

PROXIMA series

Latest generation high-performance intrusion-detection control units



PROXIMA series

PROXIMA®

New generation of SOM-based intrusion- detection control units

With the PROXIMA series, EL.MO. is rewriting the rulebook for **professional intrusion-detection control units designed for complex systems**. Based on a SOM platform with Real-Time operating system, PROXIMA-series control units stand out for their extreme versatility by virtue of their modular architecture and an inherent openness to both EL.MO. and third-party building automation systems.



Three control units...multiple applications

PROXIMA-series control units come in three versions that differ in terms of the number of inputs/outputs each can handle: 128, 256 or 1024. Hence they adapt easily to suit the size and complexity of whatever environment they are placed in. They are ideal for

large installations, such as industrial facilities, company headquarters, infrastructure or distribution chain retail outlets. The PROXIMA series implements specific functionalities, such as entrance control, interfacing with access control systems and the

patrol round function, which is particularly useful in the target environments. Other important features are native to the control unit or can be enabled via optional hardware keys. The underlying philosophy is: adapt to the environment and grow as it grows.



Industries



Credit institutions



Hotels and Serviced Apartments



Retail Chains and Outlets



Public buildings



Offices



Infrastructure



Museums

Smart control units serving your security needs

PROXIMA-series control units incorporate **2 separate and independent RS485 ULTRABUS serial lines** for connecting EL.MO. smart devices (keypads, sensors, sirens...).



PROXIMA control units have 2 slots for functional modules from the Villeggio/Pregio series: MDGSME/MD4GE for GSM/LTE interfacing and MDPSTN for connection with a phone line.



All PROXIMA control units have a LAN RJ-45 10/100 Mbps connector for connection with remote control and supervision systems like e-Connect or GLOBALPRO.



PROXIMA-series control units are designed to handle multiple types of inputs: fast, single-, dual-, triple- and quadruple-EOL. All of which can be selected via BrowserOne software.



Protection of your premises with PROXIMA can also include access control. The control units can have ICON100AVR controller modules built into the bus to control entrances by means of proximity or biometric readers.

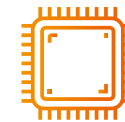


Form and substance, hardware and software: it is hard to find a series of intrusion-detection control units designed on an industrial, bank or retail scale in which these antithetical elements work in synergy and to such great effect.

Everything has been designed and engineered so that the structural conformation and robust, technologically cutting-edge componentry support the multiple functions in the best possible way.

The direction we needed to take was clear and this is the way we have gone: offering installers and security operators alike a feature-rich control unit that is easy to install and set up and, above all, open to future integration and technological developments.

And here is the result: PROXIMA!



SOM platform

SOM stands for System On Module, namely the new architecture on which high-performance electronic products are now being based. The SOM design revolves around a microprocessor/microcontroller with RAM, input/output controllers and other functionalities, making it a computer for all intents and purposes. Why is PROXIMA SOM based? Simple, to better support all its current functions and those to come.

Wired security and so much more

With the two RS485 serial interfaces on the PROXIMA control units, the **potential of EL.MO's ULTRABUS-series products can be exploited to the full**: direct connection on the bus, reduced cabling required to reach devices in the field, and advanced programming of said devices via PC, even remotely. The extensive range of ULTRABUS devices (keypads, sensors, concentrators, sirens and smoke screen systems) allows you to create highly diverse systems. In addition, it supports all the brand new TERABUS technology functions:

