



Personal Computer Unit (PCU)

Generation 2024

PCU1100-* (Intel® Atom Elkhart Lake Processor)

- Modular, lightweight design
- Low-power design with minimal heat dissipation
- High connectivity flexibility due to multiple interface options
- Powerful Intel® Atom Elkhart Lake processor
- Certified for ATEX and IECEx Zone 1/21
- UL listed for USA and Canada
- IP66

Personal Computer Unit (PCU)



Function

The PCU1100-* Personal Computer Unit is an ATEX/IECEx certified, UL listed device intended for use in potentially explosive atmospheres, such as Zones 1/21 and Class I/II, Div. 2, and Class III.

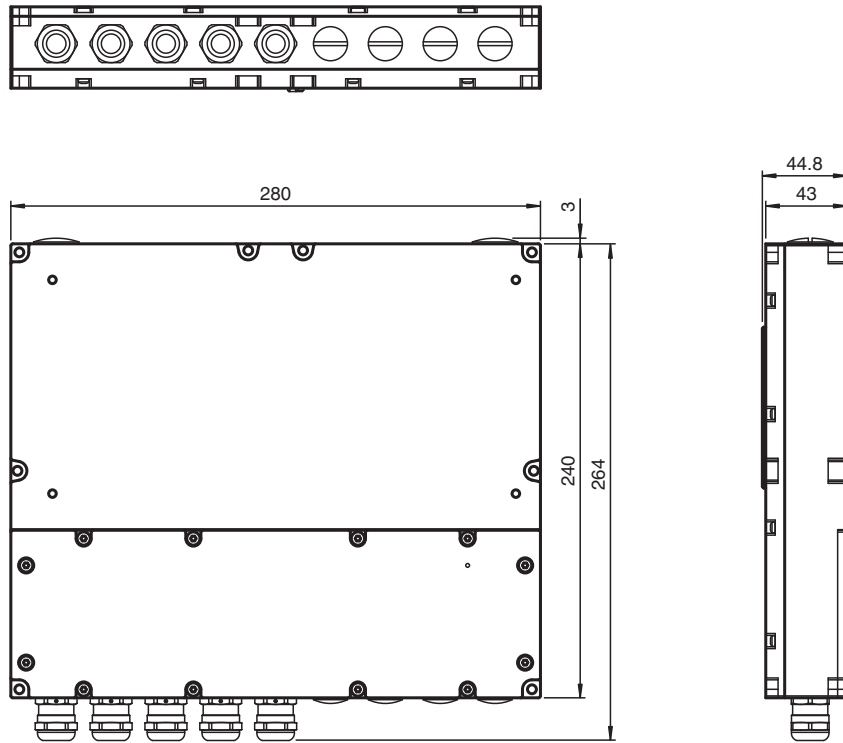
Connected to a Pepperl+Fuchs display unit device, it serves as a PC-based computing unit and runs a pre-installed Microsoft® Windows™ operating system. The PCU1100-* allows users to install individual software packages such as SCADA applications to visualize and control their automation application.

Multiple Ex i interfaces support the connection of intrinsically safe accessories that match with the provided entity parameters like Pepperl+Fuchs' EXTA2 keyboard and mouse system or IDM barcode readers.

The USB Ex e interface can be used to connect other third-party devices that comply with the installation requirements. For extended distances, the PCU1100-* is available with an optional multi-mode or single-mode fiber optic interface.

The PCU1100-* Personal Computer unit is used in combination with the modular Pepperl+Fuchs HMI components display unit (DPU1100-*) and Power Supply unit (PSU1100-*) of the VisuNet GXP product line.

Dimensions



Technical Data

Hardware	
Processor	Intel® Atom Elkhart Lake x6425RE
RAM	8 GB
Mass storage	240 GByte industrial grade SSD optional: 480 GByte SSD
Supply	
Input voltage	24 V DC , 2 A SELV/PELV
Power consumption	max. 48 W
Interface	
Interface type	<p>Standard:</p> <ul style="list-style-type: none"> Pepperl+Fuchs interface v1.0 for display units 1 x Ethernet 100/1000BASE-TX (Ex e) or 1 x fiber optic 1000BASE-SX (Multimode) or 1 x fiber optic 1000BASE-LX (Singlemode), 1 x USB 2.0 (Ex e), 2 x USB 1.1 (Ex i; intended for Pepperl+Fuchs keyboard and mouse), <p>Optional:</p> <ul style="list-style-type: none"> 1 x barcode reader interface Pepperl+Fuchs Pscan-D/B (Ex i) "S3": 1 x barcode reader interface for wired 1-D scanners IDM-160-D*, IDM-Z1-160-D-* and base station IDMx61-B-* and IDM-Z1-x61-B-* (Ex i) "S4": 1 x barcode reader interface for wired 2-D Scanner IDM-Z1-260-D-* (Ex i) "S5": 1 x RS-232 interface with Power Supply for miscellaneous devices and peripherals (Ex i) 1 x RS-232 (Ex e) 1 x RS-485 (Ex e) 1 x Ethernet 100/1000Base-TX (Ex e) Bluetooth v4.0, communication distance up to 30 m in open terrain, transmission power +8 dBm, transmission frequency 2.402 ... 2.48 GHz
Directive conformity	

