XV and XP Operator Interface



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Drawings Online

An Eaton Green Solution

Product Description

The XV and XP Series, along with Visual Designer software, completes Eaton's strong portfolio of operator interfaces and logic control products. Along with a broad selection of industrial control components, Eaton is a single-source supplier for automation and control products

The new XV and XP Series of operator interfaces represent the broadest set of solutions Eaton has introduced in more than 25 years of HMI innovation. This family of high performance platforms provides unmatched flexibility, with a slim OEM design and a variety of communication port options that include onboard Ethernet on all models. With screen sizes ranging from 3.5 to 15 inches, vast communications capabilities, and a single development software package, the XV and XP Series represent a complete solution to any HMI application.

Visual Designer—a single software solution

At the heart of any good operator interface system is a powerful and intuitive software package. For this reason, Eaton introduces Visual Designer. When coupled with this new software package, XV and XP Series operator interfaces can communicate with virtually any network, any PLC, any web client, and any database. Development is simplified by the ability to seamlessly scale a single application across all XV and XP Series models. The Visual Designer runtime and web server licenses are pre-installed on all XV and XP Series units, eliminating the hassle and cost of purchasing and installing separately.

XSoft-CoDeSys-2: Integrated PLC and Operator Interface Solution

The XV Series is offered with a combination PLC/Operator Interface runtime software. (Not available on the XP Series.) These units handle both the Visualization and Logic needs of a system, eliminating the need for a separate PLC. XSoft-CoDeSys-2 provides a powerful environment to develop both the logic and visualization for your application. Logic development is available in multiple programming languages and is fully IEC-61131 compliant. Operator interface development is directly integrated with the logic development reducing design and administration time.

CoDeSys on which XSoft-CoDeSys-2 is based, is the leading IEC-61131 compliant programming software in the world. Eaton Corporation is a member of the CoDeSys Alliance and offers CoDeSys development tools across multiple Eaton product groups around the world.

Selecting the right model for your application

The XV product offered with either Visual Designer or XSoft-CoDeSys-2 offers the best solution for two different user requirements. Visual Designer provides a fully integrated SCADA and HMI platform and XSoft-CoDeSys-2 provides a fully integrated Logic and OI platform. Both are fully web enabled for remote access and annunciation.

The XP with Visual Designer offers SCADA functionality with full windows compatibility and protected operating system, all in a rugged industrial hardware platform.

Features and Benefits

Fully connected, web-enabled

Today's operator interface applications range from basic monitor and control to high-end, feature-rich HMI software with Supervisory Control and Data Acquisition (SCADA). Customers demand communications capability with any network, PLC, Web client, and database. The answer: Eaton's Web-enabled Visual Designer operator interface software.

Web-based thin client

- Zero admin client—no need to install software on the remote PC
- Supports multiple simultaneous and independent web clients
- Simplified security—the same local user accounts and passwords for viewing and control also apply remotely

Connectivity

- Extensive list of over 240 native communication drivers for PLCs, drives, and many other industrial and commercial devices
- Visual Designer software can interface to any relational database—access both local and enterprise functions such as MRP/ERP through databases such as Microsoft® Access, Fox Pro, SQL Server, Oracle®, PI System® and many others
- Other connectivity tools provide redundancy capabilities, Real-Time Data Exchange, Centralized Alarm Management, and more

Open platform

- Visual Designer Software can host third party ActiveX® and .NET controls and Visual Basic® programs
- In addition to Eaton's Operator Interface families, Visual Designer's runtime may be licensed on any 32 or 64-bit Windows PC

Interoperability

- Software is designed to open standards such as XML, OPC, ActiveX, .NET, ODBC, ADO, SOAP, DDE and more

Peace of mind

All of these capabilities—combined with Eaton's commitment to provide free technical support for both OI hardware and software—make it quick and easy to purchase, develop and deploy XV and XP operator interface solutions.