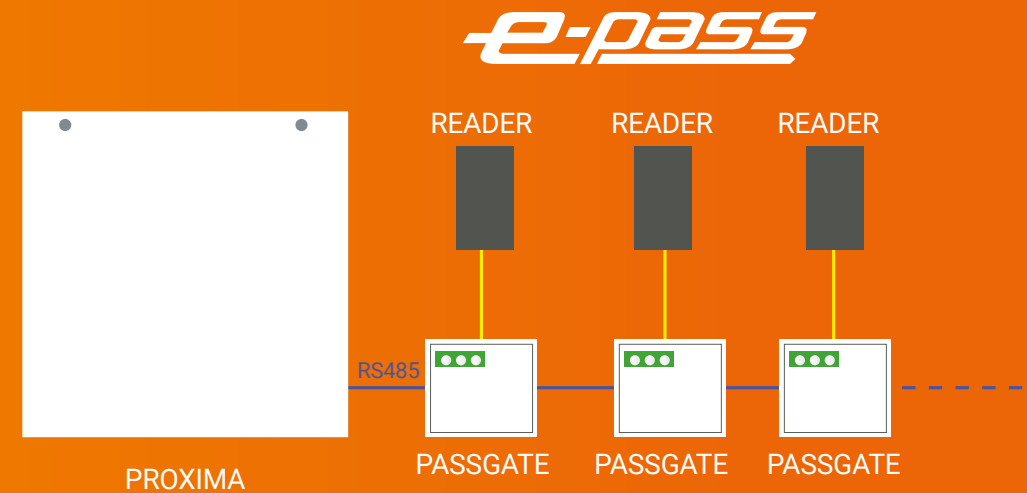
- Multiple addressing modes: manual for each single concentrator; automatic multiple addressing; guided multiple addressing.
- Freely configurable zone balancing using BrowserOne software, to manage with the highest degree of flexibility the already existing zones that are not balanced according to the EL.MO. standards.
- Support of the TBSManager software, which allows viewing the concentrator state, carrying out zone diagnostics operations and addressing the concentrator.



The two serial lines are independent and separate. The advantages? Communication times between the control unit and field devices are significantly reduced, which is great for security and system responsiveness. In addition, any short-circuits or tampering on one line will not compromise the correct operation of the other.

Integration with access control

Protecting locations with PROXIMA series control units may also include the control of sensitive gates. The PROXIMA control units, indeed, natively implement the functions of a controller for access control, managing the PASSGATE optional modules or systems based on ICON100AVR (the overall limit is 16 connected devices) notably reducing cost, wiring and complexity. To manage gates (users, permissions etc.) it is possible to use the PassManager software.



EN 50131 grade 4 certification

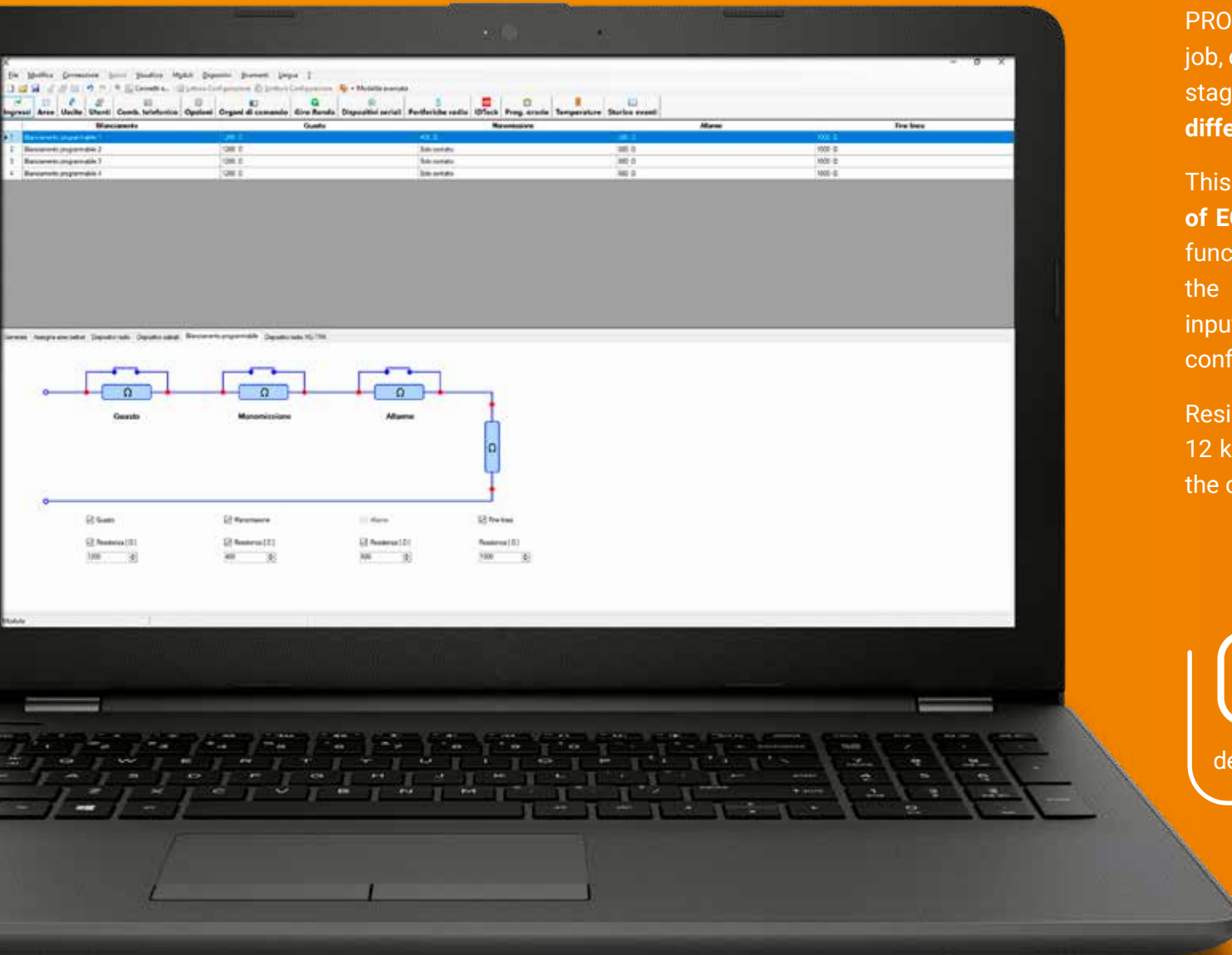
PROXIMA is certified with the highest degree of security obtainable on the market! It is the first Italian grade 4 intrusion detection control panel, the highest level recognized by the EN50131 standards, becoming one of the few control panels in the world certified with this level of security!

