



Panel PC with capacitive multi-touch (PCT), 21. 5", 2xEthernet, 2xUSB3.0, 1xRS232, 1xRS485, Visual Designer Runtime, ATEX



Part no. XP-503-21-A10-A01-1V
Catalog No. 197672

Delivery program

Product range			Visualisation solutions XP
Product range			XP-503
Function			Industrial PC
Description			Panel PC with capacitive multitouch display
Common features of the model series			1.65 GHz dual-core CPU Powerful graphic processor 4GB DDR3-RAM Min. 32 GB SSD min. 4 GB of CFast removable memory 2x Ethernet interface 10/100/1000 Mbps 2x USB host 3.0 1x RS232 1x RS485 1x DVI-I Windows Embedded Standard 7 Galileo Open Runtime License Approvals CE, cUL508, CUL Class 1 Div 2 in preparation
Display - Type			Color display, TFT
Touch-technology			Capacitive multi-touch technology (PCT)
Number of colours			16.7 mil.
Resolution		Pixel	WUXGA 1920 x 1080
Portrait format			no
Screen diagonal		Inch	21.5
Model			Die-cast aluminum enclosure and glass front in aluminum frame
Operating system			Windows Embedded Standard 7 Kit "P" (32bit) VISUAL DESIGNER Runtime License
PLC-licence			Not offered by Eaton
License certificates for onboard interfaces			Not required
built-in interfaces			2 x Ethernet 1000/100/10 Mbps 2 x USB host 3.0 1 x RS232 1 x RS485 1 x DVI-I
Front type			Tempered glass with anti-reflective coating
Utilization			Flush mounting
Slots			For CFast memory cards: 1
Memory card automation			For CFast memory cards
Pluggable communication cards (optional)			no
Touch sensor			Multi-touch touch panel
Heat dissipation		W	41

Technical data

Display			
Display - Type			Color display, TFT
Screen diagonal		Inch	21.5
Resolution		Pixel	WUXGA 1920 x 1080
Visible screen area		mm	476.64 x 268.11
Format			16:9
Viewing range	[left/right/up/down]	° (Degrees)	89°/89°/89°/89°
Number of colours			16.7 mil.
Contrast ratio (Normally)			Normally 5000:1

Brightness		cd/m ²	Normally 550
Back-lighting			LED
Service life of back-lighting		h	Normally 50000

Operation

Technology			Projected Capacitive Touch (PCT)
Touch sensor			Multi-touch touch panel

System

Processor			x86, DualCore 1.65Ghz
Internal memory			4 GB of DDR3 RAM, min. 32 GB SSD
External memory			Min. 4 GB of CFast removable memory
Cooling			Fanless CPU and system cooling, natural convection-based passive cooling
Back-up of real-time clock			
Battery (service life)			Replaceable, Lithium CR2032 (220 mAh, 3V)
Backup (time at zero voltage)			Normally 5 years

Engineering

Visualisation software			VISUAL DESIGNER
PLC-licence			Not offered by Eaton
Operating system			Windows Embedded Standard 7 Kit "P" (32bit) VISUAL DESIGNER Runtime License


Interfaces, communication

built-in interfaces			2 x Ethernet 1000/100/10 Mbps 2 x USB host 3.0 1 x RS232 1 x RS485 1 x DVI-I
USB Host			2 x USB 3.0
RS-232			Not galvanically isolated, 9-pin D-sub plug, UNC
RS-485			Not galvanically isolated, 9-pin D-sub plug, UNC
Slots			For CFast memory cards: 1
Ethernet			10/100/1000 Mbps

Power supply

Nominal voltage			24 V DC SELV (safety extra low voltage)
permissible voltage			18-36 V DC
Heat dissipation		W	41
Current consumption	I	A	max. 1.7 A