Product Selection Guide

XV and XP Operator Interface with Visual Designer Series XV Operator Interface

Series	XV		XP	
Model	XV-102	XV-152	XP-702	
Screen Size	3.5, 5.7, 7.0	5.7, 8.4, 10.4	8.4, 10.4, 12.1, 15.0	Blind Node (no display)
Housing material	Plastic	Metal	Metal	
Operating system	WinCE 5.0 Professional		Windows XPe	
Touchscreen technology	Resistive		Infrared, non-reflective safety glass	N/A
Communication ports	1 Ethernet, 1 or 2 serial, 0 or 1 USB		2 Ethernet, 2 serial, 4 USB	
Development software	Visual Designer (VISUALDCE or VISUALDXP)		Visual Designer (VISUALDXP)	
Pre-licensed tags, drivers, web sessions	1500 tags, 3 drivers, 1 web session		Standard models 4000 tags, 5 drivers, 1 web session	
			Enterprise models 64,000 tags, 8 drivers, 1 web session	
Field upgradeable max tags, drivers, web sessions	4000 tags, 3 drivers, 1, 2, 4, or 8 web sessions simultaneously		64,000 tags, 8 drivers, 1, 2, 4, 8, 16, 32, 64, 128, or 256 web sessions simultaneously	
Alarm online/history	Yes		Yes	
Trend online/history	Yes		Yes	
Scripting	Yes (VB Script)		Yes (VB Script)	
Scheduler	Yes		Yes	
Recipe	Yes		Yes	
Reports	Yes		Yes	
OPC, TCP/IP, and communication drivers	Yes		Yes	
Web Server and Web Thin Client support	Yes		Yes	
Full remote access	Yes		Yes	
Local/remote database interface	Yes		Yes	
Ability to run third party software	No		Yes	
ActiveX and .NET controls	No		Yes	
Full document viewing	No		Yes	
Windows media player	No		Yes	
Vision system interfaces	No		Yes	
Network camera monitoring	No		Yes	

XV Series with CoDeSys Run Time (Not Available on XP Series)

Series	XV	
Model	**XV-102**	**XV-152**
Screen Size	**3.5, 5.7, 7.0**	**5.7, 8.4, 10.4**
Housing material	Plastic	Metal
Operating system	WinCE 5.0 Standard	
Touchscreen	Resistive	
Communications ports	1 Ethernet, 1 or 2 serial, 0 or 1 USB	
Optional field buses	PROFIBUS, CANopen, SmartWire-DT	
Development software	XSoft-CoDeSys-2	
IEC-61131-3 logic programming	(LD, ST, SFC, IL, FBD, CFC) Yes	
Integrated screen design	Yes	
Integrated field bus configuration	Yes	
Alarm online/historical	Yes	
Trend online/historical	Yes	
Scripting	Structured Text	
Scheduler	Yes	
Recipe	Yes	
Reports	No	
OPC, TCP/IP and communication driver	Yes (OPC Server for PC)	
Web Server and Web Thin Client support	Yes	
Full remote access	Yes	
Local/remote data base access	Limited (DDE)	
Ability to run third party software	No	
ActiveX and .NET controls	No	
Full document viewing	No	
Windows media player	No	
Vision system interfaces	No	
Network camera monitoring	No	

XV Operator Interface



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XV with Visual Designer or XSoft-CoDeSys-2

Product Description

XV with Visual Designer

Positioned between the **HMI***i* and the XP series of operator interface, the XV series is ideal for applications requiring extensive connectivity and the advanced features available in Visual Designer without the expense associated with more powerful open platforms.

The XV models were designed with OEMs in mind featuring an attractive bezel and slim and light weight housing. The clip mount design simplifies installation.

XV with XSoft-CoDeSys

The XV series with XSoft-CoDeSys combines powerful logic and visualization capabilities into a single device. It is ideal for OEM applications where low component count and ease of program development and remote administration is critical.

The XV Models with XSoft-CoDeSys offer multiple field bus options built directly on-board the unit to provide an overall solution optimized both for size and cost.

Features

XV with Visual Designer

XV Series operator interface with Windows CE operating system

- 3.5 in, 5.7 in, 7.0 in (widescreen), 8.4 in, and 10.4 in screen sizes
- Cost effective plastic or metal housing
- Resistive touch with flush bezel
- Ethernet and serial ports on all models
- Visual Designer XP or CE development software
- Pre-installed Visual Designer runtime and web serving licenses

XV with XSoft-CoDeSys

XV Series operator interface with Windows CE operating system

- 3.5 in, 5.7 in, 7.0 in (widescreen), 8.4 in, and 10.4 in screen sizes
- Cost effective plastic or metal housing
- Resistive touch with flush bezel
- Ethernet and serial ports on all models
- PROFIBUS, CANopen and SmartWire-DT optional
- XSoft-CoDeSys-2 programming software
- Pre-licensed for CoDeSys run time

Standards and Certifications

- CE
- UL
- cUL
- RoHS

Catalog Number Selection

XV Operator Interface

XV

XV – 102 – B3 – 35TQRG – 10

Family
XV = Microsoft Windows CE operating system

Performance Class
102 = CE, plastic housing, 2nd gen
152 = CE, metal housing, 2nd gen

Features Base Unit Variant ①	Features Additional COMM Options
B = Retentive memory	**3** = 1-RS232
D = Retentive memory, USB host, RS-232	**4** = 1-RS485
E = Retentive memory, USB host, SmartWire-DT	**6** = 1-CANopen
	8 = 1-PROFIBUS
	E = 1-SmartWire-DT