The control panel is designed to guarantee the highest security standards: this makes it impregnable even in case of intrusion attempts from criminals with a high level of knowledge and expertise in alarm systems, with the ability and resources to plan in detail a break-in or robbery using sophisticated equipment, and with the possibility of replacing the components of an intrusion detection system. Moreover, EL.MO. has proceeded to certify further products to provide a complete system with the highest security degree:

- The e-Connect app is also EN50131 certified to the highest level for management by end users, to ensure all-around security for users.
- RIVERTBS, the remote concentrator that allows connecting additional devices to the control unit via RS485 serial line, has now been certified grade 4 as well.



Simplified installation and commissioning



PROXIMA has been designed to simplify the installers' job, offering valuable help at the cabling and configuration stage: **inputs can be programmed via BrowserOne for different EOL configurations.**

This software actually allows you to define **up to 4 types of EOL configurations, which you can apply at will.** This function is particularly useful when needing to integrate the control unit into an existing system that includes inputs set up for EOL resistors that are not in an EL.MO. configuration.

Resistor values can be set arbitrarily in the range 400Ω to $12 \text{ k}\Omega$ and the software will automatically check whether the configuration is valid.



Removable terminals

All terminals on the PROXIMA control units' boards can be removed. Why? Simple, to make the job of cabling and connecting the control unit to all the field devices that much easier.

Graphic editor for creating logics

One of the most innovative aspects of the PROXIMA control units is the ability to program up to 255 logic diagrams (even complex diagrams) managed by the control units by means of a **graphic editor with simulator on BrowserOne**.

This editor, featuring an **extremely simple and intuitive interface**, exploits **Drag&Drop elements** and icons to create logic diagrams and structure automated systems that prove very useful in the management of large buildings.

