



OPERATOR GUIDE

TARGA EXPLORER

Complete operator manual for control posts in geographic Europe — configuration, control area, analysis, archive, clips, privacy (GDPR), limits and FAQ.



Emiltronica Soluzioni Tecnologiche S.R.L.
CHIARA ANPR Recognizing System V.2.0
Version 1.0.10 — first edition 29/08/2026
www.targaexplorer.com
Windows 10 / 11 64-bit · RAM ≥ 8 GB · SSD

This document is intended for authorised operators of control posts in geographic Europe. The chapters must be followed in order. The privacy notice must not be omitted.

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Each entry shows the chapter page. In the PDF, the title is a link to that chapter. At the end of every paragraph in the body, a link returns to this table of contents.

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PART

I — Foundations

1. How to use this guide

This guide describes the use of TARGA EXPLORER on a control post: start-up of the program, guided setup (privacy notice as first page), selection of the video source, definition of the control area, analysis of transits, documentation produced when the session is closed, and product limits. The chapters follow the order of a working session: sequential reading corresponds to the sequence of operations to be carried out in front of the program.

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Intended readers of the document

The document is intended for operators of control posts and for inspection personnel of law-enforcement bodies operating in geographic Europe. It assumes knowledge of the service procedures of the relevant authority, not knowledge of video-surveillance systems or of specialist computing notions: every technical term used is defined in the chapter where it first appears and is restated in the glossary in chapter 7.

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The guide does not contain installation, maintenance or network-configuration instructions: such activities are reserved to the technical personnel appointed by the supplier or to the system administrator of the authority. The operator uses the program as already installed, starting it from the shortcut present on the workstation, and works exclusively with the interface described in the following chapters.

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How to read the highlighted boxes

Three types of highlighted box appear in the body of the text. Each type has a colour, a title and a meaning that remain constant throughout the document; the distinction must be observed, since it defines the operational weight of the indication.

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- Light-blue «Nota» box: operational clarification. It explains a step, states a default value or points out an expected consequence. Failure to observe it does not compromise the session.
- Orange «Avvertenza» box: an indication whose non-observance may compromise the result of the analysis, the completeness of the documentation produced or the traceability of the session parameters.

- Red «Divieto» box: an operation that is forbidden or not provided for by the product. Attempting it produces an error, an unusable result or a use that does not comply with the authorisations received.

The figures reproduce the screens of the program or summary diagrams prepared for the guide. The labels of the buttons cited in the text coincide with those on screen, which remain in Italian even in the English edition of the document. Numbered lists describe procedures to be carried out in the order indicated; bulleted lists describe sets of cases or conditions among which there is no obligatory sequence.

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The «← Contents» link

At the end of every paragraph in the body of the document the link «← Contents» appears («← Indice» in the Italian edition). When the document is consulted on screen, with a PDF reader, selection of the link returns to the general contents, from which every chapter heading points to the corresponding page. In the printed copy the link remains visible as a typographic reference only and has no effect: consultation is carried out through the contents and the numbering «Page n of N» shown in the footer.

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Recommended reading path

Before first use in service, a complete reading of this Part is recommended. Two chapters must be treated as preliminary to any use and cannot be replaced by experience acquired on screen.

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1. Chapter 3, devoted to the rules on the protection of personal data and to the distinction between the data controller and the operator of the post: knowledge of it is a prerequisite of acceptance of the notice that the program presents as the first page of guided setup.
2. Chapter 35, in Part VII, which sets out the complete procedure for a first session in a single ordered list, from first switch-on through to verification of the documentation.
3. Chapter 33, in Part VI, which collects frequent questions on the use of the product and cases of unexpected outcome.

Operational note — Interface language and guide language

The program interface is in Italian. The guide is available in Italian and in English, for staff training and for delivery to non-Italian-speaking counterparts. The two editions have the same chapter structure and the same numbering, so that a reference applies to both.

Warning — Version of the document

This edition is version 1.0 of the operator guide and describes the version of the program delivered to the post. If the program is updated, the edition of the guide distributed with the update must be used: the procedures described in a previous edition may not correspond to the screens present on the display.

2. What TARGA EXPLORER is



Start-up screen of the program: supplier mark and identity of the recognition engine.

TARGA EXPLORER is a software workstation for the automatic reading of vehicle plates from video images. Automatic plate reading is indicated, in the technical literature and in this document, by the acronyms ANPR (Automatic Number Plate Recognition) and LPR (Licence Plate Recognition): it is the process by which a program locates a vehicle plate inside a frame and transcribes its characters as text.

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The program operates on video already available: the live stream of a camera of the installation, a recording already acquired and present on the workstation, or a video publicly accessible on the network. It does not itself produce the images and does not command the cameras: it does not change framing, focus, exposure or any other parameter of the apparatus being viewed.

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The intended use concerns gates and side or oblique views, that is the typical views of existing video-surveillance cameras, not the close frontal view of dedicated ANPR installations. In this document «gate» means the portion of the framed scene within which vehicle transits are treated as relevant: its definition is the operator's responsibility and is described in the chapters devoted to the control area.

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The recognition engine

The engine incorporated in the product is CHIARA ANPR Recognizing System V.2.0, which cannot be selected by the operator. The designation appears on the start-up screen, on the bar superimposed on the video and in the session summary document. TARGA EXPLORER is the workstation environment: selection of the source, definition of the control area, alerts, register, photographs, clips and traceability of the parameters. The operator obtains the plate reads of vehicles transiting in the control area and the documentation described in the following chapters.

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The full designation of the engine in use (CHIARA ANPR Recognizing System V.2.0) is the one shown on the start-up screen, in the PDF documents produced when the session is closed and in the message panel of the interface. In the remainder of this guide, after the first citation in each chapter, the engine is referred to in short form as «the engine» or «CHIARA».

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Who supplies the product

Item	Data
Supplier	Emiltronica Soluzioni Tecnologiche S.R.L.
Product website	www.targaexplorer.com
Company website	www.emiltronica.it
Product	TARGA EXPLORER
Recognition engine	CHIARA ANPR Recognizing System V.2.0 (fixed)
Guide edition	Version 1.0

The supplier delivers the program installed on the workstation, provides technical maintenance of the product and assists the authority in setting the parameters. The supplier does not intervene in assessments of the merit of the reads obtained, which remain the responsibility of the user authority.

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What the program does

- Opens a single video source per session and verifies the validity of the first frame before creating any archive on the workstation.
- Leads the operator through guided setup in seven pages: privacy notice, summary, source, engine settings, plates to be searched, gate options, final confirmation of the parameters.

- Allows the control area to be delimited on the video, that is the polygon within which transits are treated as relevant.
- Recognises plates inside the control area, merges into a single transit the reads belonging to the same vehicle and classifies the outcome of the transit.
- Signals to the operator, with audible and on-screen alerts, the passage of a plate among those placed under search.
- When the session is closed, produces a session folder containing the transit register in Excel format, the summary PDF documents, the photographs of the transits and, if requested, the video clips.
- Reports in the summary PDF all parameters used, so that every row of the register remains attributable to the settings with which it was obtained.

What the program is not

The delimitation that follows is not a contingent limitation of the version in use: it describes the functional scope of the product. Requests that fall outside that scope must not be addressed to TARGA EXPLORER.

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- It is not a video-management system (VMS): it does not record continuously, does not archive the full recording of the source, does not manage several cameras at the same time and does not constitute an operations centre.
- It is not the playback program of the camera or network-video-recorder manufacturer. In particular it does not open password-protected files of the recorder and does not remove any encryption applied by the apparatus that produced them.
- It does not read plates from cameras connected directly to the workstation via a USB port nor from devices identified by a local numeric index: the sources allowed are only those described in the Part devoted to video sources.
- It is not a speed-measurement device and does not replace any instrument subject to type approval or metrological verification.
- It does not express a judgment on the lawfulness of the transit detected: it records the read, the photograph and the time, while the assessment remains with the operator and the competent bodies.
- It does not replace the original video file for evidential purposes: the clip produced by the program is an extract, as described in the Part devoted to video clips.

Prohibition — The clip does not replace the original

The video clips produced by the program are files of limited duration, centred on the recorded transit. The original video file, when the source is a recording present on the workstation, must be retained by the authority in accordance with internal rules.

Production of a clip does not authorise deletion of the source recording.



Flow of a session: start-up, guided setup, control area, analysis, closure with register and PDF documents.

Territorial scope of use

The product is intended for use in geographic Europe, at authorities and organisations that have a legal basis under Regulation (EU) 2016/679 (GDPR) for processing images of vehicles and the related plates. The interface, the documents produced and this manual are drafted in accordance with that intended use. National rules that go beyond the GDPR remain a matter for the data controller in the country of use; they are not set out in this guide.

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3. Privacy and GDPR

This chapter recalls the awareness duties that accompany use of the product. It does not constitute legal advice and does not replace the instructions given by the data controller of the authority or command of belonging: it provides the operator with the elements needed to recognise the nature of the data processed, to identify the operator's position in the processing and to understand what the program retains on the workstation.

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Reference legal framework

The processing of personal data in the European Union is governed by Regulation (EU) 2016/679, known as GDPR (General Data Protection Regulation). Where competent authorities process personal data for the purposes of prevention, investigation, detection or prosecution of criminal offences, Directive (EU) 2016/680 and the national rules transposing it may also apply. This guide does not list national statutes of individual Member States.

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Identification of the legal basis of the processing, of the purposes pursued, of the retention periods and of the applicable security measures is the responsibility of the data controller. This guide does not state retention periods: any time indication given in a user manual would be without foundation and might conflict with the determinations of the authority.

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Prohibition — The guide is not legal advice

The indications in this chapter have the purpose of operational awareness. In case of doubt as to the lawfulness of a use, the operator must suspend the activity and refer to the data controller or to the data-protection officer of the authority, without taking autonomous decisions.

Nature of the data processed

The program processes images of vehicles and the alphanumeric transcription of the related plates, associated with the date and time of the transit and with the session parameters. A vehicle plate makes it possible, through public databases, to identify the registered keeper: it therefore constitutes data relating to an identifiable natural person and falls within the notion of personal data. The images may also contain, incidentally, further identifying elements, such as persons present in the scene or inscriptions on the vehicles.

- Transcription of the plate detected, with an indication of the outcome.
- Date and time of the transit, referred to the workstation clock or to the time of the recording analysed.
- Photograph of the transit and related thumbnail, always produced.
- Video clip of limited duration around the transit, when the clip option is selected and the transit is recorded.
- Session parameters: source used, control area, sensitivity, plates placed under search, gate options.

The «Genera zip assistenza» button produces on the Desktop a password-protected technical archive intended for the supplier. That archive may contain plate texts and the description of the control area; photographs, clips and stream passwords are not attached to it. The password must be given to the technician by voice only, during the telephone session, and must not be written in the email. Depending on the level of assistance requested, support may also need further materials from the session. The operator must be aware of this. Emiltronica Soluzioni Tecnologiche S.R.L. is a company certified for the secure processing of data of this nature. The sending procedure is described in chapter 34 and requires authorisation by the data controller.

Data controller and operator of the post

The data controller is the person who determines the purposes and means of the processing: in the context of use of the product it is as a rule the authority or administration at which the post is installed, through its own bodies. The operator of the post is the natural person who, under the authority of the controller and on the basis of documented instructions, physically carries out the operations described in this guide. The two positions do not coincide and are not interchangeable.

Aspect	Data controller	Operator of the post
Determination of purposes	Identifies purposes and legal basis of the processing	Does not determine the purposes: operates within those assigned
Authorisation for use	Authorises use of the system and defines its limits	Verifies authorisation before starting the session
Operational instructions	Issues documented instructions to staff	Observes the instructions received and does not extend them autonomously

Retention of documentation	Establishes periods and methods of retention	Hands over the session folder in accordance with internal rules
Relations with the data subject	Ensures the information notice and the exercise of rights	Does not respond autonomously to requests from data subjects
Security of the post	Defines the technical and organisational measures	Does not alter the measures adopted and does not disable the protections

Acceptance of the notice in guided setup

Before «Avvia sessione» the program remains waiting: no source is open and no session data can be processed. When «Avvia sessione» is pressed, guided setup opens. The first page is the notice on the protection of personal data. The notice recalls the nature of the data processed and the need for the use to be authorised. Pressing «Avanti» on that page constitutes acceptance of the notice and allows setup to continue. «Indietro» on the same page returns to the operational window in waiting, without creating any archive and without opening any video source.

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1. Read the text of the notice in full, without limiting the action to selection of «Avanti».
2. Verify that the activity is carried out within an authorisation of the data controller and for a determined service purpose.
3. In the absence of such authorisation, do NOT press «Avanti»: use «Indietro» to return to waiting, or close the program with the X of the operational window. No data are processed.
4. By pressing «Avanti», take note that the session, after «Conferma» and «Avvia analisi», will be documented in the session folder, in the transit register and in the summary PDF documents.
5. Treat the session folder as service documentation, retaining and transmitting it in accordance with the internal rules of the authority.

Prohibition — Duties of the operator

By accepting the notice the operator declares that the operator is entitled to use the system in the legal order in which the operator works and that the protections recognised to third parties are not being infringed. Use must be authorised by the data controller of the authority or command of belonging. The supplier makes the technical tool available and does not authorise any unlawful use.

What remains on the workstation

The documentation of the session is collected in a single session folder, created on the workstation at confirmation of the setup and completed at closure. The folder constitutes the whole of what the program retains: there are no further archives, nor transmissions to the outside arranged by the program.

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Content	Presence	Description
Transit register	Always	Spreadsheet with one row per transit: plate, outcome, date and time, reference to the photograph
Session summary PDF	Always	Parameters used, source, control area, options, statistics, clip outcome
Photographs of transits and thumbnails	If the option is selected	One image per transit, recalled from the register via a relative link
Video clips	Only on request and under certain conditions	Extracts of limited duration around the transit of a plate placed under search
Full recording of the source	Never	The program does not archive the complete recording nor the stream received from the camera
Camera access password	Never in clear	Remains masked in the interface, in on-screen messages and in PDF documents

Warning — Minimisation of folder content

The options that produce images and clips must be selected only when the service purpose requires them. Indiscriminate selection of all available options increases the quantity of personal data retained on the workstation without corresponding documentary utility.

Confidentiality of credentials

When the source is a network stream, the credentials for access to the apparatus are indicated in the source address. The program does not reproduce them in clear: in the on-screen summary, in the message panel and in the PDF documents the reserved part of the address is masked. The credentials nevertheless remain confidential information of the authority: they must not be noted on unprotected media nor communicated to persons other than authorised staff.

[← Contents](#)**Awareness in daily use**

The operator acts with awareness when the analysis is limited to the assigned purpose, when the control area is delimited to the portion of the scene that is actually relevant and when the session folder is kept as a service record. The technical possibility of analysing a source is not equivalent to authorisation to analyse it: verification of entitlement always precedes start of the session.

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4. Computer requirements

The program is installed by the supplier on the workstation intended for the service. The requirements indicated below are the minimum reference values: installation on platforms not included in the list is not provided for.

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Item	Minimum requirement
Operating system	Windows 10 or Windows 11, 64-bit edition
Architecture	64-bit only
Processor (CPU)	At least 4 logical cores; Intel Core i5 6th generation class, AMD Ryzen 3 1st generation, or equivalent
RAM	At least 8 GB
Disk	Solid-state drive (SSD or NVMe) with at least 2 GB free in addition to the installation; several hundred MB more per session
Graphics	A dedicated card is not required: integrated Intel UHD / HD or AMD Radeon Graphics is sufficient
Display	Full HD (1920×1080) recommended; 1280×720 minimum usable
Network	Required only for network sources and for public videos on the network
Audio	Speakers or motherboard beeper, if audible alerts are active
Peripherals	Keyboard and pointing device; the polygon is drawn with the pointer

Warning — Dedicated workstation during the session

The program uses up to 75% of CPU and 75% of system RAM. During analysis the workstation is intended as dedicated to the service: the browser, videoconferencing and other demanding programs must be closed before start-up. With 8 GB of RAM the margin is reduced; with clips active, network sources or heavy codecs (AV1, VP9) slowing and frame loss are more likely at minimum requirements.

Recommended configuration and typical workstation

For continuous service with clips, multiple transits and Full HD sources, the configuration below reduces slowing and maintains smoother playback. It does not constitute an installation obligation: the program remains usable at the minimum requirements indicated in the table. In typical deliveries to control workstations the configuration falls in the medium-high range (e.g. 16 GB of RAM, recent Intel Core i5/i7 or AMD Ryzen 5 processor, integrated graphics, solid-state drive): it is on this class of workstation that the program is tuned to offer the best balance between video fluidity and completeness of reads.

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Item	Recommended configuration
RAM	16 GB or more
Processor (CPU)	4 or more logical cores (8 threads recommended), of recent generation (e.g. Intel Core i5/i7 from 7th generation, AMD Ryzen 5 2000 or later, or equivalent)
Graphics	Integrated graphics with H.264 / H.265 hardware decode (typical of recent office PCs); dedicated card not necessary
Disk	Solid-state drive (SSD) with at least 10 GB free for installation, sessions and archive
Video source	Prefer H.264 or H.265 streams; where possible avoid very demanding codecs (AV1, VP9) on workstations at minimum requirements

Operational note — Medium-high range (typical workstation)

A workstation with 16 GB of RAM, quad-core processor with multithreading, integrated Intel UHD / HD or AMD Radeon Graphics and SSD represents the medium-high range expected in service. On such a configuration, with the workstation dedicated to analysis and H.264 or H.265 sources, the program is designed to maintain smooth playback and a complete register. At minimum requirements (8 GB, earlier-class quad-core processor) service remains possible, with greater sensitivity to active clips, network streams and heavy codecs.

Operational note — Working image and load

Plate analysis is performed on an image at most Full HD (1920×1080) and 25 frames per second. Recognition remains on the processor in every case. If the graphics card can decode the recording, the program employs it on its own to lighten the load; otherwise decoding remains on the processor and the session continues.

Disk space

The space occupied depends on the options selected. The following figures are indicative and serve to size disk availability before a prolonged duty shift.

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Content	Order of magnitude	Note
Transit register	From a few tens to a few hundreds of kB	Grows with the number of transits
Summary PDF	A few hundred kB	Includes the parameter tables
Photograph of a transit	From 100 kB to 1 MB	Depends on the resolution of the source
Video clip of a transit	From a few MB to several tens of MB	Depends on resolution, duration and type of clip

Antivirus and protection of the workstation

If the protection system of the workstation places the program in quarantine or blocks its start-up, authorisation of the application must be requested from the system administrator of the authority. Disabling the protection system is not an allowed solution: it reduces the security of the workstation, on which personal data are retained.

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Programs for consulting the documents

To open the transit register a spreadsheet program is required, such as Microsoft Excel or LibreOffice Calc. PDF documents are opened with Microsoft Edge. The documents are produced in any case, even in the absence of those programs: they remain available in the session folder and may be consulted on another workstation.

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Permissions required in Windows

Administrator privileges are not required for ordinary use. Write permission on the user's Desktop is required, where the folder that collects the sessions is created. If the Desktop is synchronised with a network storage service, writing of the session files may be slow: completion of closure must be awaited before the workstation is switched off, otherwise some documents may be incomplete.

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Laptop and temperature

On local-police workstations laptop computers are frequently used. A laptop that meets the minimum requirements indicated in the table (64-bit Windows, 8 GB of RAM, SSD, quad-core processor) is suitable for service, on the same terms as a desktop workstation dedicated to analysis during the session. During analysis the telemetry bar reports, where detectable, processor temperature (T CPU) and chassis temperature (T case): the operator may consult it to verify the thermal behaviour of the laptop, without further settings. If the values are high or the workstation slows down, the session must be interrupted, the device allowed to cool and the analysis repeated with the workstation at normal thermal level.

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Processor and video card

A dedicated graphics card is not required. The typical case of local-police and public-office workstations — multicore processor with integrated Intel or AMD graphics — falls within the minimum requirements. The program uses up to 75% of CPU and 75% of system RAM: during the session the workstation must not be used for other activities. If the card (integrated or dedicated) can decode the codec of the recording in use, the program employs it automatically, without settings by the operator; if the codec test does not succeed, decoding remains on the processor and the session continues. Plate recognition remains on the processor in every case: it is not moved to the graphics card. The working image is at most Full HD (1920×1080) and 25 frames per second, on every type of source. A source that is already lower is not enlarged. Resolution is not reduced below Full HD when the source offers it, because the pixels are the useful data for distant or oblique plates. The on-screen window shows a preview adapted to the display, not the native recording; that preview does not alter the working image nor the evidence (photographs and clips). Very high-resolution streams involve a greater load: on workstations at the minimum requirements use of the camera sub-stream is allowed, provided that the characters of the plate remain readable on the image. The sub-stream is a second version, at reduced resolution, of the same video produced by the apparatus.

Network and firewall rules

The firewall is the component that filters the network traffic of the workstation. For local-network sources the workstation must be able to reach the port indicated in the camera address; for public videos on the network the ordinary browsing ports towards the Internet are required. If the authority firewall blocks the traffic, opening of the source fails: the cause is a network cause and does not concern plate recognition. Intervention is the responsibility of the system administrator.

Requisiti minimi v.1.0

Windows 10/11 64 bit	CPU min. 4 core	RAM min. 8 GB	SSD obbligatorio	Portatile ammesso	Schermo Full HD consigliato
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Non supportati: Windows 7/8, 32 bit, macOS, Linux, telefoni, tablet, HDD.
T CPU / T case in barra telemetria (portatile). Postazione dedicata (75% CPU e RAM).
Excel o LibreOffice servono solo per APRIRE il registro, non per crearlo.

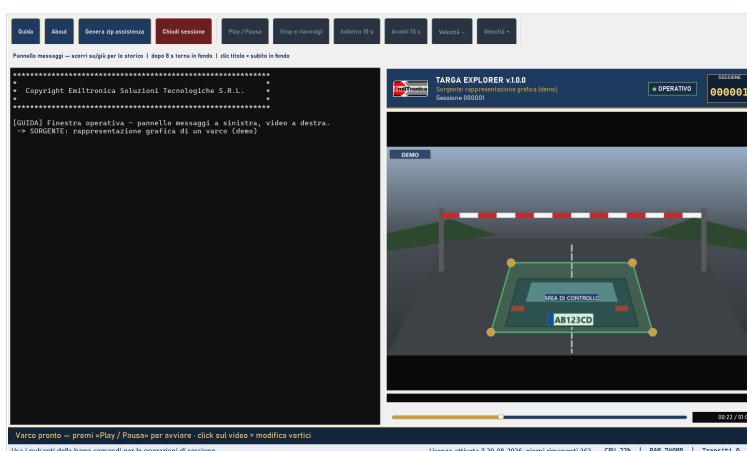
Minimum and recommended requirements: operating system, processor, memory and graphics.

5. Starting the program

Start-up always follows the same sequence. No folder is created and no data are processed until, after «Avvia sessione», guided setup is confirmed. Before «Avvia sessione» the command «Chiudi sessione» does not close the program: the instruction strip reports that the session has not yet been started and the program remains waiting for «Avvia sessione». During guided setup «Chiudi sessione» is not selectable.

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1. Start TARGA EXPLORER from the shortcut present on the Desktop or from the Start menu.
2. Wait for the start-up screen with the supplier mark and the identity of the recognition engine. At first start-up the wait may last several seconds, because the engine is loaded into memory.
3. Wait for the opening of the operational window. On the command bar «Guida», «Genera zip assistenza», «Avvia sessione» and «Chiudi sessione» are available. The Play command remains not selectable. In this waiting state no session data are processed.
4. Press «Avvia sessione» to open guided setup. The first page is the notice on the protection of personal data: «Avanti» constitutes acceptance; «Indietro» returns to waiting for «Avvia sessione».
5. Continue guided setup for the choice of video source, plates to be searched and gate options.
6. At the end of setup, confirm: only at that moment is the session folder created and the video source opened for tracing of the control area.



Main window: on the left the message panel, on the right the video area with a graphic representation of a gate; below, the single-line instruction strip and the command bar at the top.

The start-up screen

The start-up screen shows the supplier mark, the product name and the full designation of the recognition engine in use (CHIARA ANPR Recognizing System V.2.0). Its appearance confirms that the program has started correctly. The screen disappears by itself: it requires no action by the operator.

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The «Guida» button

The «Guida» button is present in the lower part of guided setup and in the upper part of the main window. Its selection opens this operator guide in the version installed together with the program, without interrupting the session in progress and without changing any parameter. Consultation during the session is therefore always allowed.

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Interruption before the session

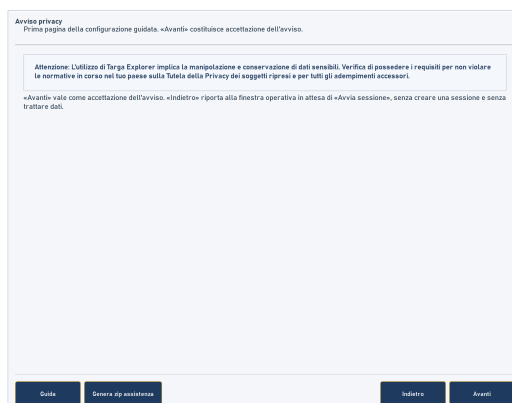
In guided setup there is no window-close X. The command «Indietro» is selectable on every page: on pages after the first it returns to the previous page retaining the values already indicated; on the first page it closes guided setup and returns to the operational window waiting for «Avvia sessione», without creating a folder and without producing a summary. «Chiudi sessione» on the operational window bar is always selectable: during guided setup it interrupts the procedure and returns to waiting for «Avvia sessione», without a folder and without a summary. Before «Avvia sessione», if «Chiudi sessione» is pressed, the instruction strip shows «Sessione non ancora avviata» and the program remains waiting. The X at the top right of the operational window closes the program. After «Conferma» and before «Avvia analisi», «Chiudi sessione» interrupts without documents and without keeping the folder, so the session number remains available; the X closes the program in the same way. After «Avvia analisi», the X starts the same logical closure as «Chiudi sessione»: register, PDFs and summary window; the program is closed from that popup. After «Conferma» guided setup closes by itself: the video and polygon tracing remain.

