



Thin Client Unit (TCU)

Generation 2024

TCU1200-* (Intel® Atom Elkhart Lake Processor)

- Modular, lightweight design
- Low-power design with minimal heat dissipation
- VisuNet RM Shell installed
- High connectivity flexibility due to multiple interface options
- Certified for ATEX and IECEx Zone 2/22
- IP66

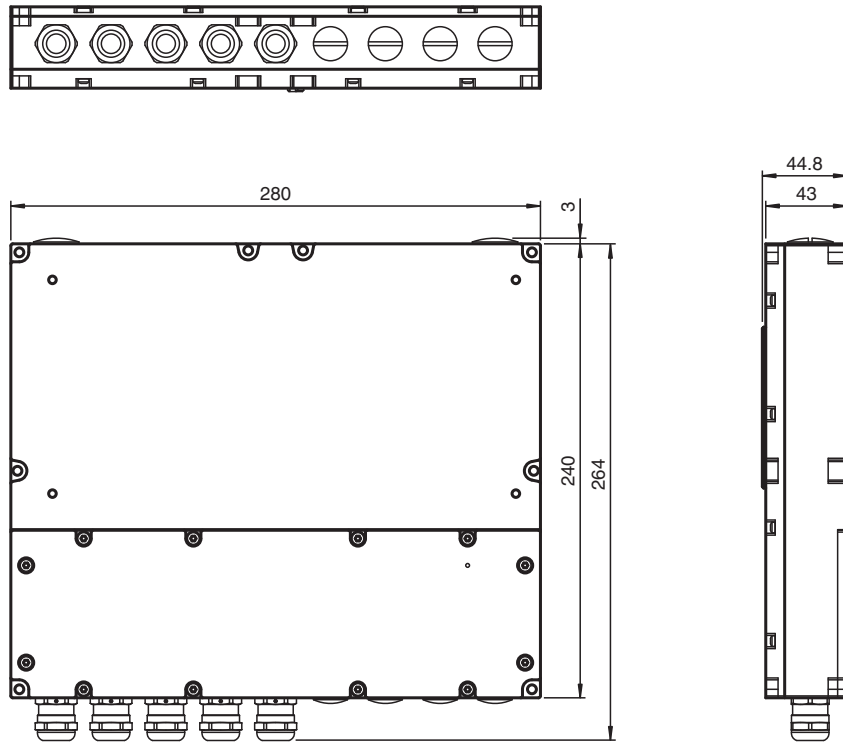
Thin Client Unit



Function

The Thin Client Unit TCU1200-* is an ATEX/IECEx certified device for use in hazardous areas (Zone 2/22). Connected to a Pepperl+Fuchs display unit device, it serves as a thin-client based computing unit that runs Pepperl+Fuchs VisuNet RM Shell firmware. The TCU1200 enables users to easily connect to a host system via Ethernet. 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 and IDM barcode readers. The USB Ex e interface can be used to connect other third party devices which comply with the installation requirements. For extended distances, the TCU1200-* is available with an optional multi-mode or single-mode fiber optic interface. The TCU1200-* Thin Client unit is used in combination with the modular Pepperl+Fuchs HMI components Display unit (DPU1200-*) and power supply unit (PSU1200-*) of the VisuNet GXP product line.

Dimensions



Technical Data

Hardware	
Processor	Intel® Atom Elkhart Lake x6211E
RAM	4 GB
Mass storage	64 GByte industrial grade MLC SSD
Supply	
Input voltage	24 V DC \pm 10 % (SELV/PELV)
Power consumption	14 W average, 30 W max.
Interface	
Interface type	<p>Standard:</p> <ul style="list-style-type: none"> 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; service port), 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	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations) ; EN 61000-6-4:2007+A1:2011

Thin Client Unit (TCU)

Technical Data

RoHS		
Directive 2011/65/EU (RoHS)		EN 50581:2012-09
Software		
Operating system		VisuNet RM Shell 6 (based on Windows® 10 Enterprise LTSC 2021) Optional: TSJ-: IGEL OS 12 (based on Linux, pre-installed without licence) TSI-: IGEL OS 11 (based on Linux, pre-installed without licence) (pending)
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		18 shocks 15 g , 11 ms all axis, IEC 60068-2-27
Vibration resistance		10 ... 150 Hz, +/- 0.075 mm , 1g, 10 cycles per axis according to EN60068-2-6
Mechanical specifications		
Degree of protection		IP66 (when mounted on the display unit from Pepperl+Fuchs)
Material		
Housing		anodized aluminum
Mass		approx. 4 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 082 X
Marking		Ⓢ II 3G Ex ec [ib] IIC T4 IP66 Gc Ⓢ II 3D Ex tc [ib] IIIC T85°C IP66 Dc
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013, EN 60079-7:2015, EN 60079-11:2012, EN 60079-31:2014
International approvals		
IECEx approval		IECEx BVS 16.0060X
Approved for		Ex ec [ib] IIC T4 IP66 Gc Ex tc [ib] IIIC T85°C IP66 Dc
Standards		IEC 60079-0:2011, IEC 60079-7:2015, IEC 60079-11:2011, IEC 60079-31:2013

Type Code

TCU1200-* Thin Client Unit

CPU Unit	Ex Protection	Interfaces	Module A	Module B	Computing Platform	Options & Customization
CPU Unit						
TCU1200-	Thin Client Unit (Platform: Zone 2/22; GXP product group, version 0)					
Ex Protection						
J2-	IECEX & ATEX II (2) 3 GD; Zone 2/22					
Interfaces						
ET-	1x 1000BASE-T LAN Ex e, 1x USB Ex e, 2x USB Ex i					
SX-	1x 1000BASE-SX fiber optic (Multimode), 1x USB Ex e, 2x USB Ex i					
LX-	1 x 1000BASE-LX fiber optic (Singlemode), 1x USB Ex e, 2x USB Ex i					
Module A						
NN-	No additional interface module					
BR-	1x TTY Ex i for Barcode Reader (PSCAN-D / EX Dragon) and Base station (PSCAN-B)					
S1-	1x RS232 Ex e					
S2-	1x RS485 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-	1x 1000BASE-T LAN Ex e					
Module B						
NN-	No additional interface module					
BR-	1x TTY Ex i for Barcode Reader (PSCAN-D / EX Dragon) and Base station (PSCAN-B)					
S1-	1x RS232 Ex e					
S2-	1x RS485 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-	1x 1000BASE-T LAN Ex e					
Computing Platform						
TS4-	Intel® Atom Elkhart Lake x6211E, 4 GB RAM, 64 GB SSD, RM Shell 6.x (basierend auf Win IoT LTSC 2021)					
TSJ-	Intel® Atom Elkhart Lake x6211E, 4-GB RAM, 64-GB SSD, IGEL OS 12 (based on Linux)					
TSI-	Intel® Atom Elkhart Lake x6211E, 4-GB RAM, 64-GB SSD, IGEL OS 11 (based on Linux)					
Options & Customization						
N0	Standard (No customization)					

Example: TCU1200-J2-ET-NN-NN-TS4-N0