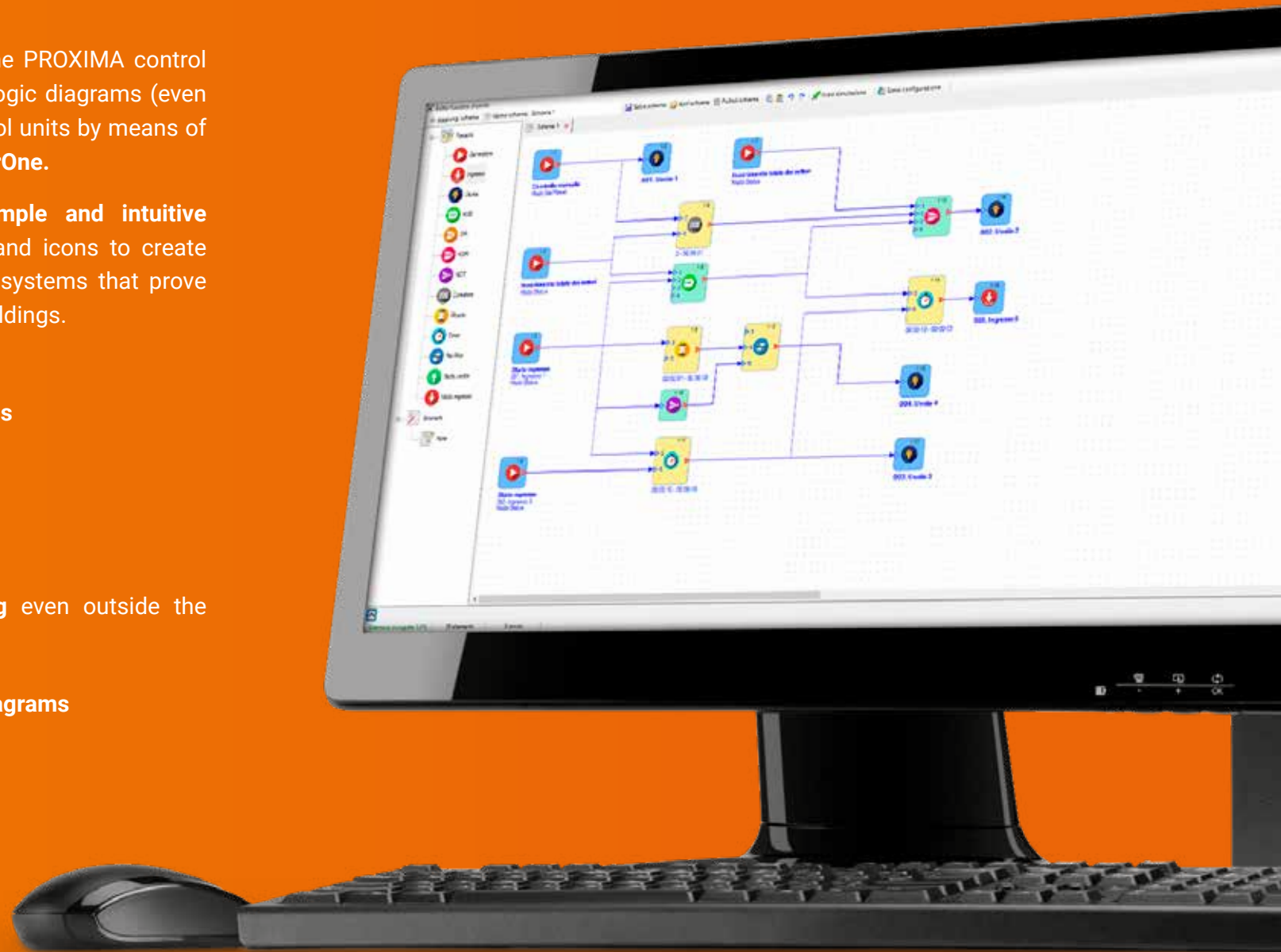
 Up to **255 customizable logic diagrams**