General

Housing material			Aluminium die-cast
Front type			Tempered glass with anti-reflective coating
Dimensions (W x H x D)		mm	536 x 328 x 84
flush mounted			Clearance: W x H ≥ 50 mm (1.97"), T ≥ 20 mm (0.79") Inclination from vertical: # ≤ ± 10 ° (if using natural convection) Mounting plate: min. 1.5 mm (0.06"), max. 4 mm
Weight		kg	7.55
Degree of protection (IEC/EN 60529, EN50178, VBG 4)			IP65 (in the front as per EN 60529-1), IP20 (on rear as per EN 60529-1), NEMA12 (as per NEMA 250-2003)
Approvals			
Approvals			cUL (UL508), ATEX
certificate			CE
Explosion protection (according to ATEX 94/9/EC)			II 3D Ex tc IIIC T70°C U
shipping classification			DNV GL
			
Applied standards and directives			
EMC			according to 2004/108/EC
Emitted interference			As per EN 55022:2010 Class A and EN 61000-6-4:2007
Interference immunity			As per EN 55024:2010 and EN 61000-6-2:2005 EN 61131-2:2007

Free fall, packaged		m	gemäß ICE/EN 60068-2-32
RoHS			conform
Environmental conditions			
Climatic environmental conditions			
Air pressure (operation)		hPa	795 - 1080
Temperature			
Storage / Transport	θ	°C	-20 - +60
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	+ 50
Relative humidity			
Condensation			Non-condensing
Relative humidity			10 - 90%, non condensing

Design verification as per IEC/EN 61439

Technical data for design verification			
Static heat dissipation, non-current-dependent	P _{Vs}	W	41
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	50
Degree of Protection			IP65 (in the front as per EN 60529-1), IP20 (on rear as per EN 60529-1) NEMA12 (as per NEMA 250-2003)
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			
			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			
			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			
			Please enquire
10.2.5 Lifting			
			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			
			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			
			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			
			Meets the product standard's requirements.
10.4 Clearances and creepage distances			
			Meets the product standard's requirements.
10.5 Protection against electric shock			
			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			
			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			
			Is the panel builder's responsibility.
10.8 Connections for external conductors			
			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			
			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			
			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			
			Is the panel builder's responsibility.
10.10 Temperature rise			
			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			
			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			
			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			
			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

PLC's (EG000024) / Panel PC (EC001414)			
Information, communication and media technology / Computer system for industrial use / Industrial PC / Panel PC (ecl@ss10.0.1-19-20-01-03 [AFR616003])			
Supply voltage AC 50 Hz		V	
Supply voltage AC 60 Hz		V	
Supply voltage DC		V	
Voltage type of supply voltage			
Number of HW-interfaces industrial Ethernet			