Display Size	Display Technology	OS Build
35 = 3.5 in	**TQR** = TFT (QVGA) resistive	**C** = XSoft-CoDeSys
57 = 5.7 in	**TVR** = TFT (VGA) resistive	**G** = CE Professional OS and Visual Designer runtime 1500 tags ②
70 = 7.0 in	**TWR** = TFT (widescreen) resistive	
84 = 8.4 in		
10 = 10.4 in		

Branding and Bezel
10 = Standard blank front bezel with Eaton branded product label

Product Selection

XV Operator Interface



XV Operator Interface with Visual Designer

Description	Catalog Number
XV 3.5 in TFT, plastic housing, resistive touch, Ethernet and RS-232	**XV-102-B3-35TQRG-10**
XV 3.5 in TFT, plastic housing, resistive touch, Ethernet and RS-485	**XV-102-B4-35TQRG-10**
XV 5.7 in TFT, plastic housing, resistive touch, Ethernet, RS-232, RS-485	**XV-102-D4-57TVRG-10**
XV 7.0 in TFT wide screen, plastic housing, resistive touch, Ethernet, RS-232, RS-485	**XV-102-D4-70TWRG-10**
XV 5.7 in TFT, metal housing, resistive touch, Ethernet, RS-232, RS-485	**XV-152-D4-57TVRG-10**
XV 8.4 in TFT, metal housing, resistive touch, Ethernet, RS-232, RS-485	**XV-152-D4-84TVRG-10**
XV 10.4 in TFT, metal housing, resistive touch, Ethernet, RS-232, RS-485	**XV-152-D4-10TVRG-10**

Notes

① All 1xx performance class units have 400MHz processor, 64 MB DRAM, 1 x 10/100 Ethernet, and 1 x USB device.

② Standard software on embedded hardware. These XV models have a Microsoft Windows CE 5.0 Professional operating system and are pre-licensed with Visual Designer runtime for up to 1500 tags, 3 simultaneous communication drivers, and 1 web session. Field upgrades are available for up to 4000 tags, 3 drivers, and 2, 4, or 8 simultaneous web sessions.

XV Operator Interface with XSoft-CoDeSys

Description	Catalog Number
XV 3.5 in TFT plastic housing, resistive touch, CANopen	**XV-102-B6-35TQRC-10**
XV 3.5 in TFT plastic housing, resistive touch, PROFIBUS	**XV-102-B8-35TQRC-10**
XV 3.5 in TFT plastic housing, resistive touch, SmartWire-DT	**XV-102-BE-35TQRC-10**
XV 5.7 in TFT plastic housing, resistive touch, CANopen	**XV-102-D6-57TVRC-10**
XV 5.7 in TFT plastic housing, resistive touch, PROFIBUS	**XV-102-D8-57TVRC-10**
XV 5.7 in TFT plastic housing, resistive touch, CANopen, SmartWire-DT	**XV-102-E6-57TVRC-10**
XV 5.7 in TFT plastic housing, resistive touch, PROFIBUS, SmartWire-DT	**XV-102-E8-57TVRC-10**
XV 7.0 in TFT plastic housing, resistive touch, CANopen	**XV-102-D6-70TWRC-10**
XV 7.0 in TFT plastic housing, resistive touch, PROFIBUS	**XV-102-D8-70TWRC-10**
XV 7.0 in TFT plastic housing, resistive touch, CANopen, SmartWire-DT	**XV-102-E6-70TWRC-10**
XV 7.0 in TFT plastic housing, resistive touch, PROFIBUS, SmartWire-DT	**XV-102-E8-70TWRC-10**
XV 5.7 in TFT metal housing, resistive touch, CANopen	**XV-152-D6-57TVRC-10**
XV 5.7 in TFT metal housing, resistive touch, PROFIBUS	**XV-152-D8-57TVRC-10**
XV 5.7 in TFT metal housing, resistive touch, CANopen, SmartWire-DT	**XV-152-E6-57TVRC-10**
XV 5.7 in TFT metal housing, resistive touch, PROFIBUS, SmartWire-DT	**XV-152-E8-57TVRC-10**
XV 8.4 in TFT metal housing, resistive touch, CANopen	**XV-152-D6-84TVRC-10**
XV 8.4 in TFT metal housing, resistive touch, PROFIBUS	**XV-152-D8-84TVRC-10**
XV 8.4 in TFT metal housing, resistive touch, CANopen, SmartWire-DT	**XV-152-E6-84TVRC-10**
XV 8.4 in TFT metal housing, resistive touch, PROFIBUS, SmartWire-DT	**XV-152-E8-84TVRC-10**
XV 10.4 in TFT metal housing, resistive touch, CANopen	**XV-152-D6-10TVRC-10**
XV 10.4 in TFT metal housing, resistive touch, PROFIBUS	**XV-152-D8-10TVRC-10**
XV 10.4 in TFT metal housing, resistive touch, CANopen, SmartWire-DT	**XV-152-E6-10TVRC-10**
XV 10.4 in TFT metal housing, resistive touch, PROFIBUS, SmartWire-DT	**XV-152-E8-10TVRC-10**