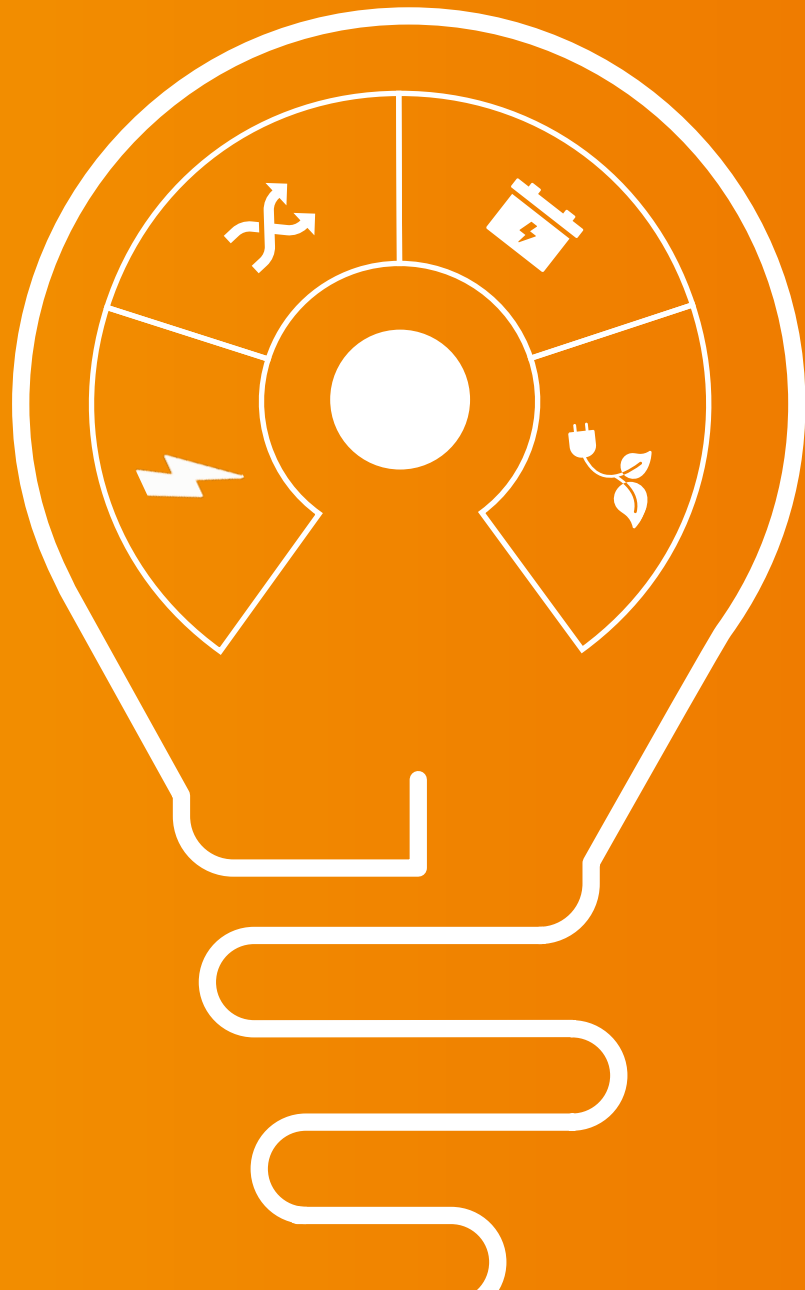
 **1024 total logic elements**

 **13 types of elements used**

 Option of **exporting and importing** even outside the configuration


 Option of creating a **library of logic diagrams**







Power supply is a key factor

A lot of thought went into the **electrical side** of PROXIMA during its design and engineering. The control units are structured to **manage and distribute the power supply to field devices efficiently, safely and in a differentiated manner**.

 **On-board 5A power supply unit** to withstand a high current load and supply a large number of devices.

 **2 separate independent outputs powering the sensors**, each fuse protected and with a 2A capacity. Any short-circuits or tampering on one of the outputs will not compromise the correct operation of the other.

 **Designed to house a 40Ah battery** for PRX1024 and PRX256, and a 18Ah battery for PRX128.

 PROXIMA control units qualify as **green control units, with their extremely low current consumption (max. 70 mA)**.

Monitoring and diagnostics



Can you monitor PROXIMA control units' electrical parameters in real time? Of course! You can access diagnostics directly via BrowserOne and view: Main supply voltage, On-board battery voltage, Siren battery charging voltage, Sensor 1 and 2 output voltage, Total current delivered to sensors, and Circuit board temperature.