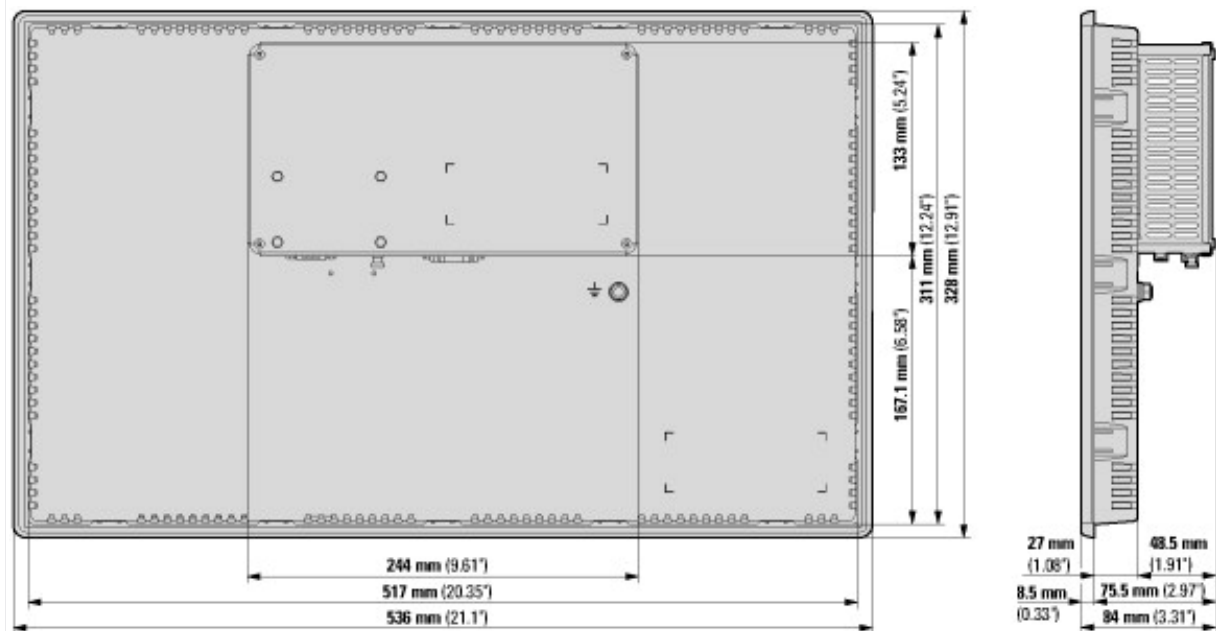
Number of interfaces PROFINET		
Number of HW-interfaces RS-232		
Number of HW-interfaces RS-422		
Number of HW-interfaces RS-485		
Number of HW-interfaces serial TTY		
Number of HW-interfaces USB		
Number of HW-interfaces parallel		
Number of HW-interfaces Wireless		
Number of HW-interfaces other		
Number of HW-interfaces SCSI		
Number of HW-interfaces PS2		
Supporting protocol for PROFIBUS		
Supporting protocol for CAN		
Supporting protocol for INTERBUS		
Supporting protocol for ASI		
Supporting protocol for KNX		
Supporting protocol for MODBUS		
Supporting protocol for Data-Highway		
Supporting protocol for DeviceNet		
Supporting protocol for SUCONET		
Supporting protocol for LON		
Supporting protocol for PROFINET IO		
Supporting protocol for PROFINET CBA		
Supporting protocol for SERCOS		
Supporting protocol for Foundation Fieldbus		
Supporting protocol for EtherNet/IP		
Supporting protocol for AS-Interface Safety at Work		
Supporting protocol for DeviceNet Safety		
Supporting protocol for INTERBUS-Safety		
Supporting protocol for PROFIsafe		
Supporting protocol for SafetyBUS p		
Supporting protocol for other bus systems		
Radio standard Bluetooth		
Radio standard WLAN 802.11		
Radio standard GPRS		
Radio standard GSM		
Radio standard UMTS		
IO link master		
Type of display		
Screen diagonal		inch
Number of pixels, horizontal		
Number of pixels, vertical		
Preinstalled operating system		
Max. main memory		MB
Integrated keyboard		
Number of function buttons		
Number of buttons with LED		
Number of system buttons		
With touch screen		
Mouse-cursor control integrated		
Degree of protection (IP), front side		
Degree of protection (NEMA)		
Operation temperature		°C
With hard disc		
With CD-ROM drive		

With DVD-drive		
With CD-RW drive		
With DVD RW drive		
With floppy disc drive		
With other storage media		
Customer individual configuration		
Number of free AGP-slots		
Number of free PCI-slots		
Number of free ISA-slots		
Number of free PCMCIA-slots		
Rail mounting possible		
Wall mounting/direct mounting		
Front build in possible		
Rack-assembly possible		
Mounting type, table foot		
Mounting type, gallows mounting		
Suitable for safety functions		
Width of the front		mm
Height of the front		mm
Built-in depth		mm

Approvals

Product Standards		UL508, cULus; CE
UL File No.		E205091
CSA File No.		C22.2. No. 142-M1987
North America Certification		UL listed, certified by UL for use in Canada
Specially designed for North America		No
Current Limiting Circuit-Breaker		No
Degree of Protection		IEC: IP65, UL/CSA Type: -