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Warning — If the source does not open

When the program cannot open the source indicated, or the first frame is not valid, an error message is presented with the options available. In that case no session folder is created: the session is not started and there is no partial documentation to retain.

6. The session



First page of guided setup: notice on the protection of personal data. «Avanti» constitutes acceptance.

The session is the working unit of the program: the folder on the Desktop is created when guided setup is confirmed, but the summary (register, photographs, PDF documents and any clips) is produced only if analysis has started with «Avvia analisi». If the operator leaves with the X before «Avvia analisi», the folder is removed and the session number remains available. The documents of the session, when produced, are intended to be used as service records. The confirmed parameters remain locked for the whole duration and are reported in the summary PDF.

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What is meant by «sessione certificata»

The expression «sessione certificata» concerns the traceability of the parameters used, not an assessment of the merit of the individual reads. The values defined in guided setup remain locked for the whole duration of the session and are reported in full in the summary PDF. The document therefore makes it possible to reconstruct with which settings each row of the transit register was obtained.

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Assessment of the individual read remains with the operator, who has the photograph of the transit and, where produced, the clip. The program does not attest the correctness of the transcription: it attests the conditions in which the transcription was produced.

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Parameters locked after confirmation

After confirmation of the control area the session parameters can no longer be changed. The lock is the condition that makes the summary reliable: if a parameter could change after the session had started, the rows of the register would no longer all be attributable to the same settings.

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- The polygon of the control area is not redrawn: to change it the session must be closed, then a new one opened.
- Recognition sensitivity, plate search window (1 line or 2 lines), plates placed under search and gate options remain those confirmed.
- Playback speed is not changed: the analysis remains continuous and aligned with the time of the source. If “Closed-door analysis” is ticked (local file only), after confirming the control area Play leaves a black picture and only a 5 percent progress caption is shown, typically in about half the viewing time. Messages in the left-hand panel do not scroll on every line: they arrive in groups; at the end of the file or when the session is closed the list is complete. While a passage is already under analysis, the programme rereads the plate already in hand. On a camera, recorder or YouTube live stream a short buffer of images is kept, without accumulating delay relative to real time.
- On live sources the command to suspend and resume playback remains available; it does not alter the parameters.
- The commands that would interrupt the continuity of the examination (rewind, ten-second jumps, change of speed) remain visible but cannot be selected.

7. Essential glossary

The glossary collects the terms used in the guide and in the interface. Each entry is self-contained: the definition is understandable without referral to other chapters. The terms are nevertheless restated and expanded in the chapters in which the corresponding function is described.

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Term	Definition
ANPR / LPR	Automatic plate reading: the process by which a program locates a plate in the image and transcribes its characters as text.
Genera zip assistenza	Password-protected compressed archive created on the Desktop by the button of the same name, intended for Emiltronica support. It reports the workstation code in the file name. The password is given to the technician by voice only, not in email. It may contain personal data. Depending on the level of assistance, further session materials may also be required. Emiltronica is certified for the secure processing of such data.
CHIARA	Recognition engine incorporated in the product. Designation: CHIARA ANPR Recognizing System V.2.0, not selectable. It produces the plate reads used by the program.
Clip	Video segment covering 10 seconds before entry, the passage, and 10 seconds after exit, saved in the session folder. It is not the full recording of the source.
Clip video	Choice in guided setup, mutually exclusive: no clip, clip for target transits only, or clip for all recorded transits. On a local file operational clips are MP4 from the working view; on a live stream or YouTube the same method applies. Forensic bitstream clips (extract from the original file) remain available only with a local file source.
Whitelist	List of authorised vehicles, indicated by the operator. Matching is exact (case-insensitive). The corresponding transits are excluded live (message «Rilevata in whitelist»): no Excel row, photograph, clip or provisional count; use of the list is documented in the summary PDF and in the dedicated PDF <code>riepilogo_whitelist.pdf</code> .

Confidence	Internal value, not reported in the register, with which the engine measures its own degree of certainty on a read. It is used for selection of reads (sensitivity and the «Da verificare» option); verification of the plate is carried out on the photograph.
CRC	Cyclic redundancy check: a short value calculated on a file to detect accidental alterations. It is not suitable to prove the integrity of a document, because it can also be reproduced from different contents; the product uses SHA-256.
Dominant frame	Original frame of the source, at the same instant as the winning read, from which the photograph, the thumbnails and, if requested, the clip are obtained. It is not the reduced copy used for recognition.
Working frame	Copy of the source frame, contained at most in Full HD and with the same proportions, used for recognition and for drawing the polygon. When the source is wider, the photograph and the clip are not derived from this copy.
ftyp	Marker that appears at the beginning of video files conforming to the MP4 standard and indicates the container type. Its presence is an indication of a file readable with ordinary programs.
IMKH	Marker that appears at the beginning of some files produced by network video recorders and indicates a proprietary container of the manufacturer. On such files extraction of a clip for evidential use may fail.
IDc	Identifier of the transit capsule, assigned when the plate box enters the control area. It appears in the message panel live and, at session closure, in the IDc column of the register.
IDe	Plate elected live inside the capsule, still provisional. It appears in the provisional-transit message and in the IDe column of the register. The official read (IDt) may differ after closure of the session.
IDi	Identifier of the identity election, assigned at the first character read in the capsule. There is no IDi without IDc. It appears live and in the IDi column of the register.

IDp	Read obtained on the photograph at closure of the session. If that re-read produces no text, IDp coincides with IDe. If it produces a text different from the one chosen for the register, IDp still reports that read: the Targa column (IDt) remains the chosen value. It appears in the IDp column of the register.
IDt	Plate written in the Excel register (IDt column, coinciding with the Targa column). It is definitive only at closure of the session, after the read on the photograph. It does not appear in the live provisional-transit message.
OCR	Optical character recognition: the phase of reading in which the characters located in the plate image are transformed into text.
Operator of the post	Natural person who, under the authority of the data controller and on the basis of documented instructions, physically carries out the operations described in the guide.
Message panel	Area of the interface in which the program reports in real time the alerts on the session: opening of the source, reads, stream anomalies, clip outcome.
Polygon	Closed figure drawn by the operator on the image to delimit the control area. Its vertices are reported in the summary PDF.
RTSP	Network protocol used by cameras and recorders to transmit a live video stream. The address of a source of this type begins with the protocol identifier.
Session	Working unit: the parameters remain locked after confirmation and are reported in full in the summary PDF.
SHA-256	Digital fingerprint of a file: a sequence of characters calculated on the content, such that any modification of the file produces a different value. It makes it possible to verify that a file has not been altered.
Target	Plate placed under search by the operator in guided setup. Recognition determines the alerts; clips, if the option is active, concern the recorded transits.

Data controller	Person who determines the purposes and means of the processing of personal data; in the context of use it is as a rule the authority at which the post is installed.
Transit	Passage of a vehicle through the control area, reconstructed by the program by merging the reads referring to the same vehicle into a single row of the register.
Gate	Portion of the framed scene within which transits are treated as relevant, delimited by the polygon drawn by the operator.
Whitelist	List of authorised vehicles, indicated by the operator. Matching is exact (case-insensitive). The corresponding transits are excluded live (message «Rilevata in whitelist»); no Excel row, photograph, clip or provisional count; use of the list is documented in the summary PDF and in the dedicated PDF <code>riepilogo_whitelist.pdf</code> .

Operational note — Use of the glossary

The glossary entries are recalled in the subsequent chapters with the same terminology. In case of doubt about a term encountered during the session, consultation of this chapter is sufficient: it is not necessary to interrupt the analysis in progress.



PART

II — Session configuration

8. Guided setup, page by page

What guided setup is

«Guided setup» — in English, wizard — means a succession of seven windows that collects, in a predetermined order, acceptance of the privacy notice and all the parameters needed for the working session. Each window corresponds to a page and concerns a single subject: privacy notice, initial summary, video source, engine settings, plates to be searched, gate functions, final confirmation. The recognition engine CHIARA ANPR Recognizing System V.2.0 is fixed and appears in the summary. Guided setup does not open at start-up: it opens when, on the operational window, «Avvia sessione» is pressed, and reopens every time the operator requests «Riavvia sessione» on the bar or «Nuova sessione» in the summary popup. In the guided-setup pages the guide and the «Genera zip assistenza» command remain available. «Conferma» opens the video and polygon tracing; analysis does not start until, once the polygon is closed, «Avvia analisi» is pressed.

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Guided setup is not a panel of permanent settings: the values indicated apply to the session that is about to begin. The session, in turn, corresponds to a dedicated folder on the Desktop of the workstation, in which the register, summary documents, photographs and any clips are collected. No data are written to disk before «Conferma» in guided setup.

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Navigation commands

Command	Effect
Avanti	Validates the data of the current page and goes to the next page. On the first page (privacy notice) it constitutes acceptance of the notice. If a datum is not valid a notice appears and the page does not change.
Indietro	Always selectable. Returns to the previous page retaining the values already indicated. On the first page it closes guided setup and returns to waiting for «Avvia sessione», without acceptance of the notice and without creating a folder.
Conferma	Present on the last page only. Applies the setup, opens the video source and starts the control-area procedure.
Avvia sessione	Present on the command bar of the operational window at start-up. Opens guided setup. Plate analysis starts only after «Avvia analisi», once the polygon is closed.

Guida	Opens this operator guide. The command is available throughout setup.
About	Opens a window with program version, engine version, workstation code, applied licence, copyright and the support website. From the same window a new licence key is entered and the supplier update is applied: the program does not restart for the key alone. The command is always available on the operational window bar.
Genera zip assistenza	Prepares the password-protected technical archive without starting the session. The password is given to the technician by voice only.
Chiudi sessione	Present on the command bar of the operational window and always selectable. Before «Avvia sessione» it does not close the program: it indicates that the session has not yet been started and remains waiting. During guided setup and after «Conferma», until «Avvia analisi» is pressed, it interrupts without a folder and without a summary. After «Avvia analisi» it terminates analysis and produces the documents.
Riavvia sessione	Present on the command bar after «Conferma», during drawing and once the polygon is closed, before «Avvia analisi». Reopens guided setup. The provisional folder is removed from the Desktop and the session number remains available.
Nuova sessione	Present only in the summary popup at the end of the session. Reopens guided setup. The folder just closed remains on the Desktop.

The seven pages, in summary

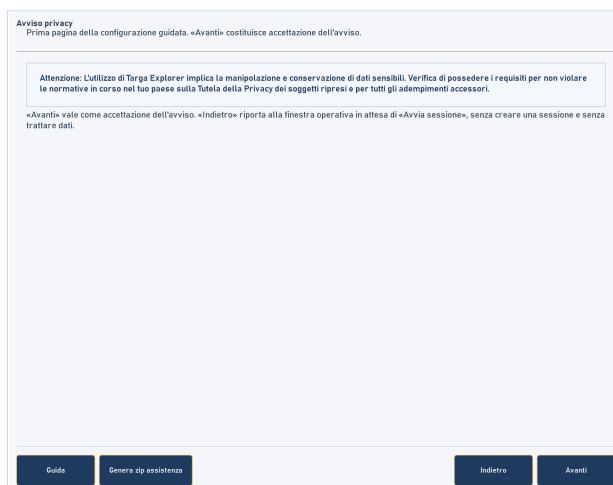
Page	On-screen title	Subject
1	Avviso privacy	Text of the notice. «Avanti» constitutes acceptance.
2	Benvenuto	Summary of the setup of the last session.
3	Sorgente video	IP stream, file already saved, or YouTube link.

4	Settings motore	Reading thresholds, 1-line or 2-line search, «Da verificare» register, Rafforza identità.
5	Ricerca targhe	Plates under search, uncertain fragment, authorised vehicles.
6	Funzionalità varco	Audible alerts, frame capture (always active), video clips, e-mail notification.
7	Conferma sessione	Final summary. «Conferma» opens the video and the control area.

Operational note — Order of completion

The pages must be completed in the order proposed. The gate-functions page contains options whose outcome depends on the video source and on the plates indicated in the previous pages: skipping pages exposes the risk of combinations that are not allowed, which guided setup rejects at confirmation.

Page 1 — Avviso privacy



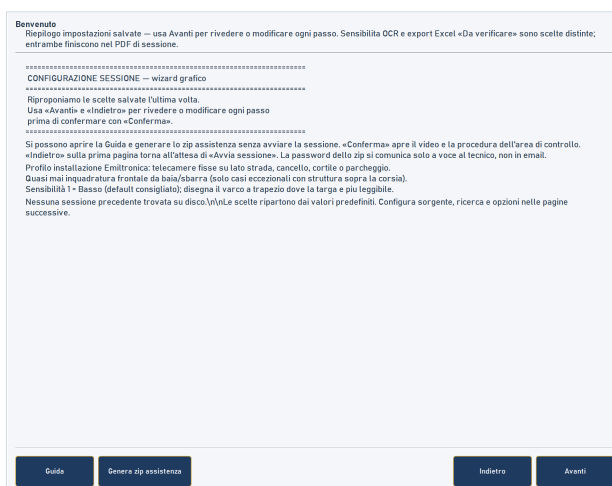
First page: notice on the protection of personal data. «Avanti» constitutes acceptance.

The first page displays the notice on the protection of personal data. Before this page the program is waiting: no source is open and no session data can be processed. Pressing «Avanti» constitutes acceptance of the notice and opens the subsequent setup pages. Pressing «Indietro» closes guided setup and returns to waiting for «Avvia sessione», without creating a folder and without processing data.

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- Acceptance applies to the setup in progress: on every «Avvia sessione» or «Riavvia sessione» the page is presented again.
- In the absence of authorisation of the data controller, «Avanti» is not pressed.
- The X of the guided-setup window closes the program, without a session folder.

Page 2 — Benvenuto



Second page: summary of the values of the last session configured on the workstation.

The second page displays the setup of the last session carried out on the workstation: source, recognition engine (CHIARA ANPR Recognizing System V.2.0, fixed), plate search (1 line or 2 lines), crop threshold, plates under search, state of the gate options and list of authorised vehicles. The page has a reminder function and does not require any datum.

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- No value is yet confirmed: every parameter may be changed on the subsequent pages.
- At first execution on the workstation, in the absence of previous sessions, the page signals the use of the default values.
- Verification of the values re-proposed is recommended when the workstation is used by several operators or on successive shifts: the plates of a concluded search must not be carried over into a new session.
- The camera password does not appear in clear: in the summary it remains masked.

Page 3 — Sorgente video

CONFIGURAZIONE SORGENTE VIDEO
 Scegli come alimentare il sistema di rilevamento targhe.

OPZIONI DISPONIBILI

☒ 1 — Stream RTSP / HTTP(S) (telecamera IP / NVR)
☐ 2 — File video già salvato
☐ 3 — Link YouTube (video o diretta)

Incolla l'URL dello stream della telecamera.
 Deve iniziare con rtsp://, http:// oppure https://
 Controlla username, password, IP e numero canale.

URL RTSP / HTTP(S) da incollare:

Esempi Hikvision (copia e adatta IP, utente, password, canale)

Telecamera IP / NVR canale 1 (stream principale):
 rtsp://admin:Password23@192.168.1.64:554/Streaming/Channel/101

Registrazione Hikvision NVR/DVR (canale 1, stream principale):
 rtsp://admin:Password23@192.168.1.64:554/h264/ch1/main/av_stream

Telecamera NVR: .../Streaming/Channel/101 (main) - /102 (sub) - /103 (canale 2)
 Registratore legacy: .../h264/ch1/main/av_stream - .../h264/ch1/sub/av_stream

Third page: the three families of source allowed, alternative to one another.

«Video source» means the origin of the images that the program analyses. The third page allows the selection of a single source per session, chosen among three families: RTSP/HTTP(S) stream from an IP camera or from a recorder, video file already saved on the workstation, public YouTube link. The three families cannot be combined: to change source the session in progress must be closed and guided setup repeated.

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1. Select the source family.
2. For the stream: paste the complete address in the field provided.
3. For the file: use «Sfoggia...» and select the recording on the workstation or on the connected drive.
4. For YouTube: paste the link of the video or of the live stream.
5. Press Avanti. Technical verification of the source takes place at final confirmation, not at typing.

Operational note — Verification before creation of the archive

At confirmation the program opens the source indicated and verifies the validity of the first frame. The session folder is created only if the verification succeeds: an incorrect address, an unreachable apparatus or a recording that cannot be decoded leave no incomplete folders on the Desktop.

The technical limits of each family are treated analytically in chapters 9 and 10. Reading of those chapters is recommended before first use on an installation that is not known.

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Page 4 — Settings motore

Settings motore
Soglie in sequenza. Passare il mouse su ogni voce per i limiti; Ripristina rimette solo quella.

Prima dell'analisi (diretta)
Ricerca targa
1 riga — Targhe su una sola riga: auto, mezzi pesanti, extra-UE a riga singola, monopattino e targhini. Da 3 a 9 caratteri: sole lettere, sole cifre o miste.

Sicurezza del riquadro targa: 0.22 — Fabbrica: 0.22 — Ripristina
Rapporto larghezza/altezza massimo: 8.50 — Fabbrica: 8.50 — Ripristina
Larghezza minima riquadro (px): 6 — Fabbrica: 6 — Ripristina
Scarto se copre troppa larghezza del varco: 0.70 — Fabbrica: 0.70 — Ripristina
Rapporto «quasi quadrato»: 1.50 — Fabbrica: 1.50 — Ripristina
Soglia sul ritaglio (consegna testo): 0.50 — Fabbrica: 0.50 — Ripristina
Altezza minima del riquadro per leggere (px): 10 — Fabbrica: 10 — Ripristina
Margine del ritaglio (frazione): 0.12 — Fabbrica: 0.12 — Ripristina
Soglia raddrizzamento se storto: 0.03 — Fabbrica: 0.03 — Ripristina

Tieni raddrizzamento (voto minimo rispetto al primo): 0.92 — Fabbrica: 0.92 Bloccato

☒ Riconosci fotogrammi intra (flusso originale) — Fabbrica: disattivo — Ripristina
☒ Sincronizza ricerca forma su iframe — Fabbrica: disattivo — Ripristina

Dopo l'analisi (chiusura sessione)
☒ Includi in Excel le letture «Da verificare» (consigliato) — Fabbrica: attivo — Ripristina
☒ Rafforza identità
☒ OCR pesante
☐ Ricostruzione artificiale 3F — Fabbrica: disattivo — Ripristina — +2

Guida Genera dp assistenza Indietro Avanti

Fourth page: plate search at the top (1 line or 2 lines), then the reading thresholds (upper part visible without scrolling).

Prima dell'analisi (diretta)
Ricerca targa
1 riga — Targhe su una sola riga: auto, mezzi pesanti, extra-UE a riga singola, monopattino e targhini. Da 3 a 9 caratteri: sole lettere, sole cifre o miste.

Sicurezza del riquadro targa: 0.22 — Fabbrica: 0.22 — Ripristina
Rapporto larghezza/altezza massimo: 8.50 — Fabbrica: 8.50 — Ripristina
Larghezza minima riquadro (px): 6 — Fabbrica: 6 — Ripristina
Scarto se copre troppa larghezza del varco: 0.70 — Fabbrica: 0.70 — Ripristina
Rapporto «quasi quadrato»: 1.50 — Fabbrica: 1.50 — Ripristina
Soglia sul ritaglio (consegna testo): 0.50 — Fabbrica: 0.50 — Ripristina
Altezza minima del riquadro per leggere (px): 10 — Fabbrica: 10 — Ripristina
Margine del ritaglio (frazione): 0.12 — Fabbrica: 0.12 — Ripristina
Soglia raddrizzamento se storto: 0.03 — Fabbrica: 0.03 — Ripristina

Tieni raddrizzamento (voto minimo rispetto al primo): 0.92 — Fabbrica: 0.92 Bloccato

☒ Riconosci fotogrammi intra (flusso originale) — Fabbrica: disattivo — Ripristina
☒ Sincronizza ricerca forma su iframe — Fabbrica: disattivo — Ripristina

Dopo l'analisi (chiusura sessione)
☒ Includi in Excel le letture «Da verificare» (consigliato) — Fabbrica: attivo — Ripristina
☒ Rafforza identità
☒ OCR pesante
☐ Ricostruzione artificiale 3F — Fabbrica: disattivo — Ripristina — +2

Complete list of fields, from plate search at the top through the thresholds and the post steps.

Settings motore
Soglie in sequenza. Passare il mouse su ogni voce per i limiti; Ripristina rimette solo quella.

Prima dell'analisi (diretta)
Ricerca targa
1 riga — Targhe su una sola riga: auto, mezzi pesanti, extra-UE a riga singola, monopattino e targhini. Da 3 a 9 caratteri: sole lettere, sole cifre o miste.

Sicurezza del riquadro targa: 0.22 — Fabbrica: 0.22 — Ripristina
Rapporto larghezza/altezza massimo: 8.50 — Fabbrica: 8.50 — Ripristina
Larghezza minima riquadro (px): 6 — Fabbrica: 6 — Ripristina
Scarto se copre troppa larghezza del varco: 0.70 — Fabbrica: 0.70 — Ripristina
Rapporto «quasi quadrato»: 1.50 — Fabbrica: 1.50 — Ripristina
Soglia sul ritaglio (consegna testo): 0.50 — Fabbrica: 0.50 — Ripristina
Altezza minima del riquadro per leggere (px): 10 — Fabbrica: 10 — Ripristina
Margine del ritaglio (frazione): 0.12 — Fabbrica: 0.12 — Ripristina
Soglia raddrizzamento se storto: 0.03 — Fabbrica: 0.03 — Ripristina

Tieni raddrizzamento (voto minimo rispetto al primo): 0.92 — Fabbrica: 0.92 Bloccato

☒ Riconosci fotogrammi intra (flusso originale) — Fabbrica: disattivo — Ripristina
☒ Sincronizza ricerca forma su iframe — Fabbrica: disattivo — Ripristina

Dopo l'analisi (chiusura sessione)
☒ Includi in Excel le letture «Da verificare» (consigliato) — Fabbrica: attivo — Ripristina
☒ Rafforza identità
☒ OCR pesante
☐ Ricostruzione artificiale 3F — Fabbrica: disattivo — Ripristina — +2

Guida Genera dp assistenza Indietro Avanti

Lower section: Excel register, Rafforza identità, OCR pesante and Ricostruzione artificiale 3F.

The fourth page collects the recognition thresholds, in the order in which the frame meets them. The values apply to the session in progress and remain stored as the last choice. Each item shows the value in use, beside it the factory datum and a «Ripristina» command that concerns that item only. Passing the mouse over the field gives the purpose, the recommended value and the allowed limits. The page scrolls: the post section lies below the separating line.

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The analysis cascade is unique. A box discarded at one step is not read at the subsequent steps. Raising a threshold upstream reduces the candidates; raising the crop threshold reduces the texts delivered. The Excel box «Da verificare» neither produces nor discards live readings: it only decides which rows below 65% certainty on the characters enter the register.

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Before analysis (live)

Field	Factory	Range	Effect on the cascade
Certainty of the plate box	0.22	0.05 – 0.95	How evident the box must be before it is cropped. Lower: more boxes, including doubtful ones. Higher: only very evident plates; lateral or distant plates are lost.
Minimum width/height ratio	1.12	0.50 – 5.00	Below this ratio the box is too vertical and is not read.
Maximum width/height ratio	8.50	1.50 – 20.00	Beyond it the box is a strip that is too long (bonnet, roadside) and is not read.
Maximum box area on the gate	0.42	0.05 – 0.90	Fraction of the control area. A larger box is not a plate.
Minimum box width	6 px	2 – 80	Below: noise, not a plate.
Minimum box height	5 px	2 – 80	Below: noise, not a plate.
Discard if it covers too much width	0.70	0.20 – 1.00	If, together with the next item, the box covers almost the whole gate, it is the entire passage and is discarded.

Discard if it covers too much height	0.40	0.10 – 1.00	To be taken with the previous item: both must be exceeded in order to discard.
«Almost square» ratio	1.50	0.80 – 3.00	Below this ratio the box is treated as almost square (vehicle, sign).
Maximum area if almost square	0.08	0.01 – 0.40	Large squares are discarded; compact plates may remain.
Crop threshold (text delivery)	0.35	0.25 – 0.99	Sole cut on the character vote. Below it the text is not delivered. 0.25–0.50 CCTV; 0.51–0.75 dedicated gate; 0.76–0.99 security automations.
Plate search	1 line	two windows	Accepts one band (3–9) or two bands (3–10). At the top of engine Settings. Treated in chapter 12.
Minimum height for reading	10 px	4 – 40	The box may be visible but, below this height, reading is not attempted.
Minimum plate width on the frame	48 px	16 – 200	Below: fragment too small, unreliable reading.
Crop margin (fraction)	0.12	0.00 – 0.40	Border around the box before reading. Too little cuts the characters; too much includes bumper and lettering.
Minimum crop margin	8 px	0 – 40	Minimum border in pixels, even if the fraction would give less.
Straightening threshold if skewed	0.03	0.00 – 0.20	Beyond this tilt a straightening is attempted. Zero: never straighten.

