

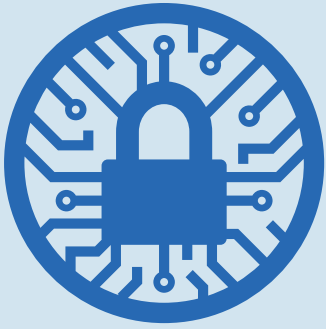
XV-102

Compact and **powerful**
operating and control
devices



Powering Business Worldwide

An Eaton secure-by-design solution



Eaton operates an independent development center, the 'Cybersecurity Center of Excellence' (CCoE), specifically designed to combat the threats posed by cyber attacks. All Eaton products are regularly qualified for secure operation.

The XV-102 devices with an Embedded Linux operating system seamlessly integrate into Eaton CCoE's 'Defense in Depth' cybersecurity concept. The devices boot from a write-protected memory, and only operating system software updates signed by Eaton can be installed on the devices. All device settings and interfaces are secured via password entries, which also withstand a brute force attack.

Communication channels can be selectively activated and encrypted for the required tasks. However, cybersecurity and usability are not mutually exclusive. Guided by the first-boot agent, the prepared application software and device configuration are installed easily and efficiently via a USB memory during machine or system commissioning. The application software and process data can optionally be installed on an encrypted SD card, and in the event of a device replacement, the application-specific data can simply be taken over to the replacement device.

Eaton.com/cybersecurity

XV-102 Touch Display - Compact, powerful and flexible

The XV-102 touch display range from Eaton's Moeller™ Series offers a compact, powerful and flexible solution for automation applications where space is at a premium. The devices offer the modern, future-proof Embedded Linux operating system with advanced cyber security features and even faster processors, while maintaining form, fit and function. They can be used either as HMI operating panels or optionally with integrated PLC functionality.

Thanks to the resistive touch screen, the devices can be operated with thick work gloves and are extremely robust against electrical interferences. The XV-102 devices are equipped with electronics, based on state-of-the-art industrial components with high availability.

With the help of the powerful CPU (Central Processing Unit or main processor), the easy-to-learn GALILEO visualization software, including an extensive library of operating objects, the touch panels make it possible to quickly implement efficient control interfaces.

In addition, visually appealing screen displays can be quickly implemented to further emphasize the high quality of the machine.

Embedded Linux was specially developed for embedded systems in the context of modern machine automation.

It makes the devices future-proof, particularly in terms of cyber security. As before, PLC programming is carried out using CODESYS, the established and industry-wide standard for programming control systems.

The devices are housed in a plastic casing and can also be used in portrait format. The integrated non-volatile memory can be easily expanded via an SD card, if required. In addition to the Ethernet interface, CANopen, RS232 and RS485 interfaces are also available, depending on the device type.

At a glance

- Screen sizes include 3.5-inch-, 5.7-inch- (4:3 format) and 7.0-inch variants (16:9 format)
- Resistive touch technology
- 800 MHz ARM CPU
- SD card slot, USB-Host
- Ethernet and optional CANbus, RS485 and RS232 interfaces
- Programming with GALILEO V11, optionally with XSOFT-CODESYS 3
- Approvals: UL, DNV





GALILEO 11 visualization software

Galileo is an intuitive and powerful engineering environment that takes small effort to master and meets every requirement involved in today's on-site machine operation. It is custom-tailored to the needs of the international machine and systems building industry and reflects the latest developments in visualization technology.

The comprehensive integrated communication protocols make it possible to provide visualization for all common PLCs resp. controllers.

Visualization controls like value display, gauge, graph charts, lists and many more offers great design possibilities for visualizing PLC tag values. At the same time, controls like value entry with modern looking on-screen keyboard, slider, list selection box, recipe and more facilitate the changing of PLC variables. Navigation between the different visualization image pages can be designed attractively using animated screen changes, pull-out menus and dynamic dialogs. Additional functionalities like scripting, trigger script execution on events and a built-in user management complete the broad range of customization.

The possibility to create your own user defined controls with parameter interface (tags, text, images, script assignments, ...) improves reusability and graphical consistency across the project, saving time during the development phase.