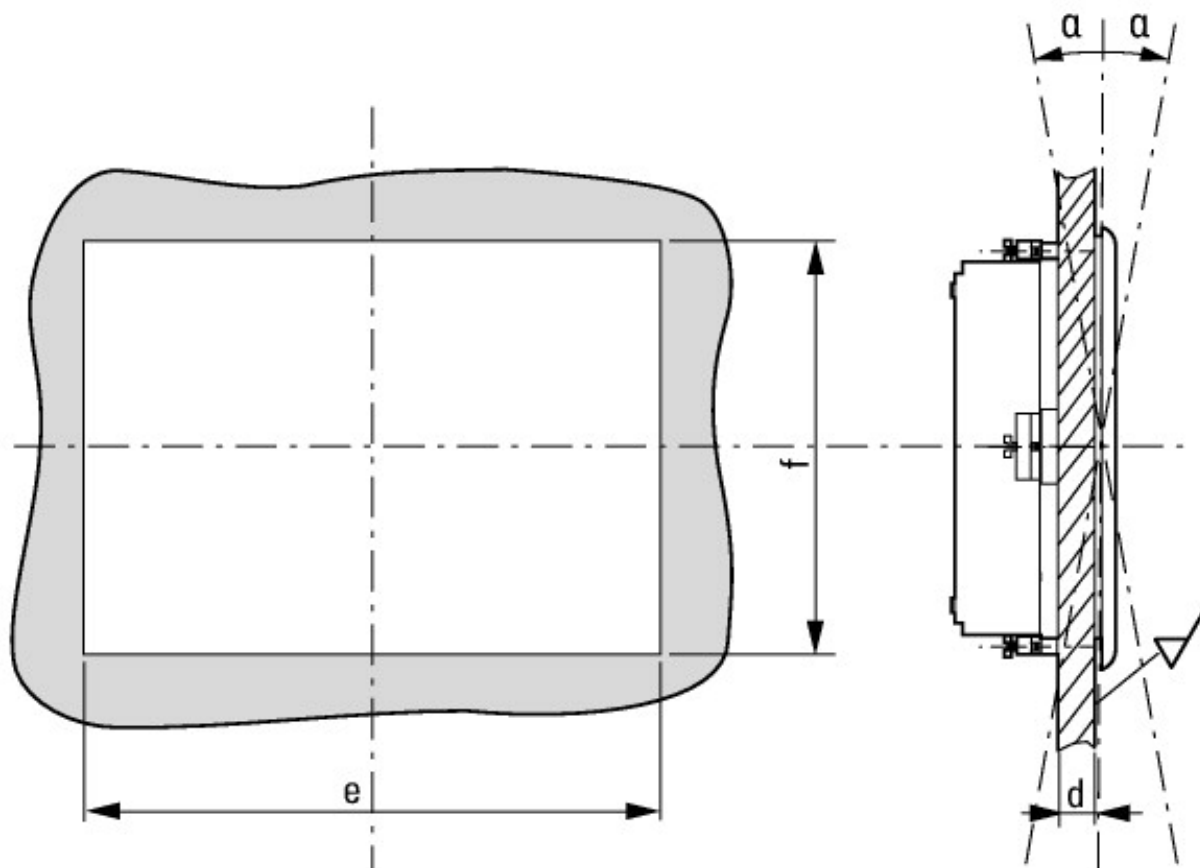
Dimensions



XP-503 industrial PC with 15.6" screen diagonal



$a, b \geq 50 \text{ mm}, c \geq 20 \text{ mm}, 0 \leq T \leq 50 \text{ }^\circ\text{C}$



$1.5 \text{ mm} \leq d \leq 4 \text{ mm}, e = 388 \text{ mm}, f = 239 \text{ mm}, \# = 10^\circ$

Additional product information (links)

f1=1454&f2=1242&f3=1773;Download Software GALILEO	http://applications.eaton.eu/sdlc?LX=11&amp
Product overview (WEB)	http://www.eaton.eu/xp500