Accessories

XV Operator Interface with Visual Designer or XSoft-CoDeSys

Description	Catalog Number
SD memory card for all XV models	**MEMORY-SD-A1-S**
Spare part kit for XV-102 models—1 power connector, 8 mounting brackets, 1 sealing strip, 1 touch pen	**ACC-TP-57-KG-1 XV-102**
Spare part kit for XV-152 models—1 power connector, 8 mounting brackets, 1 sealing strip, 1 touch pen	**ACC-TP-10-12-RES-1**

Technical Data and Specifications

XV Operator Interface

Series	XV Midrange Operator Interface					
Model	XV-102			XV-152		
Screen Size	3.5 in	5.7 in	7.0 in	5.7 in	8.4 in	10.4 in
Operating system	WinCE 5.0 Professional	WinCE 5.0 Professional	WinCE 5.0 Professional	WinCE 5.0 Professional	WinCE 5.0 Professional	WinCE 5.0 Professional
Touchscreen technology	Resistive	Resistive	Resistive	Resistive	Resistive	Resistive
Display, colors	Color TFT, 64k colors	Color TFT, 64k colors	Color TFT, 64k colors	Color TFT, 64k colors	Color TFT, 64k colors	Color TFT, 64k colors
Pixel resolution (landscape) portrait mode also available	QVGA 320 x 240	VGA 640 x 480	WVGA 800 x 480	VGA 640 x 480	VGA 640 x 480	VGA 640 x 480
Brightness (cd/m^2)	250	250	250	350	350	350
Backlight	LED, selectable dimming	LED, selectable dimming	LED, selectable dimming	LED, selectable dimming	LED, selectable dimming	LED, selectable dimming
Lifespan of backlight (half-life)	40,000 hrs	40,000 hrs	40,000 hrs	40,000 hrs	40,000 hrs	40,000 hrs
Processor	32 bit RISC, 400 MHz	32 bit RISC, 400 MHz	32 bit RISC, 400 MHz	32 bit RISC, 400 MHz	32 bit RISC, 400 MHz	32 bit RISC, 400 MHz
Volatile memory	64 MB DRAM	64 MB DRAM	64 MB DRAM	64 MB DRAM	64 MB DRAM	64 MB DRAM
Non-volatile memory	125 KB NVRAM/64 MB NAND, 1 SD card slot	125 KB NVRAM/64 MB NAND/ 2 MB NOR, 1 SD card slot		125 KB NVRAM/64 MB NAND/ 2 MB NOR, 1 SD card slot		
Real time clock	Yes	Yes	Yes	Yes	Yes	Yes
Communication ports	Ethernet 10/100, RS-485 or RS-232 USB Device	Ethernet 10/100, RS-485, RS-232 USB Host, USB Device		Ethernet 10/100, RS-485, RS-232 USB Host, USB Device		
Slots for COMM modules	None	None	None	None	None	None
Power supply rated voltage	24 Vdc nominal (–20%/+25%) with polarity protection			24 Vdc nominal (–20%/+25%) with polarity protection		
Continuous current consumption (max. amps)	0.2	0.4	0.4	0.4	0.6	0.6
Starting current inrush (A^2s)	1.5	1.5	1.5	1.5	1.5	1.5
Ambient conditions						
Operation—relative humidity, non-condensing	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%
Storage/transport—relative humidity, non-condensing	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%
Shock	IEC 60068-2-27 15g for 11 ms duration			IEC 60068-2-27 15g for 11 ms duration		
Vibration	IEC 60068-2-6 5–9 Hz: 3.5 mm displacement 9–60 Hz: 0.15 mm displacement 60–150 Hz: 2g acceleration			IEC 60068-2-6 5–9 Hz: 3.5 mm displacement 9–60 Hz: 0.15 mm displacement 60–150 Hz: 2g acceleration		
Agency certifications and standards	CE, UL/cUL, CSA (pending), RoHS			CE, UL/cUL, CSA (pending), RoHS		
Protection type						
Front	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)
Rear	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1
Housing material	Plastic	Plastic	Plastic	Metal	Metal	Metal
Dimensions WxHxD (mm)	136 x 100 x 30	170 x 130 x 39	210 x 135 x 38	212 x 156 x 53	275 x 208 x 53	345 x 260 x 54
Mounting cutout WxH (mm)	123 x 87	157 x 117	197 x 122	198 x 142	261 x 194	329 x 238
Approximate weight lbs (kg)	0.7 (0.3)	1.3 (0.6)	1.3 (0.6)	2.9 (1.3)	4.3 (2.1)	6.1 (3.0)
Ability to run third party software	No	No	No	No	No	No
Visual Designer development software	VISUALDCE or VISUALDXP			VISUALDCE or VISUALDXP		
Pre-licensed tags, drivers, web sessions (Visual Designer models)	1500 tags, 3 drivers, 1 web session			1500 tags, 3 drivers, 1 web session		
Field upgradeable max tags, drivers, web sessions (Visual Designer Models)	4000 tags, 3 drivers, 1, 2, 4, or 8 web sessions simultaneously			4000 tags, 3 drivers, 1, 2, 4, or 8 web sessions simultaneously		
XSoft-CoDeSys-2 development software	SW-XSOFT-CODESYS-2-S (seat) SW-XSOFT-CODESYS-2-M (multi-seat)			SW-XSOFT-CODESYS-2-S (seat) SW-XSOFT-CODESYS-2-M (multi-seat)		