Keep straightening (minimum score versus the first)	0.92	locked	After straightening, the new reading is kept only if its score is at least 92% of the previous one. Shown in the cascade, not editable.
Riconosci fotogrammi intra	inactive	active / inactive	Only if checked. Identifies the complete frames of the incoming file or stream, before the working cadence. It does not change the elected plate by itself.
Sincronizza ricerca forma su iframe	inactive	active / inactive	Only if checked, and only with «Riconosci fotogrammi intra» active. Shape search also analyses every intra frame of the gate, without discarding it from the working cadence, including at a cold start. Same thresholds. One attempt per intra frame: if there is no plate at that instant, no transit is opened. It does not change the elected plate by itself.

After analysis (end of session)

Field	Factory	Range	Effect on the cascade
Readings «Da verificare» in Excel	active	active / inactive	Does not act live. Active (recommended): the register also includes readings below 65% certainty on the characters. Inactive: those rows, if without history in the gate, are not written. Transits with lost characters, completion or stop remain in any case. Chapter 13.

Rafforza identità	on and locked on 1 line; on not changeable 2 lines it turns off by itself and stays locked	On 1 line the end-of-session re-reading enters only if it equals the plate elected live or completes it. On 2 lines it does not run: the register keeps the live elected plate.
OCR pesante	on and locked on 1 line; on not changeable 2 lines it turns off by itself and stays locked	Extra readings on the crop at close (and live only if verification is ambiguous). On 2 lines it does not run. No Restore: it follows the search window.
Ricostruzione artificiale 3F	inactive on 1 line (optional); on 1 line: active / inactive; on 2 lines it turns off by itself and stays locked	Only if checked on 1 line, and only after Rafforza identità and OCR pesante. Re-reads two neighbouring originals (chosen step) and may correct individual characters. If the text changes, the Excel row has outcome «Da verificare (rettificata 3F)». It does not start by itself. On 2 lines it is not available.

Operational note — Recommended values in ordinary service

Box certainty 0.22; shape at the factory values of the active window; crop threshold 0.35; plate search «1 line» if traffic is single-band (cars, heavy vehicles, extra-EU single line); «2 lines» only for the motorcycle census; readings «Da verificare» active; Ricostruzione artificiale 3F inactive, unless otherwise provided by the supplier.

Page 5 — Ricerca targhe

RICERCA TARGHE (max 5)
 Targhe in ricerca, frammento incerto e elenco veicoli autorizzati.

I campi targa possono restare vuoti: i transiti restano registrati. Le targhe indicate determinano avvisi, clip target e notifica email.

RICERCA TARGHE (max 5)

Targa 1 ☐ Targa incompleta o incerta

Targa 2

Targa 3

Targa 4

Targa 5

Se attivo: cerca un frammento di almeno 2 caratteri noti (anche non in sequenza e senza posizione fissa). Valgono le letture OCR gli accettate dalla finestra di ricerca targa (1 riga o 2 righe) che contengono quei caratteri. Le targhe 2-5 restano visibili ma non vengono analizzate. Attenzione: con pochi caratteri (soprattutto 2) aumentano i falsi — allarmi, righe Excel e clip anche su targhe diverse da quella cercata. Indica 3 o più caratteri certi quando possibile. Per extra-UE a una riga usare «1 riga»; per moto a due fasce usare «2 righe».

☒ **Whitelist veicoli**
 Elenco veicoli autorizzati vuoto

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Fifth page: plates under search, uncertain fragment and authorised vehicles.

The fifth page collects the plates subject to search, search by uncertain fragment and the list of authorised vehicles. The plate search window, already chosen in Settings motore (1 line or 2 lines), determines the maximum length allowed in the plate fields (9 or 10 characters).

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Field	Nature of the datum	Treated in chapter
Targa 1 ... Targa 5	Plates subject to search (optional)	11
Targa incompleta o incerta	Search by fragment of certain characters (partial plate)	11
Whitelist veicoli	List of authorised vehicles	11

The plate fields may remain empty. In that case the transits detected in the control area are still recorded and, if a clip mode is active, the clips concern the recorded transits; alerts for a plate under search are not produced. The «targa trovata» e-mail does not start. If «Notifica email ogni transito» is active, e-mails are sent for recorded transits. The plates indicated determine instead the alerts, any clips, the targa-trovata e-mail notification if active and the column of the register that reports the reference to the target sought.

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The authorised-vehicles box, if checked, opens the list to be reviewed. A matching transit (exact comparison, case-insensitive) does not generate a provisional count, photograph, clip, Excel row or summary window; the message panel shows «Rilevata in whitelist».

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Page 6 — Funzionalità varco

Funzionalità varco
 Alert sonori, cattura fotogrammi, whitelist e una sola clip per ogni transito registrato (sul file locale: ad uso probatorio; su stream e YouTube: dalla visione di lavoro già ricampionata).

Tipi alert: A = bip scheda madre, B = voce, C = tono altoparlante. Attivando un'opzione puoi ascoltare un'anteprima.

Funzionalità varco

☐ Bip scheda madre
☐ Voce «Targa trovata»
☐ Bip tono altoparlante

☒ Cattura fotogrammi

Clip video

☐ Nessuna clip
☐ Solo transiti target
☒ Tutti i transiti registrati

Su stream IP e YouTube non esiste un file originale da cui copiare il bitstream. La clip si ritaglia dal buffer della visione di lavoro (già ricampionata): 10 s prima dell'ingresso, l'intero passaggio, 10 s dopo l'uscita. I pezzi restano in memoria e si scrivono su disco a fine sessione (o a gruppi, con una pausa del rilevamento se la RAM si riempie). Dopo la lettura definitiva sulla fotografia i file prendono il nome targa. Non è una clip ad uso probatorio.

Diagnostica tecnica

☒ Log tecnici di sessione

Scriva in log file numerati con il prefisso sessione (es. 000318_diagnosi_tracce.log, 000318_diagnosi_ruidita.log, 000318_diagnosi_err_jam0 più sessione.jam e altri JSON tecnici. Il file diagnosi_err_jam0 registra le risposte di VIOLO e Paddle (i quadri e le strighe con voce, senza fotogrammi). Utile per analisi post-sessione e supporto Emiltronica; impatto trascurabile su CPU e memoria. Default: attivo.

☐ Notifica email targa trovata ☐ Notifica email ogni transito

Se attiva, e ogni transito che corrisponde a una targa in ricerca viene inviata una mail con lo screenshot, se disponibile. Alternativa a «Notifica email ogni transito»: se ne accende una, l'altra si spegne. Occorre confermare i parametri del mailserver («Premi per test» è facoltativo). Tra un invio e il successivo il programma attende 15 secondi. Avvertenza: configurate solo per uso su traffico privato. Tra un invio e il successivo il programma attende 15 secondi.

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Sixth page: alerts, photographs, video clips, technical logs and e-mail notification.

The sixth page contains the selection boxes of the gate functions: three concern audible alerts, one the capture of photographs (always active). The list of authorised vehicles is activated on the search page. Video clips are chosen with three mutually exclusive options: no clip, clip for target transits only, clip for all recorded transits. On this page, side by side, there are two alternative e-mail notification boxes: «Notifica email targa trovata» and «Notifica email ogni transito». If one is switched on, the other is switched off. Both may remain off.

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- On activation of an audible-alert box the program plays a preview of the signal, so that the audio of the workstation can be checked before the start of the service.
- Activation of the list of authorised vehicles makes the list editor available and shows the plates already present. Matching is exact (case-insensitive): an authorised transit does not generate a provisional count, screenshot, clip, Excel row or summary pop-up; the message panel shows «Rilevata in whitelist».
- Video clips are chosen with three mutually exclusive options: «Nessuna clip», «Solo transiti target» (requires at least one plate under search) or «Tutti i transiti registrati». On a local file a bitstream forensic extract may additionally be enabled where provided by the program.
- The option «Log tecnici di sessione» (active by default) writes diagnostic files in the log/ subfolder of the session folder, separate from operational documents. Such files are intended for Emiltronica technical support in case of anomalies; they are not part of service documentation. The ordinary way to prepare them for sending is the «Genera zip assistenza» button (chapter 34).
- Clips on all transits occupy disk space: the choice is suitable for gates with limited traffic.

- The two e-mail notification boxes are alternative. «Notifica email targa trovata» sends a mail only if the transit matches a plate under search. «Notifica email ogni transito» sends a mail for every recorded transit. Between one sending and the next the program waits 15 seconds, so as not to produce bursts. «Notifica email ogni transito» is recommended only for use on private traffic.

Page 7 — Conferma sessione

Conferma sessione
Verifica il riepilogo. «Indietro» per cambiare una scelta. «Conferma» apre il video e l'area di controllo; l'analisi parte solo dopo Play.

Riepilogo configurazione da applicare:

- Sorgente video: —
- URL / percorso flusso: —
- Motore di riconoscimento: CHIARA ANPR Recognizing System V.2.0
- Ricerca targa: 1 riga
- Soglia sul ritaglio (consegna testo): Soglia ritaglio 50%
- Tieni raddrizzamento (voto minimo rispetto al primo): 0,92 (Bloccato)
- Rafforza identità: ATTIVO (Bloccato)
- OCR pesante: ATTIVO (Bloccato)
- Ricostruzione artificiale 3F: DISATTIVO
- Riconosci fotogrammi inre (flusso originale): DISATTIVO
- Sincronizza ricerca forma su frame: DISATTIVO
- Includi in Excel le letture «Da verificare» (consigliato): ATTIVO
- Targhe target: (nessuna)
- Whitelist veicoli: ATTIVO
- Notifica email targa trovata: DISATTIVO
- Notifica email ogni transito: DISATTIVO

Opzioni varco:

- Bip scheda madre: DISATTIVO
- Voce «targa trovata»: DISATTIVO
- Bip tono altoparlante: DISATTIVO
- Cattura fotogrammi: ATTIVO
- Clip video: Tutti i transiti registrati
- Log tecnici di sessione: ATTIVO

All'avvio verrà assegnata la sessione di lavoro n. 000604.

«Conferma» apre il video e la procedura dell'area di controllo. L'analisi targhe inizia solo dopo Play, a poligono chiuso. «Indietro» è sempre selezionabile: sulla prima pagina torna all'attesa di «Avvia sessione».

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Seventh page: final summary of the parameters and command to start the session.

The seventh page reproduces in full the setup that is about to be applied, including the progressive number that will be assigned to the session. Verification of the summary constitutes the last possible check before the parameters are locked.

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1. Verify the source indicated, with particular regard to the camera channel or to the name of the recording.
2. Verify that the engine indicated is CHIARA ANPR Recognizing System V.2.0.
3. Verify the crop threshold and the plate search window (1 line or 2 lines) indicated in Settings motore.
4. Verify the plates under search, character by character, comparing them with the service request.
5. Verify the state of the gate options, in particular frame capture and clip mode.
6. Press «Conferma». The program opens the source, creates the session folder on the Desktop and presents the video for drawing the control area.

Warning — If the source does not open

An error message appears with an indication of the reason. For recordings originating from a recorder, when the image is black or the content is encrypted, only two possibilities are offered: selection of another recording or closure of the program. No session folder is created and no document is produced: the operation may be repeated without consequences for the archive.

9. Video sources: definitions and camera stream

Preliminary definitions



The three families of input allowed; every other source is rejected by guided setup.

The following chapters require some definitions, given here in full so as not to presuppose knowledge of networks or of video encoding.

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Term	Definition
Stream	Continuous transmission of images from a capture apparatus towards the workstation. The stream has no predetermined end and is not retained by the program.
RTSP	Real Time Streaming Protocol: the protocol with which IP cameras and recorders make a video stream available on the network. The default port is 554.
HTTP and HTTPS	Web protocols. Some cameras publish the stream on HTTP, in the form of a sequence of images or of a playlist; HTTPS is the variant with encrypted transport between workstation and apparatus.
URL	Complete address of the source: protocol, any credentials, address of the apparatus, port and path of the channel.
Container	Format of the file that encloses the compressed images, any audio and the timing data. The extension of the file name declares the container, but does not guarantee its content.

Codec	Method of compression of the images. In video-surveillance installations H.264 and H.265, also called HEVC, predominate.
Bitstream	Sequence of compressed video data present in the container. Copying the bitstream, without new compression, preserves the images identical to the original.
Sub-stream	Second stream, at reduced resolution, published by the same apparatus to limit the network load.

The CHIARA engine performs the analysis on the images supplied by the source, independently of the source family. The quality of the result nevertheless depends on the actual resolution and on the stability of the images received: a reduced-definition source does not allow the characters of the plate to be read, whatever sensitivity is set.

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IP stream from camera or recorder

In the source field an address beginning with rtsp:// or with http:// or with https:// must be pasted. No other form is allowed. TCP transport is set by the program, so as to limit the packet loss typical of uncontrolled transport.

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Composition of the address

1. Protocol, as a rule rtsp:// for video-surveillance cameras.
2. User name of the apparatus, followed by the colon character.
3. Password of the apparatus, followed by the @ character.
4. IP address or name of the apparatus, for example 192.168.1.64.
5. Colon character and port number: 554 is the default RTSP value.
6. Path of the channel, which depends on the manufacturer; on many Hikvision apparatuses /Streaming/Channels/101 corresponds to channel 1 main.

Complete example for channel 1 main:

rtsp://utente:password@192.168.1.64:554/Streaming/Channels/101

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Warning — Credentials obligatorily in the address

There is no separate window for user name and password: the credentials must be indicated inside the address. In the interface and in the summary documents the password remains masked, and it does not appear in clear in the message panel.

Special characters in the password: percent encoding

Some characters have a reserved meaning in the structure of the address. If they appear in the password they must be replaced by the respective form with the percent sign, called percent encoding: otherwise the address is truncated or invalid and opening fails.

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Character	Form to indicate	Reason
@	%40	Separates the credentials from the address of the apparatus.
:	%3A	Separates user and password and precedes the port.
/	%2F	Separates the elements of the channel path.
?	%3F	Introduces the request parameters.
#	%23	Introduces an internal reference and truncates the address.
&	%26	Separates several request parameters.
%	%25	Introduces percent encoding itself.
space	%20	Is not allowed inside an address.

Example: the password Varco@2026 must be indicated as Varco%402026. When the password contains numerous reserved characters it is preferable to prepare on the apparatus a view-only user with a password composed of letters and digits.

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Main channel and secondary channel

Path	Meaning	Use
/Streaming/Channels/101	Channel 1, main stream, at the full resolution of the apparatus.	To be preferred for plate reading, if the network and the workstation allow it.

/Streaming/Channels/102	Channel 1, secondary stream, at reduced resolution.	Allowed when the main stream is too demanding; the reduced resolution may prevent reading of the characters.
/Streaming/Channels/201 and subsequent	Channels 2, 3, 4 of a recorder: the first digit indicates the channel, the last the type of stream.	Selection of the desired camera inside the recorder.

Encryption, certificates, forms not allowed

Case	Behaviour of the program
RTSP user name and password	Supported, indicated inside the address.
Video payload encrypted by the apparatus, with a verification code	Is not unlocked. The content cannot be decoded: if the images are black the session is not started.
rtsp:// , that is RTSP over TLS	Address rejected: it does not fall within the allowed forms rtsp, http, https.
Client certificate or certification authority of the authority	No certificate archive is provided. An intermediate apparatus is required, such as a recorder, proxy or protected link, that makes the stream available in clear on the local network.
Network authentication 802.1X, firewall, protected link	Matter external to the program: if the port of the apparatus does not respond an opening error appears.
H.265 (HEVC) encoding on RTSP	Allowed; the program signals that the frames may be unstable and resorts to reconnection.
Files in AV1 or VP9	Allowed; playback remains aligned with real time and the codec is indicated in the status bar.

Operational note — Recommended configuration of the installation

On the recording apparatus: stream in clear, content encryption disabled, dedicated user with a password composed of letters and digits, main channel active. With this configuration the address is simple, verifiable and reproducible in service.

10. Video sources: files, YouTube and forms not allowed

Video file already saved on the workstation

The second family of source consists of recordings already present on the workstation or on a connected drive: exports from a recorder, footage delivered to the office, downloads from individual capture apparatuses. Analysis proceeds from the beginning of the recording; the audio track is not used by recognition.

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On recordings already present on disk, the CHIARA engine handles both smooth playback of the allowed containers and codecs (H.264, H.265, AV1, VP9 and similar) and plate recognition in parallel during viewing. An external player or a separate engine for the analysis is not required.

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Extensions allowed

The following extensions are accepted, indifferently in lower case or in upper case: .mp4 .avi .mkv .mov .wmv .m4v .webm .ts .mpg .mpeg

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Extensions rejected and related reason

Extension	Reason for refusal
.flv	Container intended for distribution, rarely produced by recording apparatuses.
.mts and .m2ts	Format of consumer camcorders; the .ts format produced by recorders is already allowed.
.3gp	Format for mobile telephony, at insufficient resolution for reading a plate.
Local .m3u8	It is not a single recording but a list of segments: it does not allow calculation of a file hash nor extraction of a clip. The same form published on https remains allowed as a stream.
Folders and compressed archives	Selection concerns a single recording; analysis of a folder or of an archive is not provided for.

Recordings originating from a recorder

File Hikvision: chiaro vs cifrato vs spezzone

Dump NVR in chiaro
IMKH + HEVC
immagine visibile
-> SESSIONE OK

Dump NVR CIFRATO
IMKH + payload illeggibile
nero / nessun frame
-> NESSUNA SESSIONE

Spezzone MP4/MOV
ftyp ISO (anche HKMI)
H.264 o H.265
-> SESSIONE OK

Regola: il programma PROVA sempre a decodificare. Se l'immagine c'è, parte.
Se è nera o assente, chiude senza creare la cartella sessione.

Export in clear from a recorder, encrypted content and excerpt in standard format: three distinct cases.

Recorders frequently use proprietary containers, recognisable from the first bytes of the file. The identifier IMKH identifies the proprietary container of some Hikvision apparatuses, the identifier DHAV that of some Dahua apparatuses. The program examines those bytes and reports them in the message panel.

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1. In the presence of the identifier IMKH or DHAV the program signals the proprietary container and nevertheless attempts decoding.
2. If the frames are visible the session is started, even when the extension of the name does not correspond to the actual content of the file.
3. If the image is black or cannot be decoded, because the content is encrypted with the key of the apparatus, the session is not started.
4. An excerpt exported in standard format, recognisable from the ISO structure of the container, constitutes a regular recording and is accepted.
5. The behaviour of other players does not constitute a criterion of validity: decoding depends on the actual content of the file.

Prohibition — Encrypted content: no key in the program

Even when the encryption code of the apparatus is known, TARGA EXPLORER does not request it and does not apply it: the product contains no unlock function. For analysis of an encrypted recording it must be exported in standard format from the manufacturer's program or the clear stream of the apparatus must be used.

Operational note — Why the file source allows the clip for evidential use

Only for a recording present on disk is it possible to calculate a hash of the content and obtain an extract of the original container without new compression. Live sources do not allow that operation, because there is no source file to verify against.

YouTube link

The third family of source consists of links to the YouTube platform, in the forms youtube.com andyoutu.be, referring to a video, a short video or a live stream. The content must be public. The program selects the video stream with preference for the high-definition format; the audio track is not used by recognition.

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- Intended use: technical verification, staff training, check on publicly accessible footage.
- Private content, reserved to subscribers, paid, allowed only in embedded form or subject to territorial restriction cannot be opened.
- The quality of the images depends on the format made available by the platform at that moment and not on the program.
- Opening requires connection of the workstation to the public network and may require several attempts, carried out automatically.
- The clip for evidential use is not available, because the source is not a file present on disk.

Warning — Use of third-party content

Analysis of footage published by third parties must be assessed by the data controller as to lawfulness and relevance to the purpose of the service. The technical availability of the source does not, by itself, constitute a title for processing the images.

Sources not allowed and particular cases

The following list is closed: the forms indicated are rejected by guided setup and no setting is provided that would make them usable.

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Form	Reason for exclusion
rtmp://	Protocol of delivery towards a distribution service, not of intake from a gate camera.

srt://	Requires additional components not present on the workstation and does not allow automatic reconnection.
udp:// and group addresses	Transport without delivery control: packet loss compromises decoding and no authentication is provided.
rtsp://	Encrypted transport: it does not fall within the forms allowed and there is no certificate archive.
Webcam connected to the workstation, indicated with a device number	Input of a different nature, without a verifiable address, a file hash or an extractable clip.
Screen capture or window of another program	It is not a video source: it does not allow stream diagnostics nor documentation of the parameters.

Individual capture apparatuses and registration protocols

Some individual capture apparatuses, such as body-worn cameras and cameras with a mobile connection, do not publish an address to open: they register with a server of the authority by means of proprietary protocols, among which ISUP, formerly called EHome, and OTAP. TARGA EXPLORER is a program that opens an address or a file: it does not perform the function of a registration server and contains no field for those protocols.

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- Live capture: the apparatus registers with the system of the authority, which publishes the channel as an RTSP address; that address constitutes the source allowed.
- End of the shift: the docking station produces the recordings, which are opened as a file source.
- A camera in motion does not constitute a gate: the control area presupposes a fixed capture point.

11. Plates to be searched, incomplete plate, session without targets

Plates to be searched (target)

«Target» means a plate indicated by the operator before the session is started, to which the program must draw attention. The target does not modify recognition: it determines the comparison between the consolidated reading and the expected characters and, in the event of a match, the issue of alerts and the production of any clips.

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Compilation rules

Aspect	Rule
Number of plates	Up to 5, in the fields from Targa 1 to Targa 5.
Characters allowed	Letters from A to Z and digits from 0 to 9. Lower case and upper case are equivalent.
Separators	Space, hyphen, full stop and underscore are allowed during typing and are removed.
Maximum length	10 characters for each plate.
Normalisation	The program converts the plate to upper case and removes separators; the normalised value is the one reported in the summary.
Empty fields	Allowed. An empty field does not constitute an error and does not interrupt setup.

When to indicate the plates to be searched

- Search for one or more determined vehicles, identified in the service request or in the act that orders the check.
- Verification of the passage of a vehicle in a time interval, on a recording already acquired.
- Limitation of acoustic alerts and of clips to the vehicle of interest only, in order to reduce the material to be examined.
- Surveillance of an access when ordinary transit must not produce a signal.

Warning — Transcription of search data

A plate transcribed in a partial or incorrect manner produces an ineffective search: the vehicle, if it transits, is recorded as an ordinary transit, but does not generate alerts or clips. Before final confirmation the characters entered must be compared with the service request, taking into account the recurring confusions between the digit 0 and the letter O, between the digit 1 and the letter I, between the digit 5 and the letter S, between the digit 8 and the letter B.

Search for a partial plate (incomplete or uncertain plate)

The box «Targa incompleta o incerta» allows the search for a vehicle when the plate is not known in full, but at least two certain characters are known. Under ordinary conditions the match is assessed on the whole plate; with the box active it is assessed on a fragment, that is on a set of characters declared certain, without a constraint of order and without a constraint of position within the reading. The mode is available with both plate search windows (1 line and 2 lines). The fragment is compared only with readings already accepted by that window: in «2 lines» a single-line car does not enter among the transits and therefore cannot match. For extra-European single-line plates use «1 line»; for two-band motorcycles use «2 lines».

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Step-by-step procedure

1. Select the appropriate plate search window (as a rule «1 line» for single-band plates; «2 lines» for the motorcycle census). The window decides which readings are admitted as candidate plates; it does not limit the characters that may be typed as a fragment.
2. Activate the box «Targa incompleta o incerta».
3. Indicate in the field Targa 1 the certain characters (at least 2; where possible 3 or more). The fields from Targa 2 to Targa 5 remain visible but are not used in the comparison.
4. Where it is intended to retain also the readings with confidence below 65%, activate the option that includes in Excel the readings «Da verificare».
5. Confirm the configuration and start the session. Recognition first identifies a candidate plate in the control area; it then verifies whether the reading contains the characters of the fragment.

How fragment comparison works

- Comparison is performed on the set of characters: all readings that contain the characters indicated, in the quantity indicated, in any order and in any position, are relevant.
- Example: the fragment 123 matches readings that contain a 1, a 2 and a 3, such as AB123CD.
- With a single character the mode is not allowed and guided setup signals the error.
- The program does not search for two or three isolated glyphs in the image: it must first obtain a plate reading accepted by the plate search window; only afterwards does it check whether that reading contains the fragment.

What is recorded

In the register and in the session documents it is not the fragment typed alone that appears (for example 123), but the complete consolidated reading that produced the match (for example AB123CD). That row is treated as a searched plate: alerts provided, photograph with a dedicated prefix and, if the clip option is active, the video file of the transit.

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Aspect	Behaviour
Readings with confidence equal to or greater than 65%	May be reported in the register according to the ordinary quality filters.
Readings «Da verificare» (confidence below 65%, without a history of character loss, completion or stop)	Enter the register only if the Excel option relating to readings to be verified is active.
Readings «Da verificare» for lost characters, completion or stop	Always enter the register: consolidated transit to be checked.
Match on a target (including by fragment)	Produces the same effects as a complete target: alerts, indication in the register, signalling e-mail if the option is active and, if requested, clips. It remains «Targa cercata» even in the presence of a history to be verified.