Model	PRX128	PRX256	PRX1024
Product code	CCPRX0000100	CCPRX0000200	CCPRX0000300
Platform standard	SOM with Real-Time operating system		
Number of standard Inputs	16 inputs (12 of which are fast for inertial loads and rolling shutters), with choice of settings for single/double/triple/quadruple-EOL configurations expandable up to 128 On-board inputs can be extended up to 32 with split/extended split function Removable terminals	16 inputs (12 of which are fast for inertial loads and rolling shutters), with choice of settings for single/double/triple/quadruple-EOL configurations expandable up to 256 On-board inputs can be extended up to 32 with split/extended split function Removable terminals	16 inputs (12 of which are fast for inertial loads and rolling shutters), with choice of settings for single/double/triple/quadruple-EOL configurations expandable up to 1024 On-board inputs can be extended up to 32 with split/extended split function Removable terminals
Number of standard Outputs	16 electronic outputs, expandable up to 128, programmable at will on ETRREL modules	16 electronic outputs, expandable up to 256, programmable at will on ETRREL modules	16 electronic outputs, expandable up to 1024, programmable at will on ETRREL modules
Sensor power supply outputs	2 independent outputs, 2A each	2 independent outputs, 2A each	2 independent outputs, 2A each
Relay outputs	2 x 3A programmable C/NO/NC relay outputs		
Siren interface	1 interface for self-powered siren		
RS485 serial lines	2 independent RS485 ULTRABUS lines for concentrators, control devices, and compatible devices		
RS232 serial lines	1 RS232 serial line via optional MDRS232 module		
NG-TRX device management	Yes, via optional GATEWAY2K		
CEI 79-5 79-6 centralization	2 CEI/ABI connections at the same time with independent configurations on LAN network, with FEAL-NX 64bit and 128bit encryption. GSM/GPRS or PSTN backup connection		
Multi-area control	16 areas with 4 sectors per area up to 4 areas with 16 sectors per area		
Supervision protocols	EL.MO. encrypted, CEI/ABI encrypted, Fast Format, ContactID, SIA DC09 encrypted		
User code	1024 user codes		
Keypad management	Max. 32 control devices, including KARMA and AURA advanced keypads		
Output logics	2 output logic control modes: standard or advanced mode (with visual editor on BrowserOne)		
Programmer	Annual, 32 programs, 16 permanent exceptions, 16 volatile exceptions, 8 holiday periods		
Event log	5,000 events logged		
FW update	Via USB / Ethernet using BrowserOne, via e-Connect		
Diagnostics	Electrical operating parameters available in teleservice mode on BrowserOne, including current delivered to peripherals		
Slots for communication modules	MDGSME or MD4GE for connection via GSM/GPRS or LTE respectively; for connection with e-Connect platform; and for voice and digital transmission with ContactID, Fast Format and SIA IP Reporting (TCP-2007) protocols MDPSTN for analogue phone line		
Compatible functional modules	MDVOICE64 for extension up to 64 voice messages, for a total of 8 minutes MDRS232 for connection with ETREIB for interfacing with Konnex systems		
LAN interface	1 built-in RJ-45 connector for connections with Ethernet-TCP/IP networks		
Teleservice	Via ethernet, via optional PSTN modem MDPSTN, via optional GSM/LTE modem MDGSME/MD4GE or e-Connect		
Wireless sensor management	Via RIVERRF/RIVERRFPLUS and GATEWAY2K		
Entrance control functionality	Entrance control with software and hardware applications with door lock release by means of proximity card reading		
Access control functions	Management of access control systems with RF cards based on ICON100AVR controller and accessories with date and time syncing		
Battery housing	Max. 18 Ah / 12 Vdc	Max. 40 Ah / 12 Vdc	Max. 40 Ah / 12 Vdc
Size	W 316 x H 305 x D 143 mm	W 430 x H 354 x D 212 mm	W 430 x H 354 x D 212 mm
Standard board current demand	Max. 70 mA (with RJ45 OFF)		
Power supply unit	5 A		
Power supply	230Vac, 50Hz		
Standards	EN 50131 grade 4 certification, environmental class II, EN50131-6:2008		



D-Pulse: The pulse for safety

D-Pulse is the new interfacing technology between e-Vision video surveillance systems based on Artificial Intelligence (AIUNIT devices or AI e-Vision PRO cameras) and EL.MO. compatible intrusion detection control units (at the moment PROXIMA).

The alarm events generated by the analysis of the video streams (intrusion detection, line crossing, abandoned object) trigger an alarm in the control unit in the same way as a physical input. What does this innovation entail? A camera can now play the role of a sensor, with all the benefits that come from the increase in reliability and versatility deriving from an analysis based on Artificial Intelligence.