XP Operator Interface



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5

XP with Visual Designer

Product Description

The XP models were designed for performance. This series is perfect for OEMs who require extensive connectivity, the advanced features available in Visual Designer, have large or high speed applications, or need an open platform for running third party software. The unique infrared touchscreen with scratch resistant safety glass is ideal for harsh environments where traditional touchscreens are easily damaged. The two externally accessible solid state CompactFlash® drives provide both easy access and reliability. Protect Mode, available only on Eaton's XP embedded operator interface products, protects the operating system from unwanted changes providing improved up-time and reliability.

Features

XP Series operator interface with Windows XP Embedded operating system

- 8.4 in, 10.4 in, 12.1 in, and 15.0 in screen sizes as well as blind node
- Infrared touch screen, safety glass and metal housing for demanding environments
- Multiple Ethernet, serial, and USB ports on all models
- All solid state media increases reliability
- Open architecture compatible with third party software and hardware
- Non-corruptible OS with Protect Mode® increases security and minimizes emergency and preventative maintenance downtime
- Visual Designer XP development software
- Pre-installed Visual Designer runtime and web serving licenses

Standards and Certifications

- CE
- UL
- cUL
- RoHS

Catalog Number Selection

XP Operator Interface

XP

XP – 702 – F0 – 84TSIK – 10

Family
XP = X86 Microsoft Windows XPe operating system

Performance Class
702 = XPe, metal housing, 2nd gen

Features Base Unit Variant ①	Features Additional COMM Options
E = 1 GHz Celeron with 1 GB RAM 4 GB C drive CF and 1 GB D drive CF **F** = 1.8 GHz Pentium with 2GB RAM 4 GB C drive CF and 1 GB D drive CF	**0** = No additional communication options

Display Size	Display Technology	OS Build ②
84 = 8.4 in **10** = 10.4 in **12** = 12.1 in **15** = 15.0 in **BOX** = Blind node (no display)	**TSI** = TFT (SVGA) Infrared **TXI** = TFT (XVGA) Infrared **Blank** = No display	**J** = XPe OS and License Visual Designer Runtime 4000 tags **K** = XPe OS and License Visual Designer Runtime 64,000 tags

Branding and Bezel
00 = No bezel (blind node) **10** = Standard blank front bezel with Eaton branded product label

Product Selection

Series Information

All XP models have a Microsoft Windows XP embedded operating system and are pre-licensed with Visual Designer runtime. The standard models are licensed for 4000 tags, 5 simultaneous communication drivers, and 1 web session. The enterprise models are licensed for 64,000 tags, 8 simultaneous communication drivers, and 1 web session. Field upgrades are available for up to 64,000 tags, 8 drivers, and 2, 4, 8, 16, 32, 64, 128, or 256 simultaneous web sessions.