Warning — Risk connected with the use of two characters only

With 2 characters the set of relevant readings becomes very large: alerts, register rows and clips increase even on vehicles extraneous to the search, with consequent dispersion of checking activity and processing of images that are not relevant. Where possible it is preferable to indicate 3 or more certain characters; the fragment mode must be reserved for cases in which the plate is not known in full.

Fragment indicated

Practical effect

2 characters	High number of matches that are not relevant. Allowed, but to be assessed with care.
3 characters	Compromise ordinarily acceptable between coverage and relevance.
4 or more characters	Matches almost always relevant; it is the choice to be preferred when the certain characters allow it.

Sending of a signalling e-mail

Notifica email targa trovata — mailserver

Compilare tutti i campi. Predefinito: porta 25 senza TLS né SSL. «Premi per test» invia una mail di prova. «Conferma» è disponibile solo dopo un test riuscito. La password non compare nei documenti di sessione.

Server SMTP:

Porta:

Sicurezza: ☒ Nessuna ☐ TLS (STARTTLS) ☐ SSL

Utente:

Password:

Mittente:

Destinatari:

Mail-server parameter window: obligatory fields, sending trial and confirmation (example values, no operator data).

The two boxes «Notifica email targa trovata» and «Notifica email ogni transito» stand side by side on the gate-functions page and are alternative: if one is selected, the other is deselected. If selected, the program opens a field window for the mail-server parameters: SMTP server, port, security, user, password, sender and recipients. Security defaults to sending without TLS or SSL on port 25; TLS (STARTTLS) and SSL remain available, with the typical ports 587 and 465. All fields are obligatory. Recipients may be more than one, separated by a comma or a semicolon. Pressing «Premi per test» sends a trial e-mail (optional). «Conferma» saves the parameters and enables the notification, even without having run the test, and returns to guided setup. The parameters remain available for subsequent sessions, including which notification to keep active. The password does not appear in the message panel or in the session summary document.

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With «Notifica email targa trovata», when a transit matches a plate under search the e-mail is sent, even if the transit is still classified as provisional and even if the screenshot cannot be attached. With «Notifica email ogni transito» the e-mail is sent for every recorded transit (authorised vehicles on the whitelist excluded). The subject and the text report the product name, the workstation code and the plate read. At the end of the text there is the warning that the transit is provisional (to be checked in the register) and that the screenshot might not be attached. If the photograph file is not available, the e-mail is still sent and the message panel indicates it. An unsuccessful sending attempt (network, credentials, server) is reported in the panel and in the session summary; it is not repeated automatically.

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Common rule: the program does not send bursts. Between one sending and the next it waits 15 seconds; any later transits remain in queue. «Notifica email ogni transito» is recommended only for use on private traffic.

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- Without plates under search the «targa trovata» box may remain selected: no e-mail is sent in the session. With «ogni transito» e-mails are still sent on recorded transits.
- A vehicle present in the list of authorised vehicles remains excluded from the Excel register according to the rule already in force; if that plate is also under search, the «targa trovata» e-mail is still sent, as alerts, photograph and clips remain if they are active. With «ogni transito» a whitelist vehicle does not generate a mail, because the transit is not recorded.
- To modify the mail-server parameters the box is deselected and selected again: the window reopens with the values already stored.

Session without plates to be searched

The absence of plates to be searched constitutes a normal condition of use and corresponds to the recording of the transits detected in the control area. The register collects all consolidated readings, with date, time and outcome; photographs are saved if the related option is active.

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Function	Without plates to be searched
Recording of transits	Active: every consolidated reading is reported in the register at session closure.
Capture of photographs	Always active (cannot be deactivated).
Alert of plate found	Not issued: no objective to be compared is defined.
Notifica email targa trovata	Not sent: no objective to be compared is defined.

Notifica email ogni transito	Sent on recorded transits, if the box is selected; between one sending and the next the program waits 15 seconds. Recommended only for private traffic.
Video clips	Producible with «Tutti i transiti registrati»; suitable for gates with limited traffic. «Solo transiti target» requires at least one plate under search.
List of authorised vehicles	Active, if the related box is selected.

Warning — Workstation load with clips

The «Tutti i transiti registrati» mode produces a file for each recorded transit. At confirmation, if a clip mode is active, a notice on the load of the workstation is presented. The choice is suitable for gates with limited traffic.

12. Plate search (1 line or 2 lines) and crop threshold

Plate search: 1 line or 2 lines

Plate search chooses how many text bands to accept, not the nation of registration. There is no third window «1 and 2 lines together»: either single-line plates or two-line plates are censused. The choice is at the top of the engine Settings page. On start-up the last saved window is restored, with the stored numeric values.

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Window	Accepted plate	Use
1 line (factory)	A single text band, from 3 to 9 characters; letters only, digits only or mixed are allowed.	Ordinary traffic: cars, heavy vehicles, extra-European single-line plates, scooters and bicycle platelets. Two-line plates do not become transits.
2 lines	Two text bands, from 3 to 10 characters in total; same composition rules.	Motorcycle census. If the box is already almost square and the reading arrives as a single block, the programme splits the two bands (anti-fusion). Single-line plates do not become transits.

Operational note — Consistency between window and search

Search for a full plate or a fragment (at least two certain characters) works on the text already accepted by the active window. In «2 lines» a single-line car does not enter among the transits, so it cannot appear as a target. European bicycle platelets are searched with «1 line». For unusual single-line forms remain on «1 line»; for two-band motorcycles use «2 lines».

Crop threshold (delivery of the text)

«OCR» — optical character recognition — denotes the phase, performed by CHIARA ANPR Recognizing System V.2.0, in which the characters present in the image of the plate are converted into text. «Confidence» denotes the value, expressed as a percentage, with which CHIARA measures its own degree of certainty on the characters of that reading.

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The crop threshold is the only cut on that vote: below it the text is not delivered. There are no three preset steps. The field is numeric (factory 0.35; allowed from 0.25 to 0.99). The usage guidance, also shown when the mouse passes over the field, is as follows.

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Range	Use
0.25 – 0.50	Lateral or tilted CCTV footage (roads, car parks, accesses).
0.51 – 0.75	Gate dedicated to reading, frontal and sharp plate.
0.76 – 0.99	Security automations: only very certain readings are delivered; near 1 the flow is almost silent.

The crop threshold does not, by itself, determine which readings are reported in the register: that aspect is treated in chapter 13. Below the post line, on «1 line», «Rafforza identità» (the end-of-session re-reading may only coincide with or complete the live elected plate) and «OCR pesante» (extra readings on the crop) stay on and cannot be changed. Ricostruzione artificiale 3F, if checked, follows those two steps. On «2 lines» the three steps turn off by themselves and stay locked: the register keeps the live elected plate, with no closing re-reading.

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Operational note — Recommended setting in service

Crop threshold 0.35, with the option of readings «Da verificare» activated (default and recommended setting). Consolidated transits and also the readings to be checked appear in the register. The configuration is suitable for ordinary CCTV installations, in which the camera is not necessarily frontal with respect to the lane.

- Raising the threshold on a lateral camera ordinarily entails the loss of transits, because tilted readings do not reach the required vote.
- The value adopted is reported in the session summary document, among the detection parameters, and therefore remains verifiable.

13. Excel register: readings «Da verificare»

The outcome «Da verificare» indicates that the row does not constitute an autonomous finding of the transit: the check must be carried out on the photograph and, where produced, on the clip. It does not coincide with the confidence threshold alone.

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The row is classified «Da verificare» when at least one of the following conditions occurs.

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Condition	Operational meaning
Confidence below 65%	Reconstruction of the characters is not considered sufficiently certain. Such rows enter the register only if the box relating to readings to be verified is active.
Plate seen in full, then characters lost	The engine has already obtained a complete reading; in subsequent processing the plate is partial (exit in pieces or shorter reading). The row reports the fullest version, but requires a check.
Completion during the transit	On entry the plate appeared incomplete and subsequently completed. A single transit; the row reports the full version and must in any case be checked.
Stop beyond the observation ceiling	The vehicle remained in the control area beyond the ceiling of ten seconds: the program closes the row once only, without waiting for exit. The same plate does not generate a second row while it remains in the scene.

The three conditions relating to the history of the plate in the gate (lost characters, completion, stop) always produce a row in the register, even if the box of readings to be verified is deactivated: these are consolidated transits that require examination. The box continues to determine only the inclusion of readings below 65% confidence, in the absence of the three conditions aforesaid.

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The box present on the Settings motore page, in the post section, is presented already activated (default and recommended setting). It establishes whether readings below the confidence threshold, without the three history conditions in the gate, must appear in the register.

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State of the box	Content of the register	Use
Activated (default and recommended setting)	Consolidated transits and also the readings with confidence below 65% and without the three history conditions in the gate, marked with the outcome «Da verificare».	Complete register to be checked on the photograph: includes doubtful transits and those with uncertain history in the gate.
Deactivated	Transits with confidence equal to or greater than 65% and, in any case, the consolidated transits classified «Da verificare» for lost characters, completion or stop.	More selective list: the rows to be checked for the history of the reading nevertheless remain.

Warning — Two distinct settings, to be assessed separately

The crop threshold determines which texts the engine delivers; the option of readings «Da verificare» determines which readings below 65% confidence are reported in the register. The two settings are independent: raising the crop threshold does not replace deactivation of the option, and deactivation of the option does not reduce the number of readings produced by the engine nor exclude the consolidated transits to be verified for lost characters, completion or stop.

- If the crop threshold is already equal to or greater than 0.65, the option has no effect on readings below the register threshold alone; the rows «Da verificare» for lost characters, completion or stop remain visible.
- The setting adopted is reported in the session summary document, among the detection parameters; the register reports, for each row, the outcome assigned.
- A reading classified «Da verificare» does not constitute a finding of the transit: the check must be carried out on the corresponding photograph and, where produced, on the clip.
- Correspondence with a plate placed in search remains classified as a searched plate even if the history in the gate presents lost characters, completion or stop: the alerts provided remain active.



PART

III — Gate and analysis

14. The gate: definitions and tracing of the polygon

Gate, polygon, control area

«Varco» denotes the supervised passage point: the stretch of lane, of access or of gate in which vehicles transit and in which the plate is readable. The gate is an element of the scene, not an element of the program.

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«Poligono» denotes the closed figure that the operator traces on the image in order to delimit, within the framing, the portion to be submitted to recognition. The polygon is defined by vertices, that is by the points selected with the mouse, joined by segments. The portion thus delimited is denominated «area di controllo»: the plates detected inside it give rise to transits, while what occurs outside it is not analysed.

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Term	Definition
Varco	The real passage point supervised by the camera.
Poligono	The closed figure traced on the image, defined by at least 3 vertices.
Area di controllo	The portion of the framing enclosed by the polygon, in which recognition takes place.
Vertice	Point selected with the mouse; vertices cannot be moved individually.
Transito	The passage of a vehicle through the control area, consolidated into a single reading.
Tempo di transito	Expected average permanence of a plate in the polygon: it indicates to the program whether the passage is short or long, in order to regulate the computational load; the reading closes on disappearance from the polygon.
Targhe parallele	The number of distinct plates that may be found simultaneously in the control area.

Delimitation of the control area meets two requirements. The first is of a technical nature: limiting recognition to the portion of the image in which the characters are readable reduces readings that are not relevant and the processing load of the workstation. The second is of a legal nature: processing of the images remains confined to the portion strictly necessary for the purpose of the check, in accordance with the principle of data minimisation.

Tracing of the gate polygon

Come si disegna il varco (poligono)



Rappresentazione grafica di un varco (non un fotogramma di campo).

1. Selezionare almeno 3 punti dove la targa è più grande e leggibile; poligono contenuto, preferibilmente sul tratto di solo passaggio lineare (senza sosta).

2. Chiudere il poligono selezionando di nuovo il primo punto.

3. Confermare tempo di transito e targhe in parallelo.

In sessione operativa il varco resta bloccato e certificato nel PDF.

Graphic representation: the vertices delimit the passage area to be analysed, excluding sky, buildings and off-lane areas; the figure must be closed on the first vertex.

After «Conferma» in guided setup the video appears in the operational window. The image is not paused by itself: the operator may run or freeze the recording with the movement commands, if the source allows it. The polygon is traced on the image: the buttons «Ridisegna da zero» and «Conferma area» are not present. The right mouse button clears the vertices; closing on the first point closes the figure. The polygon is defined on the working frame, that is on the image used for recognition, with the same proportions as the scene: the on-screen preview may be smaller, but it does not deform the figure nor shift the vertices relative to the lane. The operator's clicks are reported on that frame, not on the copy shown on screen.

During polygon tracing, even if the figure is still incomplete, the video movement commands are available if the source allows it: «Play / Pausa» to let the image run or freeze it; on a local file also «Indietro 10 s», «Avanti 10 s», speed, «Stop e riavvolgi» and the progress bar under the video (draggable). Clicks on vertices do not pause the video. «Stop e riavvolgi» does not clear points already placed. If the image is still, «Velocità +» starts playback at the chosen speed, in order to reach the useful framing more quickly. On a live stream temporal scrolling is not available: «Play / Pausa» is used to reach the useful framing and freeze it. The sides of the polygon must not cross. Closing the figure on the first vertex does not start detection: if the video was moving it remains frozen on that frame; «Play / Pausa» remains visible but is not selectable and the button «Avvia analisi» appears. The right mouse button clears the points and restores the video state that preceded the close. Analysis starts only with «Avvia analisi»: an information notice shows the session parameters; «Continua» starts detection from that frame (the summary document shows time in the recording and, on a local file, frame number and total frames). After start the movement commands and the bar return to being unusable as usual.

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1. Observe the image, moving the video if needed, and identify the stretch of passage to be analysed, excluding only what must not be processed (sky, buildings, off-lane areas), with sufficient space for the plate for the entire crossing.
2. Select with the left mouse button the vertices of the area, in succession, following the desired perimeter.
3. Select at least 3 vertices; as a rule 4 vertices arranged as a trapezium, according to the perspective of the lane, are preferable.
4. Do not exceed 8 vertices. A further point is not added: the program warns. With 8 vertices already selected, close the figure on the first point or clear with the right mouse button.
5. Close the figure by selecting again a point close to the first vertex. Closing does not start analysis.
6. To restart tracing use the right mouse button, which clears the points already selected, including after the figure has been closed, until analysis is started. Individual vertices cannot be moved: the figure must be traced again from the first point. The operation may be repeated without limit.
7. After clearing, the instruction strip under the window remains showing the invitation to trace a new complete polygon before «Avvia analisi».

8. When the area is the intended one, press «Avvia analisi». An information notice shows the parameters already chosen (source, 1 line or 2 lines, crop threshold, plates being searched, authorised list, engine). «Continua» starts detection. Transit time and parallel plates are not requested.

Warning — The polygon is not traced: analysis does not start

Until the figure is closed and analysis is started with «Avvia analisi», analysis is not started and no transit is recorded. The message panel repeats the request. The circumstance does not constitute a fault: the session requires that the control area be defined by the operator and documented in the final summary.

Placement of the polygon

Ideally: the polygon must be drawn so that vehicles fit inside it and cross it completely without encountering occlusions in the footage, without stopping or being flanked by other vehicles, and at the point where plates are most distinguishable and frontal to the camera. Vehicles must enter and leave the area in full in no more than 2 seconds; about 1 second after entry the plate should be, in the operator's sole judgement, at the point where capture is best for that plate. Throughout the transit, the area must be at least four times the largest plate visible on that path. Assess interference with other passages: do not include lanes or roads where vehicles unrelated to the gate would appear. A polygon that is too wide can cause spurious readings and slow down processing; one that is too narrow can miss readings.

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Placement	Consequence
Area that includes the entire useful stretch of passage, with a readable plate	Greater observation time and fewer plates left outside the analysis.
Stretch of linear passage only, without prolonged stop	More regular transits; fewer repeated readings from stationary vehicles.
Polygon reduced to the minimum around a single point of the lane	Risk of losing part of the passage or the entire plate.
Distant lane, sky, pavement, buildings included without necessity	Characters too small or readings that are not relevant: such zones must be excluded.
Portion crossed in a fraction of a second	Frames insufficient for consolidation of the transit.
Stop, queue or manoeuvre zone inside the polygon	Prolonged permanence and repeated readings on the same vehicle.



Area that includes signs, boards or advertising lettering Readings that are not relevant produced by texts other than plates.

15. Parameters of the control area

On closure of the polygon the program does not request a transit time or a number of plates in parallel. Crossing time is a drawing indication: vehicles must enter and leave the area in full in no more than 2 seconds; about 1 second after entry the plate should be, in the operator's sole judgement, at the point where capture is best for that plate. Up to four distinct plates may be followed at the same time. Beyond that level, the limit is the polygon traced by the operator: narrowing the area excludes unrelated passages; widening it admits more interference.

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Transit time

Transit time does not enter the recognition logic. It serves the operator in judging whether the polygon is sized correctly: a complete crossing within 2 seconds, with the plate at the best capture point around 1 second after entry. A polygon that is too extensive leaves vehicles in the area beyond the useful passage; one that is too tight may lose the plate before it is elected.

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CHIARA ANPR Recognizing System V.2.0 accumulates readings on the plate for the whole visible transit in the area. The reading to be recorded is chosen on exit from the polygon, or earlier if the plate is already stable. If recognition of another plate is already in progress in the area, election has a cap of 2 seconds from the first reading, so as to leave room for the next ones. If the box remains in the scene after recording, a second transit is not opened on the same identity.

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Value	Indication
Complete crossing of the area	No more than 2 seconds, entry and exit in full.
Best capture point	About 1 second after entry, in the operator's judgement.
Concurrent plates	Up to four, fixed value.

Plates analysable in parallel

The program follows up to four distinct plates at the same time in the control area. The value cannot be changed by the operator. If more than four identities appeared at the same instant, the excess ones are not followed until a place is freed: the remedy is to place the polygon on the lane of actual interest, excluding the others.

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Value	Use
4 (fixed)	Up to four plates at the same time on the scene.

Warning — Exceeding four concurrent plates

When more than four distinct plates are in the control area at the same time, the excess plates may not be recorded. At multi-lane gates with close traffic, place the polygon on the lane of interest.

Locking of the parameters after confirmation

Once the figure of the polygon is confirmed, the geometry remains locked for the entire duration of the session and is reported in the summary document, with the number of vertices. The number of concurrent plates is fixed. The lock guarantees correspondence between the documented area and that applied to the recorded transits.

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The command «Reset varco» remains visible but disabled: the condition does not constitute a fault. To modify the control area it is necessary to close the session, with «Chiudi sessione» or «Riavvia sessione», and to repeat guided setup. The closed session retains its own documents; the new session produces a distinct folder.

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16. Gate options

Funzionalità varco
 Alert sonori, cattura fotogrammi, whitelist e una sola clip per ogni transito registrato (sul file locale: ad uso probatorio; su stream e YouTube: dalla visione di lavoro già ricampionata).

Tipi alert: A = bip scheda madre, B = voce, C = tono altoparlante. Attivando un'opzione puoi ascoltare un'anteprima.

Funzionalità varco

☐ Bip scheda madre

☐ Voce «Targa trovata»

☐ Bip tono altoparlante

☒ Cattura fotogrammi

Clip video

☐ Nessuna clip

☐ Solo transiti target

☒ Tutti i transiti registrati

Su stream IP e YouTube non esiste un file originale da cui copiare il bitstream. La clip si ritaglia dal buffer della visione di lavoro (già ricampionata): 10 s prima dell'ingresso, l'intero passaggio, 10 s dopo l'uscita. I pezzi restano in memoria e si scrivono su disco a fine sessione (o a gruppi, con una pausa del rilevamento se la RAM si riempie). Dopo la lettura definitiva sulla fotografia i file prendono il nome targa. Non è una clip ad uso probatorio.

Diagnostica tecnica

☒ Log tecnici di sessione

Se attiva, a ogni transito che corrisponde a una targa in ricerca viene inviata una mail con lo screenshot, se disponibile. Alternativa a «Notifica email ogni transito»: se ne accorda una, l'altra si spegne. Occorre confermare i parametri del mailserver («Premi per test» e «Scegli»). Tra un invio e il successivo il programma attende 15 secondi. **Avvertenza: consigliato solo per uso su traffico privato. Tra un invio e il successivo il programma attende 15 secondi.**

☐ Notifica email targa trovata ☐ Notifica email ogni transito

Se attiva, a ogni transito che corrisponde a una targa in ricerca viene inviata una mail con lo screenshot, se disponibile. Alternativa a «Notifica email ogni transito»: se ne accorda una, l'altra si spegne. Occorre confermare i parametri del mailserver («Premi per test» e «Scegli»). Tra un invio e il successivo il programma attende 15 secondi. **Avvertenza: consigliato solo per uso su traffico privato. Tra un invio e il successivo il programma attende 15 secondi.**

[Guida](#) [Genera zip assistenza](#) [Indietro](#) [Avanti](#)

The selection boxes of the gate functions.

The options are set in guided setup and remain active for the entire session. The state of each option is reported in the summary document, so that the activity performed remains reconstructable even after a lapse of time.

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Option	Effect if active
Bip scheda madre	Acoustic signal produced by the workstation, on transit and on the plate to be searched.
Voce «Targa trovata»	Voice announcement on the plate to be searched and announcement of authorised plate on the vehicles of the list.
Bip tono altoparlante	Acoustic tone from the loudspeakers: high on the plate to be searched, short on ordinary transit.
Cattura fotogrammi	Always active: photograph of the transit and thumbnails, recalled from the register.
Clip video	Three mutually exclusive choices: no clip; clip for target transits only (plates under search); clip for all recorded transits. Time window: 10 seconds before entry, the passage, 10 seconds after exit.
Whitelist veicoli	Exact case-insensitive match. Live: message «Rilevata in whitelist», total exclusion (no Excel row, photograph, clip or provisional count). Documented in the whitelist option of the summary PDF and in the PDF <code>riepilogo_whitelist.pdf</code> .

Acoustic alerts: three distinct types

Acoustic alerts have the function of drawing the operator's attention while visual attention is directed to the scene and not to the screen. The three types are independent and may be activated together.

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Type	Origin of the signal	Requirement
A — Bip scheda madre	Signal of the workstation, independent of the loudspeakers.	None: usable even with audio deactivated or absent.
B — Uscita vocale	Spoken announcement, distinct between plate to be searched and authorised plate.	Loudspeakers or headphones active.
C — Bip tono altoparlante	Electronic tone, differentiated between target and ordinary transit.	Loudspeakers or headphones active.

Operational note — Audio check before service

On activation of an alert box, guided setup plays a preview of the signal. The preview makes it possible to ascertain, before the start of service, that the signal is actually audible at the workstation and compatible with the context in which it operates.

Capture of frames

On exit of the vehicle from the control area the program always saves the photograph of the frame deemed best during the passage. Capture of frames is part of the documentation and cannot be deactivated in guided setup. The photograph is obtained from the original frame of the source, at the resolution of the camera or of the recording. On the photograph a green box is traced outside the plate, without overlaid characters. The file name indicates directly the session number, the date, the time with seconds and the progressive transit number. At closure of the session, if the plate is confirmed, the name of the photograph, of the thumbnails and of the clips is completed with that plate; only then are the register and the summary document compiled. If the plate is not confirmed, the photograph remains numbered and cannot be recalled from the register. The images are stored in the session folder only.

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- Capture of frames is always active and cannot be deselected: without a photograph the subsequent check of a doubtful reading would not be possible.

- Photographs, and where produced clips, constitute the visual check of the readings classified as to be verified.
- The space occupied on the workstation grows in proportion to the number of transits.

List of authorised vehicles (whitelist)



Whitelist veicoli — revisione

Una targa per riga, in MAIUSCOLO (lettere A-Z e cifre 0-9). Puoi incollare un elenco da altre fonti (copia e incolla). Chiudi senza modifiche per usare l'elenco proposto (ultima sessione). Se modifichi il testo, le modifiche restano attive per la sessione.

AB123CD
EF456GH

Chiudi editor

Editor of the list of authorised vehicles, available in guided setup.

«List of authorised vehicles» means the set of plates which, although transiting in the control area, must not form the object of recording: service vehicles, residents' vehicles, means authorised for access. The program compares each read with the list by exact match, without distinction between upper and lower case. Live, the message panel reports «Rilevata in whitelist»: the transit does not produce a provisional count, photograph, clip or Excel row. At closure, if the option was active, the summary PDF indicates use of the whitelist and the document `riepilogo_whitelist.pdf` certifies the list and the number of exclusions.

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1. Select the box of the list of authorised vehicles on the page of the gate functions.
2. Open the editor of the list and indicate one plate per line (letters and digits; upper and lower case are equivalent).
3. The list may also be composed by pasting a list prepared elsewhere.
4. Close the editor without modifications in order to retain the list of the last session.
5. Verify in the final summary and in the session PDF that the whitelist option is active; open the PDF `riepilogo_whitelist.pdf` for the certified list and the count of exclusions.

Warning — Relationship between the authorised list and plates to be searched

A plate present both in the list of authorised vehicles and among the plates to be searched remains treated as a plate to be searched: the alert is issued and the transit is recorded.

The search ordered by the authority prevails over the technical exclusion. The list adopted in the session is certified in the dedicated document, so as to make the exclusions applied verifiable.