By activating the web visualization functionality of Galileo, remote devices such as PC's, tablet's or smartphones can easily access the XV-102 visualization. Based on the HTML5-standard all common web browsers (Safari, Chrome, Edge) are supported. It is possible to make an existing visualization web-accessible with just a few simple configuration clicks, or to design a specially tailored visualization for web purposes (e.g., tailored content for portrait mode view, reduced functionality for web access).

The Galileo Design Tool offers a simulator with which the created visualization can be easily tested on the developer PC.

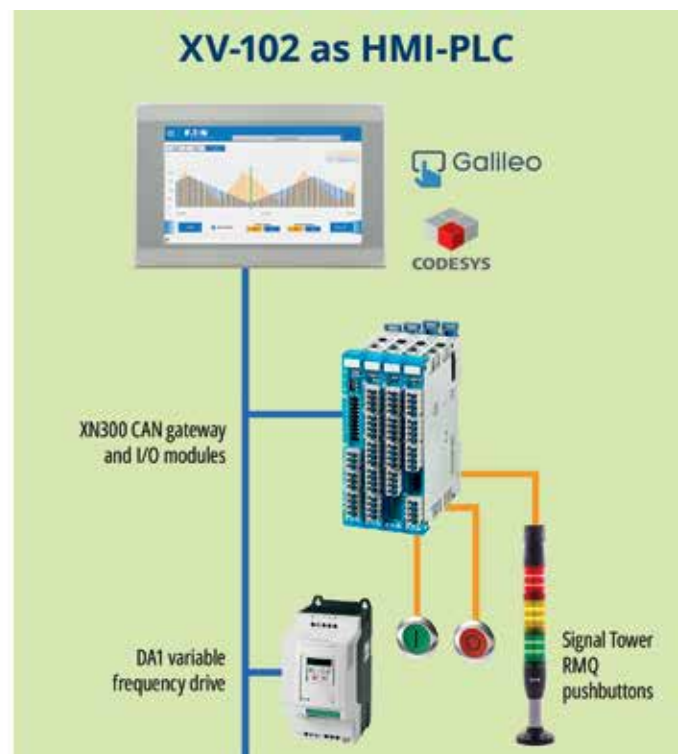
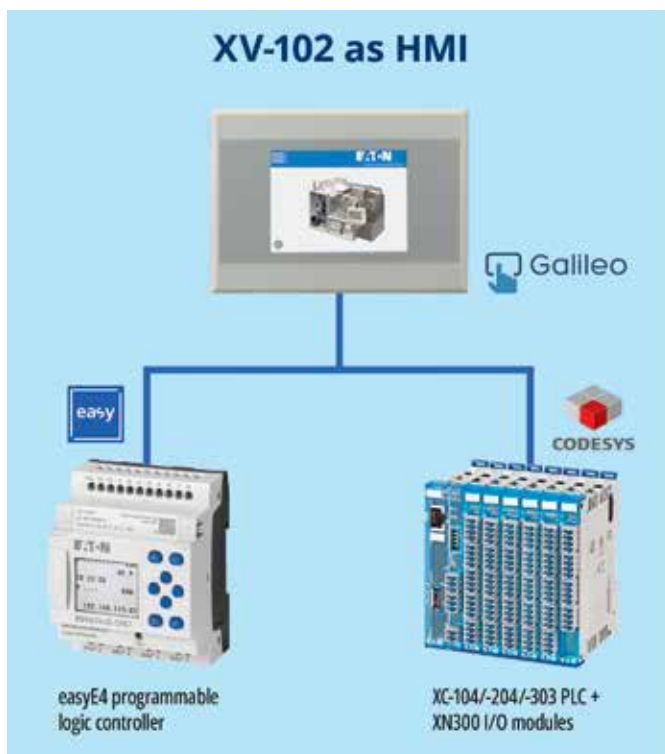
For more information, please visit: Eaton.com/galileo



XSOFT-CODESYS-3 PLC programming software

When used to implement an efficient HMI-PLC, the optional CODESYS-based PLC function enables users to develop powerful and comprehensive programming functions in line with the IEC 61131 international standard. Its sophisticated technical features and ease of use make it a popular programming system for automation components of various manufacturers. For many successful companies it is the preferred programming system for their automation solution.