XP Operator Interface



XP Operator Interface

Description	Catalog Number
XP 8.4 in TFT, 1 GHz Celeron, 1 GB RAM, 4 GB C drive, 1 GB D drive, 4000 tags, 5 drivers, 1 web session	**XP-702-E0-84TSIJ-10**
XP 10.4 in TFT, 1 GHz Celeron, 1 GB RAM, 4 GB C drive, 1 GB D drive, 4000 tags, 5 drivers, 1 web session	**XP-702-E0-10TSIJ-10**
XP 12.1 in TFT, 1 GHz Celeron, 1 GB RAM, 4 GB C drive, 1 GB D drive, 4000 tags, 5 drivers, 1 web session	**XP-702-E0-12TXIJ-10**
XP 15.0 in TFT, 1 GHz Celeron, 1 GB RAM, 4 GB C drive, 1 GB D drive, 4000 tags, 5 drivers, 1 web session	**XP-702-E0-15TXIJ-10**
XP blind node (no display), 1 GHz Celeron, 1 GB RAM, 4 GB C drive, 1 GB D drive, 4000 tags, 5 drivers, 1 web session	**XP-702-E0-BOXJ-00**
XP 8.4 in TFT, 1.8 GHz Pentium, 2 GB RAM, 4 GB C drive, 1 GB D drive, 64k tags, 8 drivers, 1 web session	**XP-702-F0-84TSIK-10**
XP 10.4 in TFT, 1.8 GHz Pentium, 2 GB RAM, 4 GB C drive, 1 GB D drive, 64k tags, 8 drivers, 1 web session	**XP-702-F0-10TSIK-10**
XP 12.1 in TFT, 1.8 GHz Pentium, 2 GB RAM, 4 GB C drive, 1 GB D drive, 64k tags, 8 drivers, 1 web session	**XP-702-F0-12TXIK-10**
XP 15.0 in TFT, 1.8 GHz Pentium, 2 GB RAM, 4 GB C drive, 1 GB D drive, 64k tags, 8 drivers, 1 web session	**XP-702-F0-15TXIK-10**
XP blind node (no display), 1.8 GHz Pentium, 2 GB RAM, 4 GB C drive, 1 GB D drive, 64k tags, 8 drivers, 1 web session	**XP-702-F0-BOXK-00**

Notes

① All 7xx Performance Class units have 1 x 10/100, 1 x 10/100/1000 Ethernet, 4 x USB Host V2.0, 2 x RS-232.

② Standard software on embedded hardware.

Accessories

XP Operator Interface

Description	Catalog Number
Hard drive, 80 GB minimum for all XP models for application or data storage	**HDU-A7-S XP700**
Industrial grade hard drive, 80 GB minimum for all XP models for application or data storage	**HDU-A7-SI XP700**
XP700 externally mounted fan for all XP models (included with 1.8 GHz Enterprise models)	**ACC-FAN-700-S**
CompactFlash memory card, minimum 4 GB, with Visual Designer image for all XP models	**OS-FLASH-A7-V**
XP-702 spare part kit for all XP models—1 power connector, 8 mounting brackets, 1 sealing strip	**ACC-TP-57-RES-1**

Technical Data and Specifications

XP Operator Interface

Series	**XP Performance Operator Interface**				
Model	**XP-702**				
Screen Size	**8.4 in**	**10.4 in**	**12.1 in**	**15.0 in**	**Blind Node (no display)**
Operating system	Windows XPe	Windows XPe	Windows XPe	Windows XPe	Windows XPe
Touchscreen technology	Infrared, non-reflective safety glass				N/A
Display, colors	Color TFT, selectable 16 million, 64k, or 256 colors				VGA and DVI-D output
Pixel resolution (landscape)—Portrait mode also available	SVGA 800 x 600	SVGA 800 x 600	XGA 1024 x 768	XGA 1024 x 768	800 x 600 to 1920 x 1200
Brightness (cd/m^2)	400	400	400	400	N/A
Backlight	2 CCFL	2 CCFL	2 CCFL	4 CCFL	N/A
Lifespan of backlight (half-life)	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs	N/A
Processor					
Standard models	1 GHz Celeron M	1 GHz Celeron M	1 GHz Celeron M	1 GHz Celeron M	1 GHz Celeron M
Enterprise models	1.8 GHz Pentium M	1.8 GHz Pentium M	1.8 GHz Pentium M	1.8 GHz Pentium M	1.8 GHz Pentium M
Volatile memory					
Standard models	1 GB	1 GB	1 GB	1 GB	1 GB
Enterprise models	2 GB	2 GB	2 GB	2 GB	2 GB
Non-volatile memory					
Standard models ①	4 GB min C drive (OS), 1 GB min D drive				
Enterprise models ①	4 GB min C drive (OS), 1 GB min D drive				
Real time clock	Yes	Yes	Yes	Yes	Yes
Communication ports	Ethernet 1 x 10/100 and 1 x 10/100/1000; 2 x RS232; 4 x USB 2.0 Host				
Slots for COMM modules	1 x PCI 32-bit	1 x PCI 32-bit	1 x PCI 32-bit	1 x PCI 32-bit	1 x PCI 32-bit
Power supply rated voltage	24 Vdc nominal (–15%/+20%) with polarity protection				

Note

① All are removable CompactFlash.