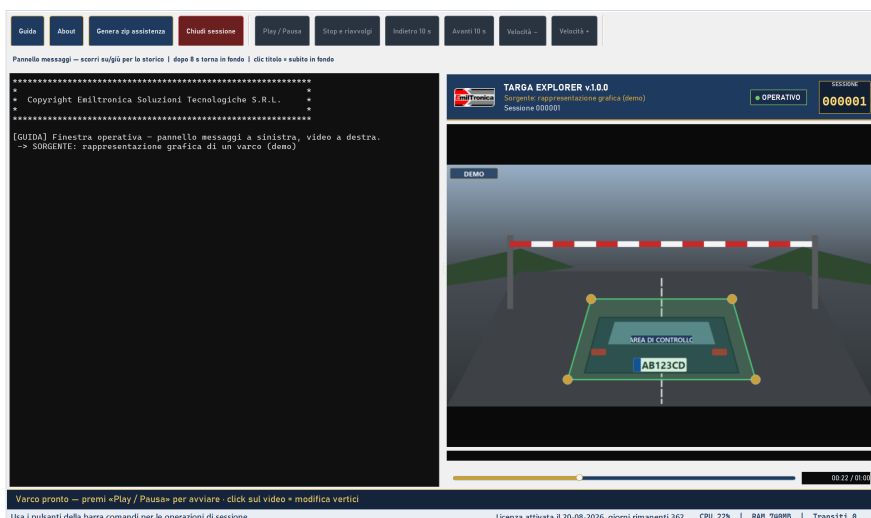
Clip: notion and conditions

«Clip» denotes a short recording relating to the transit: 10 seconds before entry into the control area, the entire passage and 10 seconds after exit. The photograph remains on the dominant frame. In guided setup a single mode is chosen among three mutually exclusive options: no clip, clip for target transits only, or clip for all recorded transits. What the operator obtains depends on the mode chosen, on the source and on the presence of recorded transits.

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Combination	What the operator obtains
No clip	No video file. Register, photographs and PDF remain.
Target transits only, at least one target detected	File in the clip subfolder for each recorded target transit.
All transits, at least one recorded transit	File in the clip subfolder for each recorded transit (limited traffic recommended).
Clip mode active, no eligible transit	No video file; the summary PDF indicates this.
Local file with forensic extract (if active)	Bitstream extract from the original recording, with SHA-256 hashes in the PDF.
Dominant frame in the first seconds of the session	Clip shorter than 20 seconds in the preceding part: no images exist prior to opening of the source.

17. Operational window and command bar



Structure of the operational window: command bar at the top; on the left the message panel; on the right the video area; below, the one-line instruction strip.

The operational window is the environment in which the entire session takes place. It comprises: the command bar at the top; the main area divided into two columns (on the left the message panel, with space for numerous history lines; on the right the video area with the original proportions of the source); below the main area, the one-line instruction strip (contextual commands, for example during tracing of the gate); the recording progress indicator, when the duration is known, in the video area; the stream status data in the status bar. No analysis function is reachable from menus other than those described.

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Command bar: «Guida» is always active; some commands remain visible but not selectable in order to preserve continuity of the examination.

Commands available during the session

Button	Function
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Guida	Opens the present operator guide, in the version supplied with the program. The command is always available, even before tracing of the polygon.
About	Opens a window with program version, engine version, workstation code, applied licence, copyright and the support website. From the same window a new licence key is entered and the supplier update is applied: the program does not restart for the key alone. The command is always available.
Avvia sessione	Present when the operational window opens. Opens guided setup. It is not visible after «Conferma».
Play / Pausa	During polygon drawing it runs or freezes the video, if the source allows it: it does not start analysis. Once the polygon is closed it remains visible but is not selectable. After «Avvia analisi» it suspends or resumes. On live sources the pause freezes the last frame, while real time continues to elapse: the program does not perform the function of a recorder and the images of the period of suspension are not recoverable.
Avvia analisi	Appears next to Play when the polygon is closed. Opens an information notice with the session parameters; «Continua» starts detection from that frame.
Riavvia sessione	Visible after «Conferma», during drawing and once the polygon is closed, before «Avvia analisi». Reopens guided setup. The provisional folder is removed from the Desktop and the session number remains available. After «Avvia analisi» the button on the bar is not selectable.
Nuova sessione	Present only in the summary popup at the end of the session. Reopens guided setup. The folder just closed remains on the Desktop.

Chiudi sessione

Always selectable. Before «Avvia sessione» it does not close the program: the instruction strip indicates that the session has not yet been started and the program remains waiting. During guided setup and after «Conferma», until «Avvia analisi» is pressed, it interrupts without a folder and without a summary. After «Avvia analisi» it terminates analysis, writes the transit register and the summary documents, calculates the hashes provided and presents the on-screen summary only when writing is complete.

Commands visible but not selectable

The following commands remain visible on the bar and are not usable. The condition does not constitute a fault: it meets the requirement of keeping unchanged the parameters documented in the summary and the correspondence between playback times and real times.

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Button	Reason
Stop e riavvolgi	It is not a pause: it would take the recording back to the beginning. To suspend the image «Play / Pausa» is used.
Indietro 10 s e Avanti 10 s	Movement in the recording would interrupt continuity of the examination.
Velocità – e Velocità +	Alteration of speed modifies the correspondence between the times detected and real times.
Reset varco	The control area is documented in the summary: modification requires a new session.
Chiudi sessione	Before «Avvia sessione» the command is selectable but does not close: it indicates that the session has not yet been started. In all other phases it is selectable.

Operational note — End of a recording

At the end of a recording playback does not restart from the beginning: the message panel and the instruction strip under the window indicate that «Chiudi sessione» must be pressed for production of the register and of the summary documents. After the video has stopped the summary may appear several seconds later: the register must not be opened from the folder in that interval.

Under the video area a recording progress indicator is present (elapsed time relative to the expected duration). After detection has started the indicator is read-only: it is not draggable. During polygon tracing, on a local file, the bar is draggable in order to choose the frame; once the polygon is closed and after «Avvia analisi» it returns to being unusable. During drawing the points of the polygon are placed on the video image: scrolling of the recording takes place on the thin track of the indicator and with the movement commands, not by dragging the video area. On live streams without a known end the indicator is not shown.

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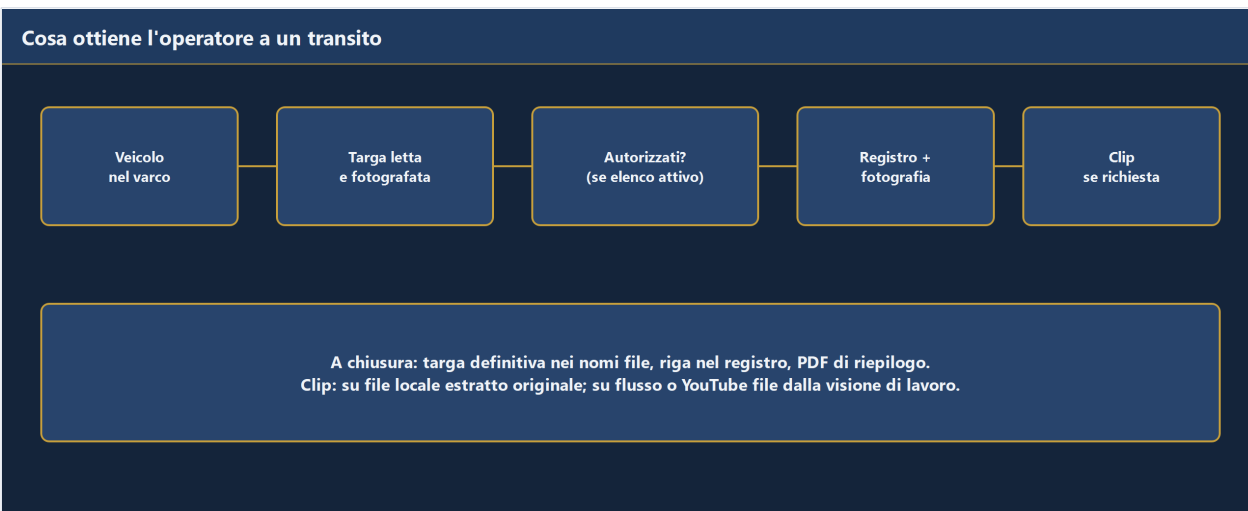
Status bar on the video

On the upper portion of the image a bar is superimposed that reports the mark, the identity of the engine in use (CHIARA ANPR Recognizing System V.2.0), the type of stream, the resolution in pixels, the number of frames per second and the encoding in use. The data make it possible to assess whether the source is adequate for reading of the plates: a reduced-definition profile is ordinarily insufficient, whatever the sensitivity set.

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18. Conduct of the analysis, observation, message panel

From the polygon to the register



From passage through the gate to documentation: register, photograph and, if requested, clip.

Once the control area is confirmed, analysis proceeds without intervention by the operator. The program examines the frames, identifies the plates inside the polygon, reads their characters, unites into a single transit the readings referring to the same vehicle and records the outcome. The operator observes and documents; there is no intervention on the parameters, which remain locked.

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Independently of the cadence of the source, recognition employs at most 25 frames per second and a working image at most Full HD (1920×1080). A higher cadence or resolution of the source does not increase the readings: the summary document indicates whether levelling has been applied. The window on screen shows a preview adapted to the display. Clips, when produced from a file present on the workstation, are extracted from the original recording at closure of the session and retain its native cadence and resolution.

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Indications superimposed on the image

The indications superimposed on the image, denominated boxes, indicate the processing state of each plate identified. The colour expresses the state.

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Indication	Meaning
Yellow box	Plate identified in the control area and under analysis. The transit is not yet consolidated.

Green box	Visual tag around the plate, outside the characters and without overlaid text. Live it indicates a closed transit with a provisional read (CHIARA 2.0): the photograph is already saved; the Excel register and the definitive classification are compiled at session closure.
Indication of plate to be searched	Provisional match with a plate indicated by the operator: the alerts provided are issued already live; the message panel indicates «Targa cercata — provvisoria» with IDc, IDi and IDe.
Whitelist vehicle indication	Exact match on a plate in the list: the message panel reports «Rilevata in whitelist»; no provisional transit, photograph, clip or Excel row.
Perimeter of the control area	Recalls the limits within which recognition takes place and reports the expected average permanence set.

Ordinary transit and transit on a plate to be searched

Every plate read with sufficient confidence gives rise to a transit. The transit is denominated ordinary when the reading does not match any plate to be searched; it is denominated transit on a target when the reading matches a plate indicated by the operator, in full or by fragment.

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Aspect	Ordinary transit	Transit on a plate to be searched
Recording	Reported in the register, if confidence reaches the threshold provided.	Reported in the register, with indication of the target.
Acoustic alert	Short signal, if the related boxes are active.	Distinct signal, with possible voice announcement.
Photograph	Saved.	Saved.
Clip	Produced if the clip mode provides for it (target only or all transits).	Produced if the «target only» or «all transits» mode is active and the transit falls within the choice.

One transit, one row in the register

A vehicle that crosses the control area appears in numerous frames. With CHIARA ANPR Recognizing System V.2.0, live the program records provisional transits in the message panel and saves the photographs; the Excel register and the definitive classification are compiled at closure of the session. The «Transito provvisorio» message reports three identifiers: IDc (capsule opened by the plate box in the area), IDi (identity election, at the first read) and IDe (plate elected live, still provisional). The identifier IDt, that is the plate written in the register, is assigned only at closure of the session and does not appear live. In the register a single row appears for each confirmed transit, with a single plate, the photograph of the dominant frame and, if the clip mode provides for it, the link to the video file. If at closure the plate is not confirmed, no row is compiled in the register: only the numbered photograph remains in the folder, not recallable from the register. A vehicle that leaves the area and re-enters it constitutes a new transit.

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In the message panel the lines follow a traffic-light scale: green indicates a correct outcome (provisional transit, plate being searched for, vehicle in the authorised list, register compiled); yellow indicates a problem (reading that did not enter because the parallel capsules are occupied, rectification, definitive reading absent); red indicates a serious fault (source or stream interrupted). Blue describes events of little weight (box without text yielded to a reading, transit already emitted with no new row); grey those of even less influence (box without text not opened, capsule closed without a reading). General descriptive texts (start-up, census in progress, commands) are in white. Such messages describe the outcome of the analysis expenditure live and do not replace the register.

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When a subsequent reading is more reliable than the one already recorded for the same transit, the program updates the row and reports it with the outcome of plate update. The update does not constitute a second transit.

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Interruption and reconnection of live sources

In the event of a drop of the stream from a camera or from a recorder the program attempts reconnection, up to a maximum of 10 attempts, reporting it in the message panel. Once that limit is exceeded the stream is abandoned and the session must be closed; the circumstance is reported among the critical issues of the summary document.

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- The images not received during the interruption are not recoverable: the transits that occurred in that interval do not appear in the register.
- If the resolution of the stream changes after a reconnection, the vertices of the control area are adapted to the new dimensions of the image.
- Repeated reconnections ordinarily signal a network problem or a stream that is too demanding: in the same situation use of the secondary channel may be assessed.
- The interruption must be detected by the operator before closure, because it affects the completeness of the documented activity.

Observation procedure

The following procedure is intended for the workstation operator and for the personnel charged with verification. Its purpose is to ascertain, during the conduct of the session, that the session is actually producing the expected documentation, avoiding discovery of an anomaly only at closure.

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1. Verify in the message panel confirmation of opening of the video source, and confirmation of the control area, with the number of vertices, the transit time and the number of parallel plates.
2. Verify in the status bar the resolution and the number of frames per second: a reduced-definition profile must be detected at once, because it affects the outcome of the entire session.
3. Observe the passage of the first vehicles and ascertain that the yellow boxes appear in the expected position; otherwise the polygon is placed in an unsuitable manner and the session must be repeated with a new configuration.
4. Ascertain that on passage of the vehicles green boxes appear and that the message panel reports the transits: the absence of transits in the face of regular traffic indicates a control area placed where the characters are not readable.
5. In the presence of plates to be searched, verify the audibility of the alert and note the time of each signal, for a more rapid check in the register, in the photographs and in the clips.
6. Detect any anomaly signals: unstable stream, reconnections, failure to produce a clip, proprietary container.
7. Before closure, note the number of transits indicated in the message panel, for comparison with the register and with the summary document.

Warning — Anomalies that require repetition of the session

A polygon placed in an unsuitable position, a source of insufficient definition and incorrect transcription of a plate to be searched are not correctable once the session is started, because the parameters remain locked. In such cases the session must be closed, which retains its own documents, and a new one started with the correct configuration.

Message panel

«Pannello messaggi» denotes the box present in the left column of the operational window, in which the program displays the messages intended for the operator: opening of the source, stream diagnostics, confirmation of the control area, recognised transits, alerts on the plates to be searched, exclusions for an authorised vehicle, anomaly signals. At the head of the box the Emiltronica copyright indication appears. One-line operational instructions (for example: press «Avvia analisi») do not belong to the message panel: they appear in the strip under the two columns.

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The message panel is a real-time control instrument and does not constitute documentation of the session. Documentation is formed by the transit register and by the summary documents present in the session folder, which report the parameters applied and the outcomes in stable form. Every line of the panel reports date, time and seconds of the event in the Italian day-month-year format (DD-MM-YYYY HH:MM:SS), so as to associate each message with the exact moment at which it was generated without ambiguity as to the day and the month.

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- The panel allows scrolling of previous messages; if the operator scrolls upwards, after about 8 seconds without further movement the display returns by itself to the most recent messages. Selection of the title immediately returns the display to the bottom.
- Under the two columns (message panel and video) the one-line instruction strip always remains. For the entire execution of the program it reports a single indication: the action to be taken at that moment (start session, tracing of the gate, «Avvia analisi», end of recording, «Chiudi sessione»). It does not repeat the history of the message panel. During closure of the session the strip invites waiting and not opening the register, the summary documents or the folder until the on-screen summary appears.

- The strip under the columns applies for the whole session, not only during tracing of the polygon. The messages of the panel on the left remain in the history and, as they scroll, do not stay visible: the useful instruction is on the strip.
- The date and the time with seconds appear at the beginning of every line in the format DD-MM-YYYY HH:MM:SS and make it possible to reconstruct the temporal sequence of the events observed during the session.
- The camera password does not appear in clear: it remains masked, both in the panel and in the summary documents.
- The content of the panel must not be transcribed as a record: the relevant indications are reported in the register and in the session summary.
- Anomaly signals must be detected before closure, when it is still possible to assess repetition of the session.

Operational note — What the message panel is not

The panel is not an archive consultable after a lapse of time and does not retain the sequence of messages beyond the duration of the session. The subsequent check of a transit is carried out on the register, on the photographs and on the summary documents stored in the session folder. With CHIARA ANPR Recognizing System V.2.0 live messages (provisional transit with IDc, IDi and IDe; provisional target plate; «Rilevata in whitelist») describe the event as it occurs. At session closure the panel reports, for each transit written in the register, IDp (read on the photograph) and IDt (register plate). The official documentation is the Excel register and the PDFs.



PART

IV — Video clips

19. What video clips are

«Clip» means a video segment of limited duration saved as a stand-alone file in the clips subfolder inside the session folder. The clip reproduces the passage through the control area: 10 seconds before entry, the entire presence and 10 seconds after exit. It is not centred on the photograph frame alone. It does not constitute a copy of the complete recording of the source: the program does not in any case archive the entire recording nor the entire stream received from the camera.

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Production of clips is optional. It must be requested on the page of the gate functions with one of three choices: no clip, clip for target transits only, clip for all recorded transits. In the absence of a request the program nevertheless documents the transits in the register and in the summary PDF, without producing any video file.

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What clips are for

The register and the photograph document the outcome of the reading at a determined instant. The clip documents the dynamics of the passage: approach, crossing of the control area and departure. It makes it possible to check direction of travel, presence of other vehicles and visibility conditions.

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With the «all transits» mode active the program produces a clip for each recorded transit. With «target only» the clip concerns only the plates placed under search. The «all transits» choice is suitable for gates with limited traffic: every passage generates a video file.

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The time window

The extent is predefined and is not modifiable: 10 seconds before entry and 10 seconds after exit. The overall duration is therefore more than 20 seconds, because it also includes the time of transit in the area. It is shorter only if entry falls in the first seconds of analysis, because the program does not have images prior to opening of the source, or if the session closes before the margin after exit. The actual duration of each clip is annotated in the summary PDF.

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Combinations of use: what the operator obtains

Source	Clip mode	Eligible transits	Files obtained	Annotation in the PC
--------	-----------	-------------------	----------------	----------------------

File on the workstation	None	Indifferent	None	Clip not requested
File on the workstation	Target only	At least one target	clip_... .mp4 (or probatorio if active)	Operational or forensic extract; hashes if probatorio
File on the workstation	All transits	At least one	clip_... or clip_probatorio_...	As above, for each recorded transit
IP stream or YouTube	None	Indifferent	None	Clip not requested
IP stream or YouTube	Target only or all	Eligible transits	clip_... .mp4 from the working view	Resampled crop; not a copy of the original container
Any	Mode active	None eligible	None	No clip created

Funzionalità varco
Alerti sonori, cattura fotogrammi, whitelist e una sola clip per ogni transito registrato (sul file locale: ad uso probatorio; su stream e YouTube: dalla visione di lavoro già ricampionata).

Tipi alert: A = bip scheda madre, B = voce, C = tono altoparlante. Attivando un'opzione puoi ascoltare un'anteprima.

Funzionalità varco

☐ Bip scheda madre

☐ Voce «Targa trovata»

☐ Bip tono altoparlante

☒ Cattura fotogrammi

Clip video

☐ Nessuna clip

☐ Solo transiti target

☒ Tutti i transiti registrati

Su stream IP e YouTube non esiste un file originale da cui copiare il bitstream. La clip si ritaglia dal buffer della visione di lavoro (già ricampionata): 10 s prima dell'ingresso, l'intero passaggio, 10 s dopo l'uscita. I pezzi restano in memoria e si scrivono su disco a fine sessione (o a gruppi, con una pausa del rilevamento se la RAM si riempie). Dopo la lettura definitiva sulla fotografia i file prendono il nome targa. Non è una clip ad uso probatorio.

Diagnostica tecnica

☒ Log tecnici di sessione

Scrive in log i file numerati con il prefisso sessione (es. 000538_diagnosi_trace.log, 000538_diagnosi_ruidita.log, 000538_diagnosi_scr.json) più sessione.json e altri JSON tecnici. Il file diagnosi_scr.json registra le risposte di YOLO e Paddle (riquadri e stringhe con voto, senza fotogrammi). Utile per analisi post-sessione e supporto Emiltronica, importo tracciabile su CPU e memoria. Default: attivo.

☐ Notifica email targa trovata ☐ Notifica email ogni transito

Se attiva, a ogni transito che corrisponde a una targa in ricerca viene inviata una mail con lo screenshot, se disponibile. Alternativa a «Notifica email ogni transito»: se ne accende una. Entra si spegne. Occorre confermare i parametri del mailserver («Param per test» è facilitativo). Tra un invio e il successivo il programma attende 15 secondi.

Avvertenze: consigliato solo per uso su traffico privato. Tra un invio e il successivo il programma attende 15 secondi.

Guida **Genera zip assistenza** **Indietro** **Avanti**

Page of the gate functions: video clip choice (three mutually exclusive modes), alerts and frame capture.

Warning — Clips and readings «Da verificare»

Transits that remain classified «Da verificare» for confidence below the threshold alone, and that do not enter the register, do not generate clips. Transits present in the register, even if classified «Da verificare» for other reasons (lost characters, completion during the passage, stop), produce the clip if the option is active.

20. Clips on a file present on the workstation

When the source is a video file already present on the workstation and the clip option is active, at closure of the session the operator obtains, for every recorded transit, a file in the clips subfolder. The file is an extract of the original recording: the images are not recompressed. The summary PDF shows the SHA-256 hashes of the source file and of the extract, the name of the source file and the duration.

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The name takes the form clip_probatorio_SESSIONNUMBER_DD-MM-YYYY_time_transito N_PLATE, with the extension of the source container. The session number appears first; the date is in the Italian day-month-year format; the time is that of the dominant frame, identical to the date and time of the register and of the names of photograph and thumbnails.

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If extraction does not succeed (container not copyable, file moved during the session), the PDF annotates the reason and the transit remains documented in any case by register and photograph.

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Prohibition — The clip does not replace the original

The extract does not replace the original video file, which must be retained by the authority according to internal provisions. Production of a clip does not authorise deletion of the source recording.

21. Clips on a live stream and on YouTube

When the source is a network stream or a publicly accessible video on the network, no original file from which to copy the container exists on the workstation. With the clip option active the operator nevertheless obtains, for every recorded transit, an MP4 file in the clips subfolder: 10 seconds before entry, the entire passage and 10 seconds after exit.

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The file is obtained from the frames received from the stream, at the camera cadence. It does not report hashes of the original container. The name takes the form
clip_SESSIONNUMBER_DD-MM-YYYY_time_transito N_PLATE.mp4.

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In the summary PDF the clip section indicates the method (crop from the working view) and lists the files produced with plate, time and duration.

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22. Conditions of production and checks

The following table makes it possible to establish, before starting the session, which video documentation will be available at closure.

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Clip option	Source	Event	Outcome for the operator
Deactivated	Any	Indifferent	No video file; register and PDF remain
Active	File on the workstation	Recorded transit	Extract of the original file, about 20 s, hashes in the PDF
Active	File on the workstation	No transit	No file; the PDF indicates this
Active	IP stream or YouTube	Recorded transit	File from the working view, about 20 s
Active	IP stream or YouTube	No transit	No file; the PDF indicates this

The option has no retroactive effect: it concerns the transits of the session in progress. If video documentation of a gate already analysed without clips is required, the session must be repeated on the same recording with the option activated.

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Warning — Occupation of disk space

At a gate with intense traffic, production of a clip for every transit may occupy substantial space. Before a prolonged session the free space on the workstation disk must be verified.

23. The clips subfolder

Clips, when produced, are collected in a subfolder denominated clip inside the session folder. The path is reported in the summary PDF. The files must not be renamed: the register recalls them with the original name, by means of the column «Apri clip».

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24. Checks by the operator and by the inspector

1. Ascertain in the PDF whether the clip option was active and which method is indicated (extract from the file or crop from the working view).
2. On at least one row of the register, select «Apri clip» and ascertain that playback starts.
3. Compare the time of the clip with the date and time of the row and with the name of the photograph: they must coincide.
4. Verify that the duration is more than 20 seconds (10 s before entry, passage, 10 s after exit), except for transits in the first seconds of the session or on early closure.



PART

V — Session archive

25. The session folder

«Cartella della sessione» means the folder that the program creates automatically at the start of every session and in which it places all the documentation produced: the transit register, the summary documents in PDF format, the photographs of the transits and any video clips. The folder constitutes the archive of the session: outside it the program does not save any document consultable by the operator.

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Creation occurs on selection of «Conferma» in guided setup, after «Avvia sessione» on the command bar, and not on start-up of the program. A session interrupted before that confirmation therefore leaves no folder on the workstation.

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Where the folder is located

The program uses the Desktop of the Windows user with which the workstation was started. «Desktop» means the initial Windows screen on which the icons and shortcuts appear; the same position corresponds to a system folder, openable from File Explorer. On the Desktop the program creates, at first use, a folder denominated *sessioni*, which subsequently collects one subfolder for each session.