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Technical Data

Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations) ; EN 61000-6-4:2007+A1:2011
RoHS		
Directive 2011/65/EU (RoHS)		EN 50581:2012-09
Software		
Operating system		Microsoft® Windows® 10 IoT Enterprise LTSC 2021
Ambient conditions		
Operating temperature		-20 ... 65 °C (-4 ... 149 °F)
Storage temperature		-20 ... 65 °C (-4 ... 149 °F)
Relative humidity		93% at 40°C, non-condensating, according to EN 60068-2-78
Shock resistance		30 g , 11 ms all axis, IEC 60068-2-27
Vibration resistance		5 ... 100 Hz 1 G, 12 m/s ²
Mechanical specifications		
Degree of protection		IP66 (when mounted on the display unit from Pepperl+Fuchs)
Material		
Housing		anodized aluminum
Mass		approx. 5 kg
Dimensions		280 mm x 240 mm x 43 mm
Data for application in connection with hazardous areas		
EU-type examination certificate		BVS 16 ATEX E 083 X
Marking		⊕ II 2G Ex eb q [ib] IIC T4 IP66 Gb ⊕ II 2D Ex tb [ib] IIIC T85°C IP66 Db
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013, EN 60079-5:2015, EN 60079-7:2015, EN 60079-11:2012, EN 60079-31:2014
International approvals		
UL approval		E492874
Approved for		Class I, Division 2, Groups A, B, C, D T4; Zone 2, Group IIC T4 Class II, Division 2, Groups F, G T4; Zone 22, Group IIIB T85 Class III; Zone 22, Group IIIA T85
IECEx approval		IECEx BVS 16.0060X
Approved for		Ex eb q [ib] IIC T4 IP66 Gb Ex tb [ib] IIIC T85°C IP66 Db
Standards		IEC 60079-0:2011, IEC 60079-5:2015, IEC 60079-7:2015, IEC 60079-11:2011, IEC 60079-31:2013

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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 PEPPERL+FUCHS

Type Code

PCU1100-* Personal Computer Unit

CPU Unit	Explosion protection	Interfaces	Module A	Module B	Computing Platform	Options & Customization
CPU Unit						
PCU1100-	Personal Computer Unit (Platform: Zone 1/21; GXP Product Group, Version 0)					
Explosion protection						
J1-	IECEX & ATEX II 2 GD; Zone 1/21					
Interfaces						
ET-	1 x 1000BASE-T LAN Ex e, 1 x USB Ex e, 2 x USB Ex i					
SX-	1 x 1000BASE-SX fiber optic (Multimode), 1 x USB Ex e, 2 x USB Ex i					
LX-	1 x 1000BASE-LX fiber optic (Single mode), 1 x USB Ex e, 2 x USB Ex i					
Module A						
NN-	No additional interface module					
BR-	1 x TTY Ex i for barcode reader (PSCAN-D / EX Dragon) and base station (PSCAN-B)					
S1-	1 x RS-232 Ex e					
S2-	1 x RS-485 Ex e					
S3-	1 x Ex i interface for wired 1-D barcode readers IDM-160-D*, IDM-Z1-160-D* and base station IDMx61-B* and IDM-Z1-x61-B*					
S4-	1 x Ex i interface for 2-D barcode readers IDM-Z1-260-D*					
S5-	1 x RS-232 Ex i interface for miscellaneous devices and peripherals					
ET-	1 x 1000BASE-T LAN Ex e					
Module B						
NN-	No additional interface module					
BR-	1 x TTY Ex i for barcode reader (PSCAN-D / EX Dragon) and base station (PSCAN-B)					
S1-	1 x RS-232 Ex e					
S2-	1 x RS-485 Ex e					
S3-	1 x Ex i interface for wired 1-D barcode readers IDM-160-D*, IDM-Z1-160-D* and base station IDMx61-B* and IDM-Z1-x61-B*					
S4-	1 x Ex i interface for 2-D barcode readers IDM-Z1-260-D*					
S5-	1 x RS-232 Ex i interface for miscellaneous devices and peripherals					
ET-	1 x 1000BASE-T LAN Ex e					
Computing Platform						
PC5-	Intel® Elkhart Lake x6425RE, 8-GB RAM, 240-GB SSD, Windows® IoT Enterprise LTSC 2021					
PC6-	Intel® Elkhart Lake x6425RE, 8-GB RAM, 480-GB SSD, Windows® IoT Enterprise LTSC 2021					
Options & Customization						
N0	Standard (No customization)					

Example: PCU1100-J1-ET-NN-NN-PC5-N0

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