XP Operator Interface, continued

Series	XP Performance Operator Interface				
Model	**XP-702**				
Screen Size	**8.4 in**	**10.4 in**	**12.1 in**	**15.0 in**	**Blind Node (no display)**
Continuous current consumption (maximum amps)					
Standard models	2.0	2.0	2.1	2.1	1.4
Enterprise models	3.1	3.1	3.2	3.2	2.8
Starting Current Inrush (A^2s)	2.0	2.0	2.0	2.0	2.0
Ambient conditions					
Operation—relative humidity, non-condensing	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%	0 to 50°C, 10 to 95%
Storage/transport—relative humidity, non-condensing	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%	–20 to 60°C, 10 to 95%
Shock	IEC 60068-2-27 15g for 11 ms duration				
Vibration	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6
5–9 Hz	3.5 mm displacement	3.5 mm displacement	3.5 mm displacement	3.5 mm displacement	3.5 mm displacement
9–60 Hz	0.15 mm displacement	0.15 mm displacement	0.15 mm displacement	0.15 mm displacement	0.15 mm displacement
60–150 Hz	1g acceleration	1g acceleration	1g acceleration	1g acceleration	1g acceleration
Agency certifications and standards	CE, UL/cUL, CSA (pending), RoHS				
Protection type					
Front	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP65, NEMA 4X (indoor)	IP20, NEMA 1
Rear	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1	IP20, NEMA 1
Housing material	Metal	Metal	Metal	Metal	Metal
Dimensions WxHxD (mm)	275 x 208 x 102/140	345 x 260 x 91/129	361 x 279 x 98/136	427 x 322 x 101/139	264 x 194 x 58/96
Mounting cutout WxH (mm)	261 x 194	329 x 238	344 x 262	410 x 315	N/A
Approximate weight lbs (kg)	6.4/7.3 (3.2/3.6)	8.3/9.1 (4.1/4.5)	9.5/10.3 (4.7/5.1)	12.8/13.6 (6.3/6.7)	3.9/4.7 (1.9/2.3)
Development software	Visual Designer (VISUALDXP)	Visual Designer (VISUALDXP)	Visual Designer (VISUALDXP)	Visual Designer (VISUALDXP)	Visual Designer (VISUALDXP)
Ability to run third party software	Yes	Yes	Yes	Yes	Yes
Pre-licensed tags, drivers, web sessions					
Standard models	4000 tags, 5 drivers, 1 web session				
Enterprise models	64,000 tags, 8 drivers, 1 web session				
Field upgradeable max tags, drivers, web sessions	64,000 tags, 8 drivers, 1, 2, 4, 8, 16, 32, 64, 128, or 256 web sessions simultaneously				

Visual Designer Software



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Visual Designer Software

Product Description

Advanced GUI Development, Made Easy

Time-saving solutions, lower costs.

With application development expense often outweighing the hardware expense, the demand to quickly design and implement advanced GUI solutions is greater than ever. Even advanced features such as data archiving, recipe management, multi-language, SQL database access, and web serving are made easy through an elegant and modern user interface. Visual Designer's ease-of-use and time-saving features lower your total installed cost.

Features

Visual Designer is a software development package optimized for OEMs. New tools streamline the application development process, and the creation of web-based applications has never been easier. In addition to basic monitor and control functionality, Visual Designer is packed with advanced features streamlining the design of sophisticated applications.

Advanced Features

- Pop-ups and group screens
- Full mathematical and logical evaluation
- Web browsing and document viewing
- Remote access and control without having to install software to the remote PC
- Database interfacing
- Historical alarms and events
- Historical data archiving and trending
- Recipe management
- Multi-language
- VB scripting
- Report generation
- Scheduling
- Resolution conversion
- E-mailing and text messaging
- Launch and control of third party applications

Advanced Development Features

- Conversion of legacy PanelMate™ configurations
- Optional PanelBuilder™ conversion utility
- Online configuration/ editing
- Advanced search and replace
- Automatic scaling of web clients
- Customizable application symbols
- Reusable controls, images, and screens via indirect tag and/or PLC assignments

System Requirements

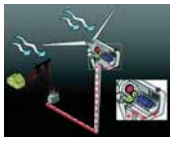
Windows XP and Windows 7 32-bit and 64-bit systems