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The complete path therefore takes the following form, in which the variable part reports the date and time of start and the progressive number assigned to the session:

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Desktop / *sessioni* / Sessione 000NNN - DD-MM-YYYY_HH-MM-SS /

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- Sessione 000NNN appears first: it is the progressive number assigned by the program and makes it possible to recall the session in the summary documents and in the file names.
- DD-MM-YYYY indicates the day, the month and the year of start according to European usage (no ambiguity between day and month).
- HH-MM-SS indicates the hour, the minutes and the seconds of start, according to the workstation clock. For a chronological list in File Explorer the folders must be sorted by date modified.



Archive on the workstation: the sessioni folder on the Desktop contains one subfolder for each session, with the documents and images produced.

Operational note — Workstation clock

The date and time reported in the folder name, in the transit register and in the summary documents come from the workstation clock. Verification of the correctness of the Windows date and time must be carried out before starting the session: an incorrect clock produces incorrectly dated documentation, not correctable at a later moment.

Order of consultation

The folder must be consulted in the order indicated below. The order is not arbitrary: each step provides the elements necessary for interpretation of the subsequent step. Reading of the register alone, without the summary document, does not make it possible to establish with which parameters the session was conducted.

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1. Session summary document: identifies the video source, the locked parameters, the control area, the options selected and the overall statistics.
2. Transit register: reports the individual reading, with date, time, plate and outcome.
3. Photographs and thumbnails: allow the visual check of the reading reported in each row of the register.
4. Video clips, if present: document the time interval close to the transit of a plate placed in search.

5. Summary document of authorised vehicles, if the list was active: certifies which plates were excluded from recording.

Content of the folder

The table reports the elements that may appear in the folder, the indication of their constant or conditional presence and the respective content. Entries that end with a slash character are subfolders.

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Element	Presence	Content
registro_transiti.xlsx	Always, even without rows	Transit register, with plate thumbnails and links to the photographs
riepilogo_sessione.pdf	At closure of the session	Summary document: source, stream diagnostics, parameters, control area, options, statistics
riepilogo_whitelist.pdf	At closure of the session	Certificate of the list of authorised vehicles: option state, list adopted, exclusions applied (if the whitelist option was active; otherwise it declares so)
Operator guide in Italian	Always	Copy of the present guide, placed by the program at the start of the session
Operator guide in English	Always	Copy of the English edition of the present guide
screenshot/	Always	Photographs of the entire frame, recalled from the register
thumbs/	Always	Thumbnails of the plate only, inserted in the register sheet
clip/	If a clip mode was active and at least one eligible transit was recorded	Video files according to the mode chosen (target, all transits, forensic extract on a local file)
log/	Always (metadata); diagnostic files if the option «Log tecnici di sessione» is active	Technical files: sessione.json, transiti_provvisori.json, diagnosi_tracce.log, diagnosi_fluidita.log, diagnosi_ocr.jsonl, diagnosi_cascata.jsonl and other logs/JSON for support

The presence of the copy of the guide in both language editions meets a documentary purpose: whoever receives the folder has, together with the session documents, the text that describes its formation and its limits, even after a lapse of time from the session and on a workstation different from the one used.

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Elements not present in the folder

Some elements that the operator might expect do not appear in the folder. Their absence is deliberate and does not constitute a defect.

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- The complete recording of the source: the program does not archive the complete recording nor the entire stream received from the camera. The source recording, when it exists, remains in the location established by the authority.
- The list of authorised vehicles as a stand-alone editable file: the list adopted is certified in the dedicated summary document.
- The camera password in readable form: in the interface and in the summary documents it remains masked.
- A recording of the messages that appeared in the message panel: the panel is a real-time control instrument and does not constitute documentation of the session (technical logs are in log/ and do not replace the panel).
- Documents relating to other sessions: each session has a distinct folder.

log subfolder (technical documentation)

The «log subfolder» means the folder named log inside the session folder. The program places there exclusively technical files: session metadata, diagnostic logs of the CHIARA ANPR Recognizing System V.2.0 engine and of the video stream, JSON files and other artefacts used for post-session analysis and for supplier support. Such elements do not constitute operational documentation and must not be confused with the register, PDFs, photographs or clips, which remain in the main folder or in the screenshot/, thumbs/ and clip/ subfolders.

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Item in log/	Presence	Content
sessione.json	Always	Session metadata (parameters, masked source, statistics, summary diagnostics)

transiti_provvisori.json	During and after the session	Provisional list of transits observed live (completed at closure)
diagnosi_tracce.log	If the option «Log tecnici di sessione» is active	Traces of the recognition engine (filename: NNNNNN_diagnosi_tracce.log)
diagnosi_fluidita.log	If the option «Log tecnici di sessione» is active	Video lag, underrun and playback fluidity (NNNNNN_diagnosi_fluidita.log)
diagnosi_ocr.jsonl	If the option «Log tecnici di sessione» is active	Boxes located and character reads with score, one JSON line per call, no photographs. If the intra-frame option is also active, each line indicates whether the attempt took place on an intra frame (NNNNNN_diagnosi_ocr.jsonl)
diagnosi_cascata.jsonl	If the option «Log tecnici di sessione» is active	Settings cascade and unrecorded traffic: sampled rejects, missed transit (m=perso) always, one-minute summary, no frames (NNNNNN_diagnosi_cascata.jsonl)
sessione_operazioni.jsonl	Always	Lightweight log of session events in real time (NNNNNN_sessione_operazioni.jsonl)
sessione_snapshot_avvio.json	Always	Snapshot of parameters and environment at start (NNNNNN_sessione_snapshot_avvio.json)
sessione_snapshot_chiusura.json	After regular closure	Final snapshot, statistics and file inventory (NNNNNN_sessione_snapshot_chiusura.json)
Other .log or .jsonl files	Conditional	Any additional technical logs with NNNNNN_ prefix (e.g. test audit)

The option «Log tecnici di sessione» is set on the gate functions page of guided setup and is active by default. Repeated rejects are sampled (at most two per second per type) and no frames are stored: the impact on workstation CPU and memory remains modest. If the option is off, the log/ subfolder still contains sessione.json and other metadata required for internal operation of the program.

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Operational note — Separation from service documentation

Register, PDFs, photographs and clips remain at the main level of the session folder. Files in log/ are for Emiltronica technical support. The ordinary way to prepare them for transmission, when the authority authorises reporting to the supplier, is the «Genera zip assistenza» button, described in chapter 34.

Warning — The folder constitutes a unitary set

The links from the register to the photographs are relative to the folder: removal, renaming or movement of part of the content interrupts those links and deprives the rows of the register of the visual check. For retention and for transmission the folder must be copied in full, as described in chapter 30.

26. The transit register

The transit register is the document that reports one row for each transit recorded during the session. It bears the designation `registro_transiti.xlsx` and resides in the session folder. The format adopted is that of spreadsheets: it allows sorting and filtering of the rows, insertion of the thumbnails and the links to the photographs and to the clips.

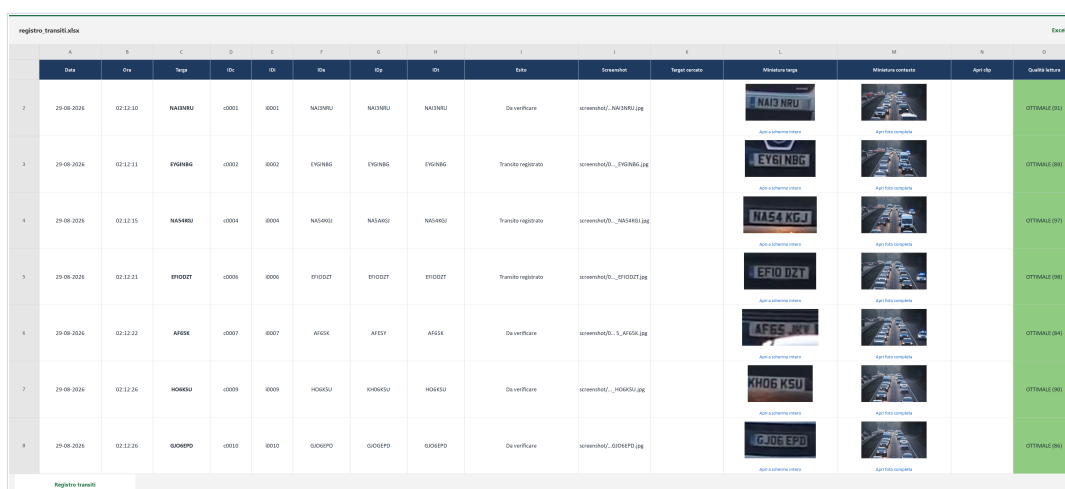
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The document is produced by the program in any case, independently of the programs installed on the workstation. For its opening a spreadsheet program is necessary; in the absence of such a program on the workstation, the register remains consultable on another workstation, without that entailing any loss of data.

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The register must be opened from the summary window, after the button «Apri Excel» has appeared, or from the session folder after that button has appeared. Opening during analysis or during closure, when the video has already stopped but the opening buttons are not yet visible, may cause a notice of unreadable content to appear: in that case the notice must be closed without recovering the file and the buttons must be awaited.

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	Date	Ora	Targa	IDa	IDb	IDc	IDd	IDe	IDf	IDg	IDh	IDi	IDj	IDk	IDl
2	29-08-2024	02:12:10	NA13NRU	<0001	0001	NA13NRU	NA13NRU	NA13NRU	Da verificare	screenShot_..._NA13NRU.jpg					OTTIMALE (91)
3	29-08-2024	02:12:11	EN61NBS	<0002	0002	EN61NBS	EN61NBS	EN61NBS	Transito registrato	screenShot_..._EN61NBS.jpg					OTTIMALE (88)
4	29-08-2024	02:12:15	NA54KJG	<0004	0004	NA54KJG	NA54KJG	NA54KJG	Transito registrato	screenShot_..._NA54KJG.jpg					OTTIMALE (97)
5	29-08-2024	02:12:21	EP10DZT	<0006	0006	EP10DZT	EP10DZT	EP10DZT	Transito registrato	screenShot_..._EP10DZT.jpg					OTTIMALE (86)
6	29-08-2024	02:12:22	AF65JTV	<0007	0007	AF65JTV	AF65JTV	AF65JTV	Da verificare	screenShot_..._AF65JTV.jpg					OTTIMALE (94)
7	29-08-2024	02:12:26	HN06KSU	<0009	0009	HN06KSU	HN06KSU	HN06KSU	Da verificare	screenShot_..._HN06KSU.jpg					OTTIMALE (86)
8	29-08-2024	02:12:26	GU06EPD	<0010	0010	GU06EPD	GU06EPD	GU06EPD	Da verificare	screenShot_..._GU06EPD.jpg					OTTIMALE (89)

Transit register (`registro_transiti.xlsx`) after session closure: header row and recorded transits.

The columns of the register

The sheet reports fifteen columns, preceded by a header row with the names of the columns themselves. The header row allows use of the automatic filter of the spreadsheet program. The header row is the first row of the sheet. Each column occupies only the space required by the text or the image: at full screen all columns remain visible without horizontal scrolling.

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Column	Content
Data	Day of the dominant frame, according to the workstation clock
Ora	Hour, minutes and seconds of the dominant frame; coincides with the names of photograph, thumbnails and clip
Targa	Single reading selected for that transit (coincides with IDt)
IDc	Identifier of the transit capsule
IDi	Identifier of the identity election
IDe	Plate elected live, still provisional
IDp	Read obtained on the photograph at closure of the session. If it differs from the Targa column, IDt remains the chosen value
IDt	Definitive register plate, coinciding with the Targa column
Esito	Operational classification of the transit
Screenshot	Relative path of the photograph of the entire frame
Target cercato	Correspondence of the row with one of the plates placed in search
Miniatura targa	Reduced-size image of the plate only, inserted in the sheet, with a full-screen link
Miniatura contesto	Reduced-size image of the capture (vehicle and scene), with a link to the complete photograph
Apri clip	Link that starts the clip of the transit, if produced
Qualità lettura	Informative assessment SCARSO, BASSO, MEDIO or OTTIMALE, with cell colour (red, orange, yellow, green)

Each column is defined in detail in the following paragraphs. The column names remain in Italian also in the English edition of the guide, because they coincide with what is reported in the sheet. The column Qualità lettura is informative only: it does not determine whether the row enters the register, nor the outcome, nor production of the clip. The check of the plate is carried out on the photograph and, where produced, on the clip.

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Data

It reports the day of the dominant frame, according to the workstation clock, not according to the time possibly overlaid on the image by the camera. The value coincides with the date present in the names of the photograph, of the thumbnails and of the clip. When the two clocks are not aligned, the two values may differ: the circumstance must be detected before the session and, if relevant for the finding, annotated by the authority in a distinct document.

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Ora

It reports hour, minutes and seconds of the dominant frame, that is of the frame from which the photograph, the thumbnails and, if produced, the clip are obtained. The value coincides with the time present in the names of those files. On a live source that instant coincides, save for fractions of a second, with the actual passage; on a recorded footage it corresponds to the moment at which that frame of the recording was analysed.

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Targa

It reports the single reading selected for that transit. During crossing of the control area the same plate is examined in numerous frames: the program unites those readings into a single transit and records only one, the one deemed most reliable. The register therefore does not report all the intermediate readings, which do not constitute distinct transits.

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The characters are reported in upper case and in bold, as a rule without spaces and without punctuation marks. The bold type distinguishes the definitive plate from the IDe, IDp and IDt columns, which report the same text or the intermediate readings in regular type. The absence of separators does not constitute an alteration of the datum: it meets the requirement of allowing automatic comparison with the plates placed in search. Plates of any European format are also recorded, provided the characters are readable: it is not required that the format coincide with that of a single national registry.

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IDc, IDi, IDe, IDp, IDt

The five columns report the identifiers already described in the glossary, in the same form in which they appear in the message panel. IDc and IDi identify the capsule and the election. IDe, IDp and IDt are the read states obtained: IDe live, IDp on the photograph, IDt in the Targa column. If a stage produced a different text, the difference remains visible against the Targa column; if it produced no text, the column coincides with the previous state.

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Esito

It reports the operational classification assigned to the transit. The outcomes constitute a closed list: the following table reports their full meaning.

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Esito	Meaning
Transito registrato	Vehicle recognised in the control area, without correspondence with the plates placed in search
Targa cercata	Correspondence with one of the plates placed in search, or with the fragment indicated: the alerts provided have been issued
Escluso da lista	Plate present in the list of authorised vehicles and not placed in search: the transit does not contribute to the statistics of recorded transits
Aggiornamento targa	Subsequent reading that rectifies a previous reading of the same vehicle, deemed more reliable
Da verificare	Reading that requires a check: confidence below the internal threshold (in the register only if the related option was active), or consolidated transit with characters lost after the full reading, completion during the passage or closure for a stop

Screenshot

It reports the path of the photograph of the entire dominant frame. The path is relative to the session folder: it indicates the position of the file inside the photographs subfolder, not an absolute position on the disk. The column remains empty only if the photograph of that transit was not saved.

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The photograph reproduces the entire dominant frame and not the crop of the plate only. With CHIARA ANPR Recognizing System V.2.0, if the source is wider than the working frame, the photograph is taken from the original of the camera or of the recording, not from the reduced copy used for live analysis. The clip, if requested, covers 10 seconds before entry and 10 seconds after exit: on a file present on the workstation it is cut from the original container; on a live stream it is reconstructed from the frames of the working view. The file name, after closure of the session, reports the session number, the date and time of the dominant frame, the progressive transit number and the definitive plate. Date and time coincide with the columns of the register and with the names of the thumbnails and of the clip. The file must not be renamed, because the links present in the sheet recall the original designation.

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Target cercato

It indicates whether the row corresponds to one of the plates placed in search in guided setup. The field remains empty when no plate to be searched was indicated, or when the recorded reading does not correspond to any of them. The column makes it possible to identify rapidly the transits that determined the issue of alerts and the production of clips.

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Miniatura targa

It reports a reduced-size image, obtained from the frame of the transit and limited to the portion occupied by the plate, without the coloured highlighting box. The image is inserted in the sheet and remains visible without opening any other file: it allows the immediate check between the characters recorded in the plate column and the characters actually present in the image.

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The thumbnail is produced at high quality so that the characters remain readable at a glance. It is obtained from the crop of the plate on the original photograph, not from a further reduction. The coloured box appears only in the complete photograph, traced outside the plate so as not to overlay the characters. The link in the same cell opens the thumbnail full screen with the workstation viewing program.

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Miniatura contesto

It reports a reduced-size image of the entire capture of the transit, not of the plate only. It is inserted in the sheet and remains visible without opening other files. It makes it possible to identify the vehicle by characteristics visible in the scene (for example the colour) even when the plate is not known in advance. The thumbnail is obtained from the same original photograph of the transit, so that the scene remains recognisable. The link in the same cell opens full screen the HD photograph from which the thumbnail was obtained.

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Apri clip

It reports a link that starts the clip of the transit with the workstation playback program, when the clip has been produced. The cell remains empty if no clip exists for that transit. The links of the sheet are relative to the session folder: they remain valid if the folder is copied in full.

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If selection of a link of the register produces no effect, the possible causes are two. The first consists in the movement or renaming of a file after closure of the session, or in the copy of the register alone without the image and clip subfolders. The second consists in the blocking of external links by the spreadsheet program, which in that case presents a security notice: the links of the document must be authorised.

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Qualità lettura

It appears in the last column on the right and is compiled for every row, including those with outcome «Da verificare». The assessment derives solely from the degree of certainty with which CHIARA ANPR Recognizing System V.2.0 reconstructed the characters on the plate crop, at closure of the session. From 1 to 50 it is indicated as SCARSO, with a red cell; from 51 to 60 as BASSO, with an orange cell; from 61 to 80 as MEDIO, with a yellow cell; from 81 onwards as OTTIMALE, with a green cell. Beside the label the value in points from 1 to 100 appears.

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The column does not affect the admission filters, the operational outcome or production of the clip. It remains an aid to reading of the sheet: the check of the plate is carried out on the photograph and, where produced, on the clip.

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Quality control of the register

Before considering the documentation of the session concluded, the content of the register must be compared with the summary document. The comparison is not a formality: it makes it possible to detect a configuration different from the one intended, or a session conducted on a source different from the one expected.

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1. Compare the number of rows of the register with the number of transits reported among the statistics of the summary document.
2. Verify that the plates placed in search reported in the summary document correspond to those intended for the service.
3. If the option relating to readings to be verified was deactivated, ascertain that no row «Da verificare» due to confidence below 65% alone appears in the register. Rows «Da verificare» relating to consolidated transits with loss of characters, completion during the passage or closure for a stop may appear.
4. If the list of authorised vehicles was active, ascertain that the rows with exclusion outcome correspond to the plates certified in the dedicated document.
5. Select the link under the plate thumbnail on at least one row and ascertain full-screen opening. Select the link under the context thumbnail and ascertain that the HD photograph opens. If a clip is present, select «Apri clip» and ascertain that playback starts.
6. Compare the characters reported in the plate column with those visible in the plate thumbnail, in particular for the rows with outcome «Da verificare».
7. Compare the context thumbnail with the expected scene (for example the colour of the vehicle), then open the complete photograph if necessary.
8. Ascertain that the date and time of the rows are compatible with the duration of the session reported in the summary document.

Warning — Register without rows

The absence of rows under the header does not indicate a damaged document. The possible causes are the absence of vehicles in the control area, the exclusion of all recognised plates by effect of the list of authorised vehicles, or the presence of readings below the internal threshold only, without consolidated transits to be verified for lost characters, completion or stop, with the related option deactivated. The check must be carried out on the statistics of the summary document, according to what is described in chapter 32.

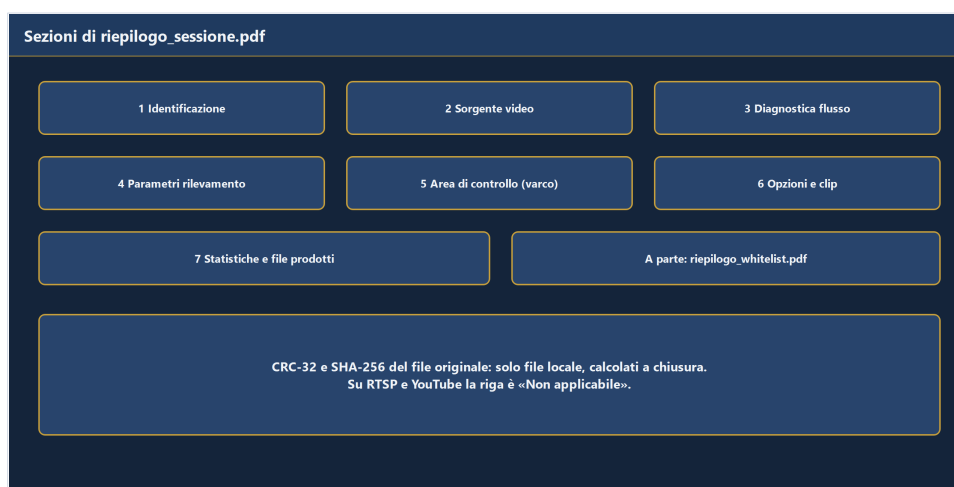
Prohibition — Modification of the register

The register must not be modified, supplemented or corrected by hand. The documentation of the session retains value only if it remains unchanged; a rectification made to the sheet is not distinguishable, at a later moment, from the datum produced by the program. Any rectifications must be reported in a distinct document by the authority, with indication of the session to which they refer.

27. The session summary document

The session summary document bears the designation `riepilogo_sessione.pdf` and is produced at closure of the session. It reports the conditions in which the analysis was conducted: the source used, the technical characteristics of the stream, the parameters locked after confirmation, the control area, the options selected and the overall statistics. It constitutes the document to be consulted first, because it makes it possible to interpret all the rest of the folder.

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Order of the sections of the session summary document; the list of authorised vehicles is certified in a distinct document.

The sections always appear in the order described below. Some rows may report the indication of a datum not applicable: the circumstance is normal on live sources, for which no file of which to calculate the characteristics exists, and does not constitute a gap in the document.

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1. Identification

It reports the progressive number of the session, the path of the folder on the Desktop, the start time, the end time and the overall duration.

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2. Video source

It reports the type of source used, that is stream from a camera or recorder, recording present on the workstation or publicly accessible video on the network, and the corresponding path or address. In the address of a network stream the password remains replaced by asterisks. The datum must be compared with the source intended for the service: a source different from the one expected makes the documentation not relevant.

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3. Stream diagnostics

It reports the technical characteristics of the material analysed. The section makes it possible to establish whether the source was adequate for reading of the plates and, in the case of recordings, whether the file was conforming to the standard or produced in a proprietary container of the manufacturer.

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Item	Meaning
Protocollo	Mode of transport of the stream, when the source is a camera or a recorder
Contenitore e firma iniziale	Structure of the file and marker placed at its beginning: distinguishes a file conforming to the standard from a proprietary container
Estensione e nota	Extension of the file and signalling of discrepancies between extension and actual content
Compressione e profilo	Mode of encoding of the images and related profile
Risoluzione e megapixel	Dimensions of the image in pixels and estimated value in megapixels
Fotogrammi al secondo	Number of images per second made available by the source
Fotogrammi di lavoro e livellamento	Appears if the source exceeded 25 frames per second and/or Full HD: recognition employs at most 25 fps and 1920×1080, without altering the source file
Durata e numero di fotogrammi	Temporal extent of the material analysed
Dimensione del file	Space occupied by the source recording, when it exists
Impronte CRC-32 e SHA-256	Values calculated on the source recording, reported only for files present on the workstation
Traccia audio	Indication that any audio is not analysed by the product
Valutazione della qualità	Synthetic judgement on the suitability of the stream for analysis of the plates

Riconessioni

Number of interruptions and restorations of the stream during the session

The CRC-32 and SHA-256 hashes are values calculated on the content of the source recording: any modification of the file produces different values. Their presence in the document makes it possible to establish, at a later moment, whether the recording retained by the authority corresponds to the one actually analysed. Recalculation of those values is reserved to technical personnel.

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4. Detection parameters

It reports the plate search window selected (1 line or 2 lines), the crop threshold, the state of the option relating to readings to be verified, the list of plates placed in search and the state of fragment search. These are the values locked for the entire session: the section makes it possible to establish with which criteria the register was formed.

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5. Control area

It reports the transit time set, the number of plates expected in parallel, the list of vertices of the polygon, the instant of start of detection fixed at confirmation of the area (time in the recording and, on a local file, frame number and total frames) and, when available, the image of the control area. The section documents the portion of the image within which recognition took place: if the vertices do not correspond to the intended capture point, the session must be repeated, because the polygon is not modifiable once the session is started.

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6. Options and clips

It reports the state of all the selection boxes of the page of the gate functions at the moment of confirmation, the designation of the clips produced with the related actual duration, the SHA-256 hashes provided for the extracts for evidential use and the reason for any failure of production. Chapter 23 describes in detail the reading of this section.

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7. Statistics and files produced

It reports the number of transits recorded, the number of photographs saved, the number of clips produced and the list of documents present in the folder. It constitutes the section to be used for comparison with the transit register, according to the quality control described in chapter 26.

Operational note — Indication of a datum not applicable

The indication of a datum not applicable on the rows of the hashes, of the duration and of the file size is the ordinary condition of live sources, such as a stream from a camera or a publicly accessible video on the network: in such cases no file exists on the workstation of which to calculate the hash. The documentation of the session remains complete.