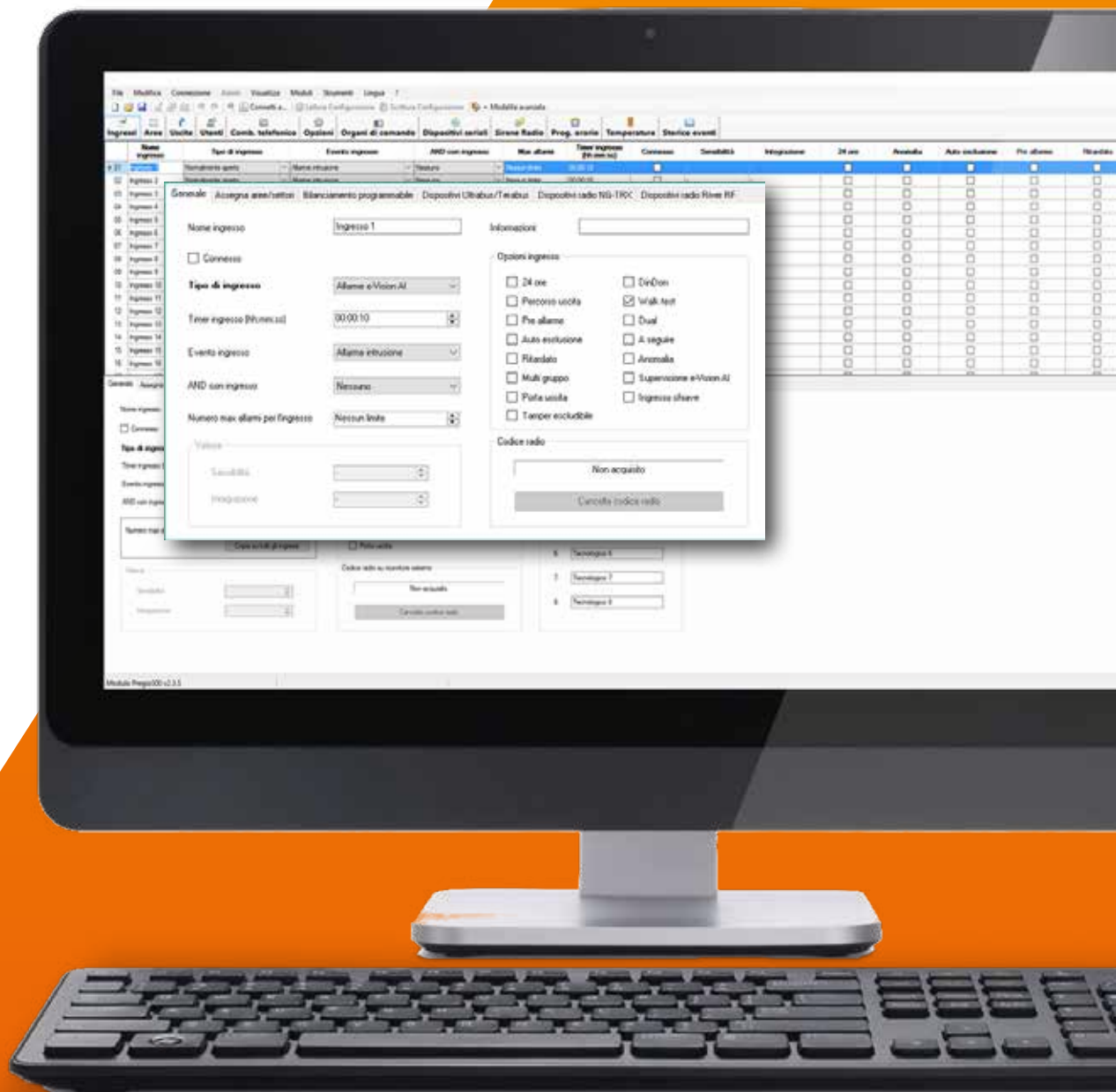
- The signals coming from the AI e-Vision PRO cameras and the AI UNIT can alarm up to 64 zones of the Proxima control unit
- The configuration of the signalling that alarms the zone is carried out in the video device (AI e-Vision PRO camera or AI UNIT)
- The camera failure is also managed and the connection of the devices can be supervised
- With AI UNIT it is possible to send different signalling on different inputs
- These functions are compatible with a wide range of e-Vision PRO devices, that can be recognized by the D-PULSE logo



D-Pulse: Ready to Go!

Configuring an EL.MO. intrusion detection system based on D-Pulse is extremely easy and requires few steps:

1. Creation of the analysis rule (for example line crossing from right to left, removing an object from a certain position etc.). This operation must be carried out both for the e-Vision AI Pro cameras in direct connection to the control unit, and for the AI UNIT module to which the cameras are connected.
2. Using BrowserOne (the programming software of the EL.MO. control units), set the zone or zones that will receive the trigger event generated by the video analysis.
3. Finally, you can configure all the alarm propagation dynamics locally (sirens, automatic activations etc.) and remotely (e-Connect app, InstaVision function etc.).