For more information, please visit: Eaton.com/codesys



Technical data

XV100 HMI / HMI-PLC

	PLC license	Built-in interfaces				Ordering information	
	Included	1 x Ethernet 10/100 Mbps	1 x RS232	1 x RS485	1 x CANopen	Part no.	Catalog no.
Touch screen: Resistive touch Processor: 800 MHz ARM Memory (RAM): 512 MB Internal memory (Flash): 4 GB SD card slot USB host Operating system: Embedded Linux Approvals: cUL, DNV							
3.5" version							
	-	✓	✓	-	-	XV-102-L3-35TQR-10	EP-401342
	-	✓	-	✓	-	XV-102-L4-35TQR-10	EP-401343
	-	✓	✓	-	✓	XV-102-L5-35TQR-10	EP-401344
	✓	✓	✓	-	✓	XV-102-L5-35TQRC-10	EP-401345
	✓	✓	-	✓	✓	XV-102-L6-35TQRC-10	EP-401346
5.7" version							
	-	✓	✓	✓	-	XV-102-L4-57TVR-10	EP-401347
	-	✓	✓	✓	✓	XV-102-L6-57TVR-10	EP-401348
	✓	✓	✓	✓	✓	XV-102-L6-57TVRC-10	EP-401349
7.0" version							
	-	✓	✓	✓	-	XV-102-L4-70TWR-10	EP-401350
	✓	✓	✓	✓	✓	XV-102-L6-70TWRC-10	EP-401351

Description	Part no.	Catalog no.
Memory card  SD memory card with min. 1 GB memory capacity	MEMORY-SD-A2-S	181638

Other visualization options out of Eaton's portfolio



XH300 HMI web panel for web-based visualization

With the XH300 web panel series, you can flexibly visualize web-based content in HTML 5. Thanks to a high-performance processor and extensive RAM, even complex web content can be displayed on the modern-designed HMIs. The range of applications is versatile and varies from classic machines and system applications to applications in building automation and IoT. The web panels with capacitive multi-touch technology are available in three different sizes. The integrated Ethernet interface can be used to connect with devices with an integrated web server.

For more information, please visit: Eaton.com/xh300

XV300 HMI / HMI-PLC for advanced visualization

The XV300 touch panels stand out for its modern design and ease of use, based on the capacitive multi-touch and high-resolution screen. The devices can either be used as HMI operator panels or optionally as a combination with an integrated PLC functionality. High system performance makes it possible for the XV300 devices to have a highly responsive, state-of-the-art user interface with gesture control and animations.

The PLC function can be programmed using CODESYS. Whether you need CANopen, J1939, Ethernet/IP, EtherCAT, Modbus (TCP/RTU), the wide variety of fieldbus interfaces on XV300 devices ensures that you will be able to use the right protocol for your application. Creating the user interface is easy, thanks to the intuitive GALILEO visualization software. Alternatively, it is possible to implement the visualization via CODESYS.



For more information, please visit: Eaton.com/xv300



XP500 industrial PC for high-end visualization

The robust and open industrial PC series XP500 provides an HMI solution in the high-end area. In addition to panel PCs, the range also includes box PCs and terminals which, in combination with an extender module, enable visualization even over long distances. The intuitive multi-touch operating concept paired with modern design, powerful technology and the modular system concept make the XP500 series a multi-talent in machine and systems design as well as in the building sector.

For more information, please visit: Eaton.com/xp500

Eaton is an intelligent power management company dedicated to protecting the environment and improving the quality of life for people everywhere. We make products for the data center, utility, industrial, commercial, machine building, residential, aerospace and mobility markets. We are guided by our commitment to do business right, to operate sustainably and to help our customers manage power - today and well into the future. By capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy sources, helping to solve the world's most urgent power management challenges, and building a more sustainable society for people today and generations to come.

For more information, visit www.eaton.com.

Eaton addresses worldwide: **Eaton.com/contacts**



Eaton

EMEA Hauptsitz
Route de la Longeraie 7
1110 Morges
Switzerland
Eaton.com

Electrical Sector

Eaton Industries GmbH
Hein-Moeller-Str. 7-11
53115 Bonn / Germany

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