Warning — Retention of the document with the source recording

When the session was conducted on a recording present on the workstation, the summary document must be retained together with the source recording. The hashes lose utility if the recording to which they refer is no longer retrievable, or if it has been converted into another format: conversion modifies the content of the file and produces different hashes.

28. The document of authorised vehicles

The document of authorised vehicles bears the designation `riepilogo_whitelist.pdf` and is produced at closure of the session, together with the summary document. It certifies the list adopted in the session and the number of exclusions applied. In the session summary PDF the whitelist option (yes/no) and the path of the dedicated PDF appear. Comparison with transiting plates is exact, without distinction between upper and lower case.

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The list of authorised vehicles is defined in chapter 16, among the gate options. «Veicolo autorizzato» means, in this guide as in the interface, a vehicle whose transit through the control area must not give rise to live recording: on an exact match the message panel reports «Rilevata in whitelist» and the transit does not generate a photograph, clip, Excel row or provisional count. The exclusion does not operate when the same plate is also placed in search: in that case the search prevails and the transit is recorded.

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Whitelist veicoli — revisione

Una targa per riga, in MAIUSCOLO (lettere A-Z e cifre 0-9). Puoi incollare un elenco da altre fonti (copia e incolla). Chiudi senza modifiche per usare l'elenco proposto (ultima sessione). Se modifichi il testo, le modifiche restano attive per la sessione.

AB123CD
EF456GH

Chiudi editor

Compilation of the list of authorised vehicles: the plates indicated are certified in the document produced at closure of the session.

What the document reports

- The session number and the start and end times, so that the document is traceable to the session that produced it.
- The indication of the state of the option: if the list was not active, the document declares it expressly.
- The complete list of authorised plates adopted in the session, in the form in which it had been compiled at the moment of confirmation.

- The number of exclusions actually applied during the session, that is how many times a plate of the list was recognised in the control area.

The number of exclusions applied makes it possible to explain the difference between the number of vehicles observed at the gate and the number of rows of the register. A register with few rows, in the face of intense traffic, frequently finds its explanation in a list of authorised vehicles that is too wide relative to the purpose of the service.

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What the document is not

- It does not constitute the transit register: the recorded transits result from the register and from the session summary document.
- It does not report the photographs of the excluded vehicles, because no image is saved for them.
- It does not attest the administrative authorisation of the vehicles indicated: it reports the list adopted by the operator, whose legitimacy is a matter for the authority.
- It cannot be modified after closure of the session: a different composition of the list requires a new session.

Warning — Personal data contained in the list

The list of authorised vehicles contains plates and therefore constitutes a set of personal data, like the transit register. The document must be retained and transmitted with the same precautions provided for the rest of the folder and must not be disseminated to persons extraneous to the service. Determination of the persons entitled to consultation is a matter for the data controller, according to what is recalled in chapter 3.

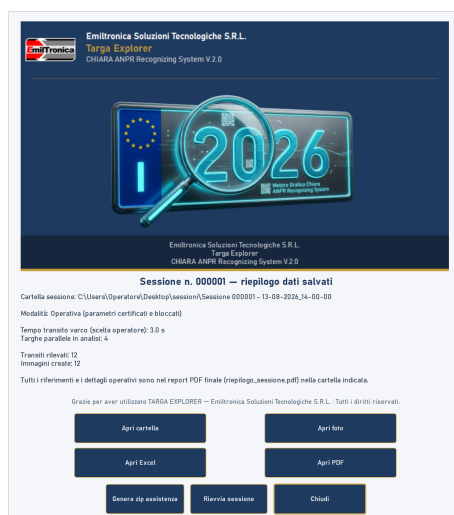
29. Closure of the session

Closure of the session is the operation with which the program completes the transit register, produces the summary documents, calculates the hashes provided and presents the on-screen summary. The summary window does not appear until every write in the session folder is finished: until that moment only the waiting window remains visible, without links. Until closure the session folder contains the register and the images, but not the summary documents: a session not closed in a regular manner therefore produces incomplete documentation.

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How the session is closed

1. Select «Chiudi sessione» on the command bar. Alternatively, after «Conferma» and before «Avvia analisi», select «Riavvia sessione»; from the summary window select «Nuova sessione» when it is necessary to start another acquisition immediately.
2. Wait for production of the documents without intervening on the workstation. A waiting window appears, not closable, and the instruction strip invites not opening the register, the PDFs or the folder. The summary window is not shown until the writes in the session folder are concluded. The video may stop several seconds before the summary: in that interval the program completes the register and the clips. On large recordings calculation of the hashes requires several seconds; in the same interval writing of the clips may be completed.
3. Read the summary presented on screen: session number, folder path, documents produced, number of transits and number of photographs.
4. Select, if consultation is immediate, the buttons that open the summary documents and the transit register. The button «Apri Excel» appears only when the register is complete and is no longer being written; the file must not be opened from the folder before that button appears.
5. Close the summary window and, when the service activity is concluded, leave the program with the button provided.



Summary window of a session: session number, folder, transits and buttons for opening the documents.

Warning — Regular closure

Switching off the workstation, forced closure of the program or interruption of the power supply during analysis produce a register without the last rows and a folder without the summary documents. The session must always be terminated with the closure button and the appearance of the button «Apri Excel» must be awaited.

Checks after closure

The following list reports the checks to be carried out on the folder before considering the documentation of the session concluded. The checks do not require technical knowledge: they consist in the comparison between what is reported in the documents and what was observed during the service.

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1. Ascertain the presence in the folder of the transit register and of the two summary documents.
2. Verify in the summary document the session number, the source and the options confirmed.
3. Verify that the source reported in the document corresponds to the one actually used.
4. Compare the number of transits reported among the statistics with the number of rows of the register.
5. Verify that the vertices and the transit time reported in the control-area section correspond to the gate observed on screen.

6. Open the register and select, on at least one row, the link under the plate thumbnail, the link under the context thumbnail and, if present, «Apri clip».
7. Ascertain the presence of the photographs and of the thumbnails in the respective subfolders.
8. If the clip options were active, open the clips subfolder and check the files present against what is reported in the dedicated section of the summary document.
9. If the clips subfolder is empty, check in the document the reason indicated, according to what is described in chapter 23.
10. If the list of authorised vehicles was active, open the dedicated document and verify the certified list and the number of exclusions.
11. Note, according to the internal provisions of the authority, any anomalies observed in the message panel during the session.
12. Copy the folder into the archive of the authority, according to what is described in chapter 30.

Operational note — Subsequent sessions on the same day

Every closure produces a distinct folder, with its own progressive number. Sessions conducted on the same day must not be united in a single folder: the separation makes it possible to trace each register to the parameters and to the source that correspond to it.

30. Retention of the archive

Retention of the documentation consists in the complete copy of the session folder into the archive of the authority. The folder constitutes the minimum unit of retention: the copy of the register alone, or of the summary document alone, does not make it possible to reconstruct the session and deprives the rows of the register of the photographic check.

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The session folder constitutes the unit to be copied in full, with documents, photographs, thumbnails and clips.

Copy procedure

1. Close the session and wait for the on-screen summary, according to what is described in chapter 29.
2. Leave the program, so that no document is in the course of being written.
3. Open the sessioni folder on the Desktop and identify the subfolder bearing the date and the number of the session.
4. Copy the subfolder in full into the archive provided by the authority: removable medium, network drive or documentary system.
5. Open the transit register from the new location and select, on one row, the link under the context thumbnail and, if present, «Apri clip»: opening of the files confirms the validity of the copy.
6. Open the summary document from the new location and ascertain that it is fully readable.
7. Retain the copy according to the internal provisions of the authority on access to and custody of service documentation.

The check described at the fifth point has a precise function: it ascertains that the copy also includes the image and clip subfolders. A partial copy presents itself with an apparently complete register, in which however the links to the photographs and to the clips produce no effect.

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Operations not allowed

- Photographs and thumbnails must not be renamed after closure of the session: the links present in the register would no longer be valid.
- Individual files must not be extracted from the folder in order to retain them separately: the extracted document loses the context that allows its interpretation.
- The documents of different sessions must not be united in the same folder, even when they concern the same gate.
- The register, the summary documents, the photographs and the clips must not be modified: the documentation retains value only if it remains unchanged.
- Photographs and clips must not be converted into other formats, because conversion modifies the content of the files and the hashes reported in the documents.
- The files in the log/ subfolder must not be opened, modified or removed except to prepare the report to support according to the procedures of the authority. The ordinary way is the «Genera zip assistenza» button (chapter 34).
- The archive produced by «Genera zip assistenza» must not be opened or modified: it is password-protected and intended for technical support.

Prohibition — Subsequent rectifications

An incorrect reading found after closure must not be corrected by intervening on the register, on the photographs or on the summary documents. The rectification must be reported in a distinct document by the authority, with indication of the session, of the row concerned and of the outcome of the check. The documentation produced by the program remains unchanged and in that way retains its own reliability.

Retention and protection of personal data

The session folder contains plates, images of vehicles and, to an unforeseeable extent, images of persons present in the scene captured. It therefore constitutes a set of personal data, whose processing remains subject to the General Data Protection Regulation (GDPR).

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Determination of the place of retention, of the persons entitled to consultation, of the security measures and of the retention period is a matter for the data controller, that is the authority in whose interest the check is carried out. The present guide does not establish retention periods and does not replace the determinations of the controller nor a legal opinion. The workstation operator applies the provisions received and does not decide autonomously on retention or on communication to third parties.

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- Unnecessary working copies must be avoided: every copy of the folder constitutes a further set of personal data to be safeguarded.
- Removable media used for transfer must be safeguarded according to internal provisions and must not be retained as a definitive archive.
- Transmission of the folder to persons external to the service must be authorised according to the procedures of the authority and does not fall within the operator's discretion.
- Deletion of the folder from the workstation, once acquired in the archive of the authority, must be ordered according to the same procedures.

The documentation produced by the program, with the parameters of the engine in use reported in the summary document, documents the operations performed and the conditions in which they were performed. The assessment of merit of the elements collected remains in any case a matter for the competent bodies.

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PART

VI — Limits, problems and FAQ

31. Product limits

The present chapter reports the limits of version 1.0 of the product in the form of a closed list. These are intended limits, not defects: none of them is surmountable by means of a different configuration, by means of support intervention on the workstation or by means of a different workstation. Knowledge of the list makes it possible to establish in advance whether a control activity can be carried out with the product.

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Limits relating to video sources

1. Only three families of source are allowed: network stream from a camera or recorder, recording present on the workstation with one of the extensions allowed, publicly accessible video on the network. Every other form of input is refused by guided setup.
2. Addresses of distribution protocols other than those provided are not allowed, such as addresses that begin with rtmp, srt or udp.
3. The webcam connected to the workstation is not allowed, nor any local capture device indicated with a numeric value.
4. File extensions other than those listed in chapter 10 are not allowed, among which the proprietary formats of recorders and streams not encapsulated in a container.
5. A source protected by transport certificates on the workstation side is not allowed, nor addresses that begin with rtsp.
6. Direct reception from apparatuses that register with a server is not allowed, such as body-worn cameras connected to a management platform: the product opens the network stream made available by the apparatus or the recordings already downloaded.
7. Recordings and streams encrypted by the manufacturer of the apparatus are not processable: the image is absent and the session does not produce transits.
8. A single source per session is allowed: two cameras require two distinct sessions.

Limits relating to the session

1. The control area is not modifiable after confirmation: the polygon, the transit time and the number of plates expected in parallel remain locked until closure.
2. The plate search window, the crop threshold, the plates placed in search and the gate options are not modifiable once the session is started.

3. Commands that alter playback, such as movement in the recording and variation of speed, are not available.
4. The program does not perform the function of a recorder: during a suspension of playback on a live source the images are not retained and are not recoverable.
5. The program does not archive the complete recording of the source: it retains the photographs of the transits and the clips requested with the dedicated options.
6. The product processes images exclusively: any audio track of the source is neither analysed nor retained.
7. The extract from the original recording (with hashes in the PDF) is available only when the source is a recording present on the workstation, according to what is described in chapter 20.
8. The transit register does not report, in the default configuration, the readings below the internal threshold: their inclusion requires selection of the dedicated option described in chapter 13.

Limits relating to recognition

1. Recognition takes place exclusively inside the polygon of the control area: plates that appear in other portions of the image are not examined.
2. A plate whose characters are not distinguishable on a visual check of the frame cannot be read reliably, whatever the sensitivity set.
3. The product reads the characters of the plate and does not identify the vehicle, the driver or the owner: correspondence between plate and registered keeper is a matter for the databases of the authority.
4. The program does not expose in the register a reliability score of the reading: the check is a matter for the operator on the photograph and, where produced, on the clip.
5. The product does not detect the speed of vehicles, does not measure distances and does not establish offences: it documents the passage of a plate through the control area.
6. The product does not recognise the characters of plates that are deformed, covered, in a rotated position or without sufficient illumination, according to the limits described in chapter 31.

Prohibition — Requests not satisfiable with version 1.0

Requests for opening of recordings encrypted by the manufacturer, for direct reception from apparatus management platforms, for use of a local webcam and for modification of the control area once the session is started are not satisfiable with version 1.0. The report must be addressed to support, which indicates the practicable solution with the product available; modifications of the configuration of the workstation must not be attempted.

32. Frequent problems

The present chapter collects the situations that present themselves with greater frequency during service, with the checks to be carried out in the order indicated. The checks must be performed before requesting the intervention of assistance: in most cases the cause resides in the video source, in the network or in the configuration of the session, not in the program.

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The video does not open

1. Verify that the correct family of source has been selected on the source page: network stream, recording present on the workstation or publicly accessible video on the network.
2. In the case of a recording, ascertain that the extension is among those allowed and that the file exists in the location indicated.
3. Copy the recording onto the workstation disk rather than using it from a slow removable medium or from a network drive: discontinuous reading determines interruptions of the analysis.
4. In the case of a network stream, verify reachability of the address with the network tools of the workstation, the port used, the credentials and the path of the channel.
5. Verify conversion of the special characters of the password into the form provided for network addresses, according to what is described in the chapter dedicated to network sources.
6. Authorise the program in the Windows firewall on the private network, when the request is presented by the system.
7. Open the same address or the same recording with another playback program: if the image does not appear in any case, the cause resides upstream of recognition.

Operational note — Completely black image

A black image in the face of a source accepted by guided setup ordinarily indicates a recording or a stream encrypted by the manufacturer of the apparatus. The condition is not surmountable with version 1.0: a recording in standard format must be exported from the apparatus or the unencrypted network stream must be used.

Plates are not read

1. Observe on screen the point at which the plate is actually larger and more readable and ascertain that the polygon includes that point, preferably on a stretch of linear transit only.
2. Reduce the width of the polygon: a polygon extended to the entire framing includes asphalt, signage and parts of the bodywork, which do not contribute to the reading.
3. Verify the correctness of the plate search window: «2 lines» concerns two-band plates (motorcycle census); «1 line» concerns single-band plates. An inverted value excludes the entire expected traffic.
4. Set the crop threshold in the CCTV range (0.25–0.50), according to what is described in chapter 12.
5. Verify the resolution reported in the status bar superimposed on the video: a reduced-definition profile does not allow reading, whatever the sensitivity set.
6. In the case of a network stream, switch to the main channel of the camera rather than the secondary channel, which ordinarily has lower resolution.
7. Verify the capture conditions: illumination, cleanliness of the lens and framing angle. A plate whose characters are not distinguishable on a visual check of the frame cannot be read reliably, whatever the sensitivity set.
8. If the search for a fragment of two characters only has been indicated, indicate a longer fragment: a short fragment produces numerous matches that are not relevant.

The register does not contain transits

A register without rows does not indicate a damaged document. The possible causes are listed below and are checkable in the statistics of the session summary document.

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- No vehicle crossed the polygon of the control area during the session.
- All recognised plates are included in the list of authorised vehicles: the dedicated document reports the number of exclusions applied.
- All readings were below the internal threshold, without consolidated transits to be verified for lost characters, completion or stop, and the option relating to readings to be verified was deactivated.
- The polygon includes a portion of the image in which the plates are not readable, such as a zone that is too distant or out of focus.

- The source did not contain readable plates, for example because of insufficient illumination conditions.

Capture of frames is always active: the register is accompanied by the photographs and by the thumbnails, except for the transits for which the photograph was not produced.

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Other recurring situations

Situation observed	Check to be carried out
The message panel signals repeated reconnections of the stream	Verify the stability of the network and switch to the secondary channel of the camera; the number of reconnections is reported in the summary document
The image freezes at irregular intervals	Close the other demanding programs on the workstation and verify the encoding of the stream reported in the status bar
The register contains more than one row for the same vehicle	Verify that the polygon covers the transit of interest only; a vehicle that leaves the area and re-enters it constitutes a new transit
The register unites distinct vehicles in a single row	Verify the number of plates expected in parallel and the presence of two lanes inside the same polygon
The photographs do not appear in the folder	Ascertain that the session was closed regularly and that the photographs subfolder has not been moved
The clips subfolder is empty	Check the reason indicated in the dedicated section of the summary document, according to chapter 23
The links of the register produce no effects	Verify that the image and clip subfolders are present and authorise the links in the spreadsheet program
The spreadsheet program signals unreadable content in the register	Opening occurred during closure: close the notice without recovering the file and wait for the appearance of the button «Apri Excel»; that button appears only when the register is still
The acoustic alert is not audible	Verify the option selected among the three available and the presence of loudspeakers configured in Windows
The summary documents do not appear in the folder	The session was not closed with the button provided: the documents are produced only at closure

Warning — Repetition of the session

When the cause resides in the configuration, such as a polygon that includes zones extraneous to the passage or an incorrect plate search window (1 line instead of 2 lines, or the reverse), the session must be closed regularly and repeated with the correct parameters. The concluded session remains documented in its own folder: repetition does not delete the previous documentation, which must be retained together with the new.

33. Frequently asked questions

The following questions collect the queries posed with greater frequency by operators of control posts. The answers recall, when necessary, the chapter in which the matter is treated in full.

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Where are the session documents located?

In the sessioni folder present on the Desktop, in a subfolder dedicated to the individual session, which contains the transit register, the summary documents, the photographs, any clips and a copy of the present guide. The Documents and Download folders are not used. Chapter 25 describes the content of the folder.

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How is the present guide opened from the program?

By means of the button «Guida» on the command bar, always available during the session. The button opens the edition installed with the program; a copy nevertheless remains present in the folder of each session.

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Is it possible to use two cameras in the same session?

No. A single source per session is allowed. Two distinct sessions must be conducted, each with its own folder and its own documentation, or a recorder that makes the already selected channel available must be used.

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Is the camera password retained by the program?

The address used may be proposed again at the subsequent guided setup, to avoid retyping. In the interface, in the message panel and in the summary documents the password remains masked and does not appear in readable form.

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Is it possible to rename the session folder?

Renaming of the folder is not advisable: the designation reports the date and the number of the session and is recalled in the summary documents. Movement is allowed provided the folder is transferred in full, with register, photographs, thumbnails, clips and summary documents.

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The spreadsheet program signals that the register includes unreadable content.

The notice appears if the register is opened while the session is still closing, before the appearance of the button «Apri Excel». Recovery of the content must not be selected: the notice must be closed and waiting must follow. The button «Apri Excel» of the summary window appears only when the file is complete and is no longer being written. If the notice appears after selection of that button, the folder must be copied and the fact reported to the person in charge of the service.

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A recording originating from a recorder does not open with other playback programs, but is accepted

No. The recording may be contained in an unencrypted proprietary container: the program attempts decoding of the images ignoring any audio track. The behaviour of other playback programs does not constitute a criterion of validity of the file.

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A recording opens in the manufacturer's program by means of a key, while in this program the image

The recording is encrypted. In version 1.0 the encryption is not processable: a recording in standard format must be exported from the manufacturer's program, or the unencrypted network stream made available by the apparatus must be used.

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Playback of a publicly accessible video on the network is discontinuous.

Continuity depends on the network and on the format made available by the platform. Sources of this type are intended for checks and demonstrations; for recognition activity a recording present on the workstation or a network stream on the local network is preferable.

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Is it possible to install the program on a body-worn camera?

No. The apparatus records on a recorder or on a management platform; the program opens the network stream made available by that apparatus, or the recordings already downloaded onto the workstation by means of the docking station.

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Is an Internet connection necessary?

It is not necessary for recordings present on the workstation nor for network streams on the local network. It is necessary for publicly accessible videos on the network and for apparatuses reachable through a remote connection.

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For how long may a session on a live source remain active?

For the entire duration allowed by the workstation and by the network. If the stream is interrupted beyond the number of restoration attempts provided, the program abandons it: the session must be closed, documented regularly up to that moment, and a new one opened.

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The acoustic alert is not audible.

It is necessary to verify which of the three options available is selected. The voice announcement and the tone require loudspeakers configured in Windows; the motherboard buzzer uses the internal speaker of the workstation, if present.

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Is it possible to modify the polygon during the session?

No. The control area remains locked after confirmation, because the summary document certifies its vertices. The session must be closed and a new one opened with the correct polygon.

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The crop threshold set is incorrect. Is it modifiable once the session is started?

No. The crop threshold too falls among the parameters locked and certified in the summary document. The session must be closed and a new one opened.

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Does a confidence or reliability column appear in the register?

No. There is no standalone percentage confidence column. In the last column on the right the informative assessment Qualità lettura (SCARSO, BASSO, MEDIO or OTTIMALE) appears, described in chapter 26: it does not modify the outcome nor determine whether the row enters the register. The operational outcome remains in the column Esito. The check of the plate is carried out on the photograph and, where produced, on the clip. The rows that require that check bear the outcome «Da verificare», according to what is described in chapter 13.

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How many plates expected in parallel must be set?

For a single lane the values 1 or 2 are indicated. For two lanes included in the same polygon the values 2 or 3 are indicated. A high value referred to a single vehicle does not improve the reading and may determine the uniting of distinct transits in a single row.

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The polygon includes the entire framing. Is it admissible?

It is not appropriate. As the extent of the polygon increases, the number of extraneous elements examined increases, such as asphalt, signage and parts of the bodywork. The polygon must be contained, placed where the plate appears larger and in focus and, where possible, on the stretch of linear passage only without a stop.

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Is it possible to use recordings with extensions other than those allowed?

No. Extensions not included in the list of chapter 10 are refused by guided setup. A recording with one of the extensions allowed must be exported from the apparatus, or the network stream must be used.

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Does the extract for evidential use correspond to the original recording?

No. It constitutes an extract of a portion of the source recording, obtained without reprocessing of the images, and does not replace the complete recording, which remains in the location established by the authority. The summary document reports the hashes of both files. Chapter 20 describes the matter.

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In the summary document the hashes are not applicable.

The condition is ordinary on live sources, such as a network stream or a publicly accessible video on the network, for which no file exists on the workstation of which to calculate the hash. On recordings present on the workstation the hashes are calculated at closure of the session.

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The message panel signals an unstable stream.

It is a notice and not a refusal of the source. If the image is visible, the session may continue and the number of reconnections is reported in the summary document. In the event of repeated freezes it is necessary to switch to a channel with different encoding or to a recording present on the workstation.

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The workstation does not have a spreadsheet program. Does the register remain consultable?

Yes. The register is produced in any case and does not require the presence of a determined program. Consultation may take place on another workstation equipped with a spreadsheet program, without any loss of data.

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Windows signals an unknown application at start-up of the program.

The signal originates from the reputation filter of the operating system. If the package installed is the one supplied by Emiltronica, execution may be confirmed. If the file originates from an unverified channel or from a removable medium of unknown provenance, it must not be executed and the intervention of support must be requested.

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The Desktop is synchronised with a network storage service and the documents are not present.

Completion of synchronisation must be awaited, without switching off the workstation during closure of the session. The sessioni folder resides on the Desktop even when upload into the network service occurs at a later moment.

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Is the use of a copy of the program not installed by Emiltronica allowed?

No. Exclusively the program supplied and installed by Emiltronica on the workstation intended for the service must be used.

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What is CHIARA ANPR Recognizing System?

CHIARA ANPR Recognizing System V.2.0 is the integrated recognition engine, not selectable. The designation appears on the initial screen, on the bar superimposed on the video and in the summary documents. TARGA EXPLORER is the workstation environment: source, gate, alerts and documentation of the session.

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May the present guide be printed?

Yes. The document is prepared for A4 format. Colour printing is recommended, because the institutional colours belong to the header. The edition supplied with the program must be retained, in the language chosen at installation.

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What is the product's reference site?

www.targaexplorer.com — TARGA EXPLORER.

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What is the supplier's reference site?

www.emiltronica.it — Emiltronica Soluzioni Tecnologiche S.R.L.

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34. Assistance

Assistance on the product is provided by Emiltronica Soluzioni Tecnologiche S.R.L. Requests concerning installation, configuration of the workstation, sources that are not processable and anomalous behaviour of the program must be addressed to the supplier's support, according to the procedures established by the authority.

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The product website www.targaexplorer.com includes a support section with frequently asked questions (FAQ) and a dedicated forum, reserved for accredited users. The forum is not a public space: access is with a user account. For workstation faults the channel described in this chapter remains valid (support zip and Emiltronica support).