Say goodbye to false alarms

With the D-Pulse systems, the risk of false alarms is almost reduced to zero. Artificial Intelligence algorithms interpret the shooting scene extremely accurately, recognising and distinguishing the elements included. Depending on what is analysed, the previously set automation sceneries will activate. Triggering an alarm only when a burglar enters the garden or, conversely, avoiding it in case a stray animal is passing by are activities that only artificial intelligence can perform. This is the kind of technology that most matches the interpretation capabilities of human sight and intelligence.

Scene target distinction



Man



Pet



Car

How is a D-Pulse intrusion detection and CCTV system composed?

The PROXIMA units are the core of the system. They receive the "alarm pulses" from the Artificial Intelligence field devices (D-Pulse cameras or AI-UNIT analysis units) and propagate the alarm according to set logics.



PROXIMA control units

The e-Vision cameras equipped with Artificial Intelligence capture the images and interpret the scene. In case of alarm event, they send the signal to the control unit via LAN.



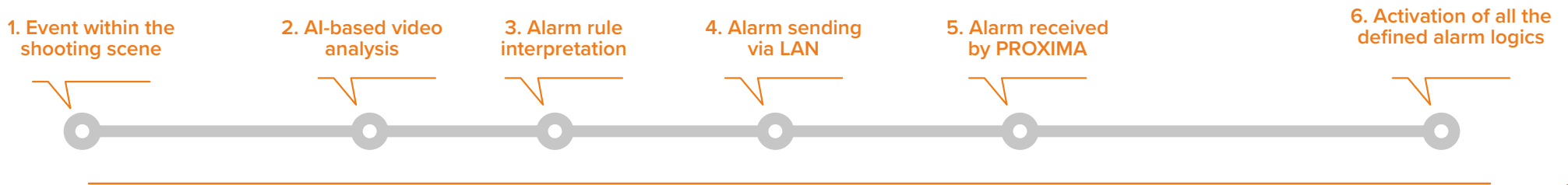
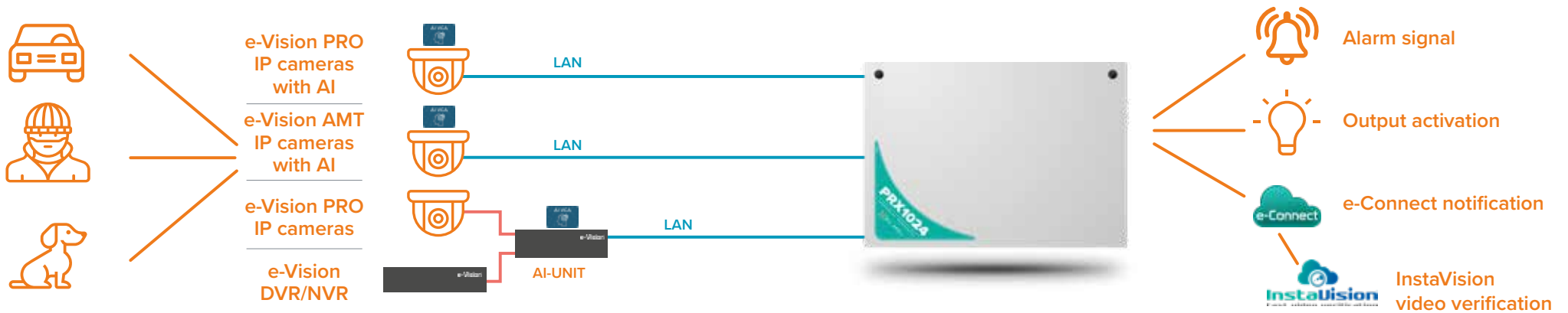
AI e-Vision cameras

AI-UNIT analysis units allow to extend the use of Artificial Intelligence to any device equipped with RTSP protocol (Onvif Profile S IP cameras or DVRs and NVRs) that does not feature AI natively. Such devices directly interface with PROXIMA units via LAN.



AI-Unit analysis unit

From event to alarm



Immunity to false alarms

Possibility to alarm up to 64 control unit zones

Camera fault signaling to control unit

AI system operation signaling to control unit

AI system tamper event signaling

Infinite logics for activation upon alarm

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