Product Selection

Visual Designer





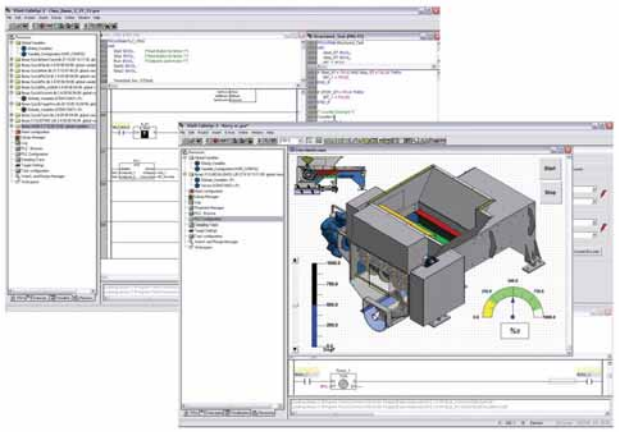




Visual Designer Software

Description	Catalog Number
Visual Designer Development Software License Key	
For CE hardware	**VISUALDCE**
For PCs, XPe, and CE hardware	**VISUALDXP**
For CE hardware, 5-pack of VISUALDCE	**VISUALDCE5**
For PCs, XPe, and CE hardware, 5-pack of VISUALDXP	**VISUALDXP5**
For a PC Runtime software license with a maximum of 64k tags, 8 drivers, 1 web session	**VISUALRTPC**
Visual Designer development software and PC runtime software licenses for a max of 64k tags, 8 drivers, 1 web session	**VISUALRTDEVPC**
Software Updates and Upgrades	
Update to current version Visual Designer development software for CE hardware	**VISUALDUPCE**
Update to current version Visual Designer development software PCs/XPe/CE	**VISUALDUPXP**
Update to current version of Visual Designer runtime license for PCs	**VISUALRTUPPC**
Upgrade from Visual Designer CE 1500 tag to 4000 tag runtime	**VISUALRT4KCE**
Upgrade from Visual Designer XPe 4000 tag, 5 driver to 64k tag, 8 driver runtime license	**VISUALRT64KXP**
Upgrade from Visual Designer development software CE to CE plus PC and XPe (64k tag, 8 drivers)	**VISUALDCE2XP**
Visual Designer PanelBuilder conversion utility optional plug-in (requires Visual Designer software)	**VISUALDPBCU**
Visual Designer 1 additional web thin client license for Internet Explorer	**VISUALWEB1**
Visual Designer 3 additional web thin client licenses for Internet Explorer	**VISUALWEB3**
Visual Designer 7 additional web thin client licenses for Internet Explorer	**VISUALWEB7**

XSoft-CoDeSys-2 Software



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XSoft-CoDeSys-2 Software	

XSoft-CoDeSys-2 Software

Product Description

Combined Logic and Visualization Development

IEC 61131-3 Logic Programming

- Ladder Diagram (LD)
- Structured Text (ST)
- Sequential function chart (SFC)
- Function block diagram (FBD)
- Freely definable function block chart/continuous function chart (CFC)
- Instruction List (IL)

Target Visualization

Integrated design of Operator Interface screens for the XV series. Visualization and logic developed as part of the same project. Simplifies screen design and always keeps the Logic and visualization in synch.

Web Visualization

Optionally XSoft-CoDeSys-2 can automatically generate XML-based runtime screens to make the screens from the XV accessible remotely using a web browser with a JavaScript plug-in such as Internet Explorer®, Firefox® and others.

Features

Project Development

- Automatic variable declaration
- On line editing
- Pop-up variable and function search/pick tools
- Automatic formatting and color coding of logic/ declaration text
- Re-usable Visual-Logic Function Blocks

Debugging and commissioning

XSoft-CoDeSys-2 offers you a number of important functions for debugging, testing and commissioning your XV applications quickly and efficiently.

All these features are available as soon as you log on to the XV (online mode) over an Ethernet connection.

Simulation

Users can also test the application when the XV is not connected to the process. This is possible thanks to the integrated online simulation feature. Simulation supports both the screens and logic that have been designed using XSoft-CoDeSys.

Advanced Features

- Up to 16 time and/or event driven tasks per project
- Each task can include multiple logic programs or subroutines
- Programs and screen designs can be exported and imported to support reuse
- Powerful, built-in function block libraries
- Ability to create user-defined function blocks
- Fieldbus Configurator for CANopen, PROFIBUS-DP and SmartWire-DT device I/O
- Ethernet and serial communication function blocks (OPC server, UDP, TCP/IP, FTP client/ server, Modbus Master/Slave, email, SMS, and more)
- 8 level password protection
- Web access selectable per screen
- System function libraries (OS Storage Card, and more)
- On-line and historical alarms
- On-line and historical trends

System Requirements

Windows XP and Windows 7 32-bit systems

Product Selection

XSoft-CoDeSys-2



XSoft-CoDeSys-2 Software

Description	Catalog Number
Single Seat License	SW-XSOFT-CODESYS-2-S
Multiple Seat License (3)	SW-XSOFT-CODESYS-2-M