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References

- Supplier: Emiltronica Soluzioni Tecnologiche S.R.L.
- Company website: www.emiltronica.it
- Product website: www.targaexplorer.com
- Support on the website: FAQ section and dedicated forum (access with a user account)
- Product: TARGA EXPLORER, version 1.0.
- Recognition engine: CHIARA ANPR Recognizing System V.2.0 (fixed).
- Matter reserved to support: installation, first commissioning, sources encrypted by the manufacturer, recalculation of the hashes.

Licence of use

Upon installation the workstation may be used on a trial basis for seven days, without a key. During the trial each analysis session lasts at most fifteen minutes: when the time expires the program closes the session as if the operator had selected «Close session» and in the summary window the indication «Session limited to 15 minutes by the trial licence» appears. The summary documents (session PDF and authorised-vehicles PDF) report the workstation code, the type of licence, the duration and the remainder at the moment of closure. After the trial period the program opens only after entry of the key issued by Emiltronica for that workstation. The key is valid for one year from the date indicated in it: reinstallation on the same computer does not renew the year; the days still covered by the same key remain.

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The workstation code, visible in About and in the «Licenza d'uso» window, identifies the motherboard of the computer. One key is valid on one workstation. The same computer, after formatting or reinstallation, may reuse the same key. A different computer requires a new key. Use on a virtual machine is not provided for, except for a key expressly issued by the supplier for that environment. Updates of the program (texts, guide, executable) do not consume nor renew the licence.

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If the trial period has ended, after the start-up screen the licence window appears: the workstation code must be copied, communicated to the supplier and the key received must be pasted. While the licence remains valid, the same window is opened from About, command «Inserisci chiave di licenza». After «Attiva» a confirmation appears with the dates of validity: the program does not restart; title, status bar and About window are updated. The status is reported in the window title and in the status bar: during the trial, with the expiry date; with a key, in the form «Licenza attivata il (date), giorni rimanenti ...». Remaining days are calendar days against the Windows date, not hours of execution: leaving the program open does not accelerate expiry.

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Warning — System clock

The validity of the trial and of the key depends on the date and time of Windows. If the clock is earlier than the last execution, the program does not start. The correct date and time according to local use (day-month-year) must be set, then the program reopened.

Technical documentation for support (debugging)

When the behaviour of the program is anomalous — video stutter, missing transits, repeated stream errors, unexpected closure — Emiltronica technical support may request the technical files of the session. The ordinary way to prepare them is the «Genera zip assistenza» button, described later in the same chapter. Alternatively support may request a full copy of the log/ subfolder. Such files do not replace the register, PDFs or photographs: they constitute the technical trace that allows the supplier to analyse the event.

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1. Close the session regularly and wait for the summary window to appear, so that the files in log/ are complete.

2. Open the session folder on the Desktop (button «Apri cartella» in the summary window, if available, or File Explorer).
 3. Enter the log/ subfolder and copy the entire subfolder onto a medium authorised by the authority, or compress it into a single archive without removing files.
 4. Do not modify, rename or delete individual files before transmission: support analyses the set as a whole.
 5. Verify that the option «Log tecnici di sessione» was active in guided setup; otherwise repeat a brief test session with the option active before sending the report.
- sessione.json — parameters and summary diagnostics of the session.
 - sessione_operazioni.jsonl — lightweight log of events from the message panel (NNNNNN_sessione_operazioni.jsonl).
 - sessione_snapshot_avvio.json and sessione_snapshot_chiusura.json — technical snapshots at start and at regular closure.
 - diagnosi_tracce.log, diagnosi_fluidita.log, diagnosi_ocr.jsonl and diagnosi_cascata.jsonl — engine traces, video stream traces, boxes and character reads and the Settings cascade through to Excel/photo/clip/thumbnail, named NNNNNN_diagnosi_* (if the option was active).
 - transiti_provvisori.json — provisional sequence of transits observed live.
 - Other .log or .jsonl files in log/ with NNNNNN_ prefix: must be included in full.

Warning — What not to send as the only technical material

The message panel is not saved in log/ and does not replace the technical files.

Photographs and clips contain personal data: they must be transmitted to support only if the authority expressly authorises it, in addition to or instead of the log/ subfolder alone, according to internal procedures.

Elements to prepare before the request

The report is processable in a short time when it is accompanied by the following elements, obtainable from the session documents without any technical competence.

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1. Session number and date, as reported in the folder name.

2. Session number and type of source, as reported in the summary document.
3. Type of source used: network stream, recording present on the workstation or publicly accessible video on the network.
4. Data of the stream diagnostics section: container, encoding, resolution and frames per second.
5. Description of the anomaly observed and of the moment at which it manifested relative to the start of the session.
6. Complete copy of the log/ subfolder of the affected session, when support requests it or when the anomaly concerns the behaviour of the program (debugging section of the present chapter).
7. Text of the messages that appeared in the message panel, when they have been noted.
8. Indication of the checks already carried out among those listed in chapter 32.

Support pack and supplier updates

In addition to the manual copy of the log/ subfolder, the program can prepare a single compressed archive intended for Emiltronica support. The «Genera zip assistenza» command is available on the operational window before «Avvia sessione»; in guided setup; in the summary window at the end of the session, together with «Riavvia sessione» and «Chiudi»; and on the command bar next to «Guida». After «Conferma», during the control area and plate analysis, the guide remains available; the archive is prepared when the session has ended.

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On activation the program asks the operator to choose a password, searches for the technical files, compresses them into a protected archive and saves it on the Desktop. The file name reports the workstation code and the creation date. Afterwards an alert appears indicating the path, recalling that the password must be given to the technician by voice only (not in the email), recalling the presence of personal data and that, depending on the level of assistance, further materials may be required, and that Emiltronica is certified for the secure processing of such data.

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The archive contains three folders. The installation folder reports version, licence, workstation paths and maintenance status. The installation-log folder collects the start-up and malfunction files of the workstation. The last-session log folder reproduces the entire log/ subfolder of that session.

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The archive may contain personal data: the description of the control area (gate map, that is the polygon vertices in the technical files); the plates detected in transits, if the session produced them in the message panel or in the transit files; the plates entered under search and those of the authorised-vehicle list, if compiled. Photographs, clips, the Excel register and network-stream passwords are not attached to this archive. Stream addresses, if present in the technical files, are reported with the password obscured.

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Technical assistance may, according to the level of intervention requested, entail the sending or processing of further session data, including photographs, clips or the register, when they are indispensable for the analysis. The operator must be aware of this before transmission.

Emiltronica Soluzioni Tecnologiche S.R.L. is a company certified for the secure processing of data of this nature. Every transmission remains subject to authorisation by the data controller.

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1. Wait for the session documents to be completed (the summary window appears when writing has finished).
2. Press «Genera zip assistenza» on the operational window before «Avvia sessione», in guided setup, or in the summary window at the end of the session.
3. Enter twice a password of at least eight characters. Keep it safely: it will be given by voice only.
4. Take note of the alert: data present in the archive, password to be given by voice only during the call with the technician, possible need for further materials according to the level of assistance, Emiltronica's certification for secure processing, and the path of the archive on the Desktop.
5. Transmit the archive to Emiltronica support only if the data controller so authorises, according to the procedures of the authority, without inserting the password in the email.

Warning — Archive password

The archive is protected by a password chosen by the operator. The password must be given to the Emiltronica technician by voice only, during the telephone assistance session. It must not be written in the email or in other written messages with which the file is transmitted. Without the password the file names remain hidden. The archive is opened with 7-Zip or an equivalent program: Windows File Explorer does not show the contents. It is not necessary to extract the archive at the workstation: it is intended for support.

Warning — Personal data in the support archive

The archive produced by the «Genera zip assistenza» button does not contain photographs, clips or stream passwords. It does however contain plate texts, if produced or entered in the session, and the description of the control area. Depending on the level of assistance requested, the supplier may also ask for further materials. The operator must be aware of this. Emiltronica Soluzioni Tecnologiche S.R.L. is a company certified for the secure processing of data of this nature. Transmission to the supplier constitutes communication of personal data and remains subject to authorisation by the data controller.

In-service updates supplied by Emiltronica (interface texts, operator guide, support tools, not the executable) are applied with the function «Applica aggiornamento del fornitore» in the About window, by selecting the archive or folder received from the supplier. Afterwards the program must be closed and opened again. Copies originating from other channels must not be applied. A defect in recognition or in session logic remains the responsibility of a new executable, signed by the supplier.

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Warning — Transmission of personal data to support

Transmission to support of registers, photographs, clips and source recordings entails communication of personal data and must be authorised by the data controller according to the procedures of the authority. In the first instance the archive produced by «Genera zip assistenza» must be transmitted. Further materials must be limited to the cases in which the level of assistance makes them necessary and must be ordered by the authority. The operator must be aware of that possibility. Emiltronica Soluzioni Tecnologiche S.R.L. is a company certified for the secure processing of data of this nature.

Prohibition — Interventions not permitted on the workstation

Modifications of the installation on one's own initiative, or substitutions of components with copies originating from channels other than the supplier, must not be attempted. Updates are applied exclusively with the function «Applica aggiornamento del fornitore» in the About window and only on packages received from Emiltronica Soluzioni Tecnologiche S.R.L. Other interventions compromise the correspondence between the product installed and the one supplied, with effects on the reliability of the documentation produced.



PART

VII — First-session procedure

35. First-session procedure

The present chapter collects, in a single ordered list, all the operations necessary to conduct the first session on the workstation: from switching on the computer to verification of the documentation produced and to the backup copy of the session folder. It constitutes the reference procedure for training and for first use in service; the preceding chapters provide the definitions and the reasons, while here the operations are listed in the order in which they must be performed.

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Definition and purpose

«Procedura di prima sessione» means the complete sequence that leads the operator, without presupposing prior experience of the product, from the workstation switched off to closure of a correctly documented session. The purpose is twofold: to verify that the workstation and the program are ready for use in service, and to produce a first consultable archive (transit register, summary document, photographs) on which to exercise the quality controls described in the part dedicated to the archive.

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Analysis is performed in full by CHIARA ANPR Recognizing System V.2.0.

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Operator flow: start-up, guided setup (privacy notice as first page), control area, analysis, closure and verification of the session folder.

When to use the procedure

The procedure must be performed in full in the following circumstances. In all other cases the already trained operator may limit activity to the variable steps (source, engine, polygon, checks at closure), having nevertheless present that the prerequisites remain obligatory at every session.

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- First start-up of the program on the workstation, or first start-up after an update delivered by the supplier.
- Training of an operator who has not yet conducted a complete session.
- Verification after an intervention on the workstation (replacement of the computer, modification of the network, restoration of the operating system) that may have affected opening of the source or writing of the session folder.
- Resumption of service after a period of inactivity, when it is necessary to ascertain that documentation is still produced correctly.

Prerequisites

Before starting the numbered sequence the conditions listed below must be ascertained. Non-observance of a prerequisite is not remediable during the session: it ordinarily entails interruption of the procedure and resumption from the beginning.

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1. The workstation has the TARGA EXPLORER shortcut, already installed by the technical personnel charged; the operator does not install nor configure the product.
2. The Windows clock reports the correct date and time according to local use (day-month-year). Correction must be carried out before start-up: the names of the folders and the timestamps of the documents depend on that clock.
3. A local recording in one of the formats allowed is available (for example a file with the mp4 extension), already present on the workstation disk or on a connected drive, to be used as the source of the first session. The laboratory or trial recording must be chosen by the authority; unauthorised third-party recordings are not used.
4. The operator knows the notice on protection of personal data and the distinction between data controller and workstation operator, according to chapter 3.
5. The path in which the session folder will be sought is known: Desktop, sessioni folder, subfolder denominated with the session number and the date in the format DD-MM-YYYY.

6. No other program demanding of processor or memory is running on the workstation during the trial.

Operational note — Why the first session uses a local recording

The recording present on the workstation makes it possible to repeat the same scene, to suspend the analysis without losing images not yet transmitted and to verify photographs and documents at once. The network stream from a camera, useful in service, introduces network and illumination variables that do not facilitate the first check. The second session on a network stream is described later in the same chapter.

Complete numbered procedure

The steps must be performed in the order indicated. Intermediate checks must not be skipped: each step prepares the next. The button labels cited remain in Italian also in the English edition of the document, because they coincide with the on-screen interface.

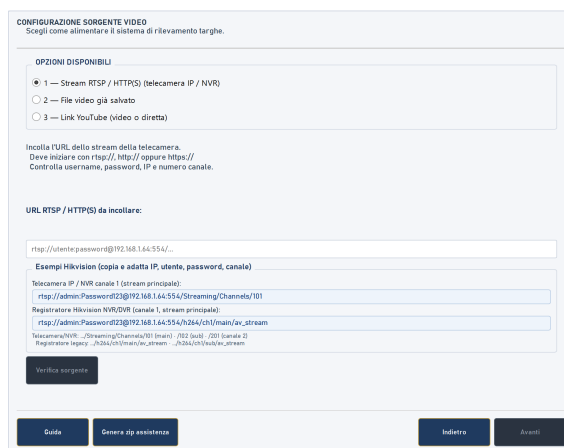
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1. Switch on the computer of the workstation and wait for complete start-up of Windows.
2. Verify the system date and time; if necessary, correct them before proceeding.
3. Ascertain that the workstation is connected to the network only if the subsequent trial requires it; for the first session on a local recording the network is not indispensable.
4. Identify on the Desktop the TARGA EXPLORER shortcut (or the icon in the Start menu).
5. Start the program by selecting the shortcut.
6. Wait for the initial screen with the supplier's mark and the designation of the recognition engine; there must be no interaction until it disappears.
7. If the «Licenza d'uso» window appears, copy the workstation code and, if already available, paste the key supplied by Emiltronica; in the first seven days from the first opening the window is not obligatory and the program continues.
8. Wait for the opening of the operational window. On the bar «Guida», «Genera zip assistenza», «Avvia sessione» and «Chiudi sessione» are available.
9. Press «Avvia sessione» to open guided setup.
10. On the first page read in full the notice on protection of personal data. «Avanti» constitutes acceptance; «Indietro» returns to waiting for «Avvia sessione».

11. On the Benvenuto page verify the values proposed again from the last session or proceed to modify them on the subsequent pages, then select «Avanti».
12. On the source page select the family «file presente sulla postazione» (local recording), not the network stream nor the publicly accessible video on the network.
13. Select «Sfoglia...» and indicate the recording prepared for the trial.
14. Verify that the path and the file name are correct in the source field, then select «Avanti».
15. On the search page leave empty the fields of the plates to be searched: the first session has the purpose of verifying generic recognition, not the search for a specific plate.
16. Select the plate search window consistent with the scene of the recording (as a rule «1 line» for cars and heavy vehicles; «2 lines» only if the recording is a motorcycle census).
17. Set the crop threshold to the value recommended for the first trial (as a rule 0.35), unless otherwise provided by the supplier at delivery.
18. Leave activated, as provided by default, the option relating to readings to be verified in the register, then select «Avanti».
19. On the page of the gate options capture of frames is already active and cannot be deselected: the first session produces photographs to be compared with the register.
20. Leave «Nessuna clip» selected and leave deactivated, for the first trial, the alerts that are not indispensable, unless training provides otherwise.
21. Select «Avanti» and reach the confirmation page.
22. Reread the summary: file source, engine CHIARA ANPR Recognizing System V.2.0, plates to be searched empty, capture of frames active, clip mode deactivated.
23. Select «Conferma». The program opens the recording and creates the session folder on the Desktop.
24. Wait for presentation of the video and the instructions of the message panel relating to tracing of the control area.
25. Observe the point of the scene at which the plate is larger and more readable, on a stretch of linear transit only (not a stop zone).
26. Trace the polygon of the control area with the pointing device: points in succession and closure on the first vertex. The video may move if the source allows it; the click does not pause playback.

27. Apply the placement criteria: contained polygon, not extended to the entire framing; exclusion of useless asphalt, signage and manoeuvre zones. The sides must not cross.
28. Close the figure on the first vertex. «Avvia analisi» appears; Play remains visible but is not selectable.
29. Select «Avvia analisi». An information notice shows the parameters already chosen; «Continua» starts detection. From this moment the polygon and the movement commands remain locked until closure.
30. During the trial period each analysis session closes by itself after fifteen minutes, with the indication in the summary; with an annual licence the limit does not apply.
31. Observe the yellow boxes (plate identified, analysis in progress) and the green boxes (transit closed with provisional read); the message panel shows provisional transits.
32. Consult the message panel for status messages, any reading errors and operational indications; the panel must not be interpreted as a log file intended for the official archive.
33. Let the analysis continue until a sufficient number of transits, or until the end of the recording.
34. If the recording ends, an automatic repetition must not be awaited: playback does not restart. The message panel and the instruction strip under the window indicate that it is necessary to proceed with «Chiudi sessione».
35. Select «Chiudi sessione» on the command bar.
36. Wait for writing of the register, of the PDF documents and of the photographs, then the summary window and the appearance of the button «Apri Excel».
37. Note the session number and the folder name shown on screen (session number before the date in the format DD-MM-YYYY).
38. Open on the Desktop the sessioni folder and identify the subfolder of the session just closed.
39. Verify the presence of the transit register in Excel format and of the summary document in PDF format.
40. Open the summary PDF and check: source indicated, recognition engine, state of the options (photographs, clips), statistics of the transits.
41. Open the Excel register and compare some rows with the photographs present in the folder (or in the image subfolders).

42. If the number of photographs and of rows does not coincide with what is expected, note the discrepancy and consult the chapters on frequent problems and on the archive before repeating the session.
43. Close the documents opened.
44. Copy the session folder in full onto a medium or onto an archival path indicated by the internal provisions of the authority (backup copy). The register must not be separated from the photographs.
45. Retain and process the folder according to the instructions of the data controller; the program neither imposes nor suggests retention periods.
46. If the trial is concluded, close the program or, from the closure window, start «Riavvia sessione» according to the needs of the service.



Source page in guided setup: for the first session select the recording present on the workstation.

Come si disegna il varco (poligono)



Rappresentazione grafica di un varco (non un fotogramma di campo).

1. Selezionare almeno 3 punti dove la targa è più grande e leggibile; poligono contenuto, preferibilmente sul tratto di solo passaggio lineare (senza sosta).
2. Chiudere il poligono selezionando di nuovo il primo punto.
3. Confermare tempo di transito e targhe in parallelo.

In sessione operativa il varco resta bloccato e certificato nel PDF.

Criteria for tracing of the polygon: contained area on the point of maximum readability of the plate, stretch of transit only.



Operational window during analysis: on the left the message panel, on the right the video area; below, the one-line instruction strip.

Checks at closure

The following checks complete the procedure. They must be performed on the session folder just produced, before considering it suitable for the backup copy and for archiving according to the provisions of the authority.

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Session closure window: on-screen summary and access to continuation of the work.



Structure of the session folder on the Desktop: register, summary PDF, photographs and any clips.

1. Verify that the folder name begins with the session number and reports the date in the format DD-MM-YYYY.
2. Open the summary document and ascertain that the session is operational (not marked as a trial).
3. Compare the source indicated in the summary with the recording actually used.
4. Verify in the statistics that the number of transits and of photographs is consistent with what was observed on screen.
5. In the register, open at least one photograph linked to a row and compare the characters of the plate with the reading reported.
6. Ascertain that the folder has been copied in full onto the destination medium indicated by the authority.

Warning — Incomplete folder

If the register or the summary document is missing, the session is not documented in a usable manner. The missing files must not be supplemented by hand. The session must be repeated and, if the problem recurs, support must be contacted according to the chapter dedicated to assistance.

Frequent errors in the first session

The following situations present themselves with frequency during the first trial. The box indicates the operational weight of the indication.

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Warning — Capture of frames deactivated

Capture of frames is always active. If the photographs are not in the folder, the session was not closed in a regular manner or the files have been moved: in that case comparison with the register is not possible.

Warning — Polygon on the wrong point or too narrow

A polygon placed where the plate is not readable, or reduced to the minimum around a single point of the lane, produces few readings or none. The session must be closed and repeated with an area that screens only the off-area and leaves sufficient space for passage of the plate.

Prohibition — Manual modification of the register or of the PDFs

It is prohibited to modify, supplement or correct by hand the transit register and the PDF documents produced by the program. A rectification made to the sheet is not distinguishable from the original datum. Any rectifications must be reported in a distinct document by the authority.

Second session on a network stream

Once the first session on a local recording has been concluded with a positive outcome, a second session on the source intended for the service is recommended, as a rule a network stream from a camera or from a recorder. The sequence remains that of the complete procedure, with the following differences only.

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- On the source page select the family of the network stream and indicate the address supplied by the technical personnel, with port and path of the channel.
- Verify that the workstation reaches the apparatus on the network; in the event of an error on opening, incomplete folders must not be created: the address or the network must be corrected and the operation repeated.
- Redraw the polygon on the real scene of the gate, applying the same placement criteria.

- It must be borne in mind that, on a live source, the pause freezes the last frame while real time continues to elapse: the images of the period of suspension are not recoverable.
- Under the video the progress indicator may not appear, if the duration of the stream is not known.

Recall on protection of data

The first-session procedure entails processing of images that may contain plates and, incidentally, other identifying elements present in the scene. Processing must be carried out in compliance with Regulation (EU) 2016/679 (GDPR). The data controller defines purposes, legal bases and organisational measures; the workstation operator performs the authorised operations and safeguards the session folder as service documentation according to the provisions received.

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Operational note — Retention periods

The present document does not indicate data retention periods nor replace a legal opinion. The times and modes of archiving, deletion or anonymisation of the session folder are established exclusively by the data controller and by the internal procedures of the authority.

36. Every button of the bar, in detail

The present chapter describes each button of the command bar of the operational window. The labels coincide with those on screen and remain in Italian also in the English edition.

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Command bar: «Guida», session and playback commands.

Some buttons remain visible but not selectable. The condition does not constitute a fault: it preserves continuity of the examination and correspondence between the documented times and real times.

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Guida

Opens the present operator guide in the version installed together with the program. It does not interrupt the session and does not modify any parameter. It is always selectable, even before tracing of the polygon and during analysis.

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Avvia sessione

Present on the command bar when the operational window opens. Opens guided setup. It is not visible after «Conferma». Until it is pressed the Guide and «Genera zip assistenza» remain available. «Chiudi sessione», in this phase, does not close the program: it indicates that the session has not yet been started.

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Riavvia sessione

Visible on the command bar after «Conferma», during polygon drawing and once the figure is closed, before «Avvia analisi». Reopens guided setup. It is used to change camera, recording or control area. The provisional folder is removed from the Desktop and the session number remains available; the summary is not produced. After «Avvia analisi» the button on the bar is not selectable: «Chiudi sessione» is used and, from the closure window, «Nuova sessione».

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Nuova sessione

Present only in the summary popup at the end of the session. Reopens guided setup. The folder just closed remains on the Desktop.

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Avvia analisi

Appears on the command bar next to «Play / Pausa» when the polygon is closed. Opens an information notice with the parameters already chosen in guided setup. «Continua» starts detection from that frame. It does not allow the parameters to be edited.

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Chiudi sessione

Always selectable. Before «Avvia sessione» it does not close the program: it indicates that the session has not yet been started and the program remains waiting. During guided setup and after «Conferma», until «Avvia analisi» is pressed, it interrupts without a folder and without a summary. After «Avvia analisi» it terminates analysis, writes the transit register, produces the PDF summary documents, consolidates the photographs and any clips, calculates the hashes provided and presents the closure window. The opening buttons, including «Apri Excel», appear only when those files are complete and are no longer being written. On a recording that has reached the end it is the obligatory step indicated by the message panel. After the video has stopped, the appearance of «Apri Excel» must be awaited before opening the register.

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X of the window

The X at the top right of the operational window closes the program. Guided setup has no X: «Indietro» on the first page is used to return to waiting for «Avvia sessione» without leaving. After «Conferma» and before «Avvia analisi» the X terminates without a summary and without keeping the folder: the session number remains available. After «Avvia analisi», the X starts the same logical closure as «Chiudi sessione»: stopping of the video and of analysis, writing of the register and of the documents, summary window; from that window «Chiudi» terminates TARGA EXPLORER.

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Play / Pausa

During polygon drawing it runs or freezes the video, if the source allows it, and does not start analysis. Once the polygon is closed it remains visible but is not selectable. After «Avvia analisi» it suspends or resumes analysis and playback. On live sources the pause freezes the last frame while real time continues to elapse: the program does not perform the function of a recorder and the images of the period of suspension are not recoverable. On a recording the pause stops playback at the current frame. At the end of a recording playback does not restart from the beginning.

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Progress indicator under the video

Under the video area a progress indicator appears, when the duration of the source is known. After detection has started it is read-only. The only exception is the control-area definition step, in which on a local file the bar is draggable; on confirmation it returns to being unusable. On live streams without a known end the indicator is not shown.

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Stop e riavvolgi

It is not a pause. It would stop playback and take the recording back to the beginning. The button remains visible but not selectable. To stop the current frame only, «Play / Pausa» is used.

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Indietro 10 s e Avanti 10 s

They would move the playback position by ten seconds. They remain visible but not selectable, so as not to interrupt continuity of the examination.

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Velocità – e Velocità +

They would alter the playback speed and the correspondence between the times detected and real times. They remain visible but not selectable.

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Reset varco

It would allow the polygon to be redrawn without closing the session. It remains visible but not selectable: the control area is documented in the summary. To modify it the session must be closed and a new one opened.

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Operational note — Consultation during the session

The button «Guida» makes it possible to consult the present chapter without interrupting the analysis.