

## Connect X300

CXG3.X300



### Connect X300 for the cloud integration of Siemens Smart Infrastructure as well as third-party systems

- 2 Ethernet ports for WAN and LAN
- Remote firmware and configuration data update over the IP Interface
- LED indication of activities and state
- Operating voltage DC 24 V =
- Plug-in screw terminal block for supply
- Mounting on standard rails or on wall

Depending on firmware, the following functions are supported (examples):

- Multi-site management
- Remote operation & monitoring
- Alarm treatment
- Remote tool access

The specific set of supported functions may vary according to the region (for example UL markets) and according to the connected system.

## Features

Connect X300 is a physical device that is the connecting point between the cloud and controlled/monitored devices. This can include controllers, sensors, and actuators in the building etc.

## Application

The device integrates BACnet/IP or Modbus/TCP devices and systems as well as FS20 fire panels.

It securely transmits data to the cloud over cabled networks or over mobile networks (e.g. 4G: With a router). 4G USB Dongle support is available in addition (see "Accessories").

## Functions

The Connect X300 provides two integration levels to connect devices to the cloud: System integration (between the Connect X300 and the devices) and cloud integration (between the Connect X300 and the cloud).

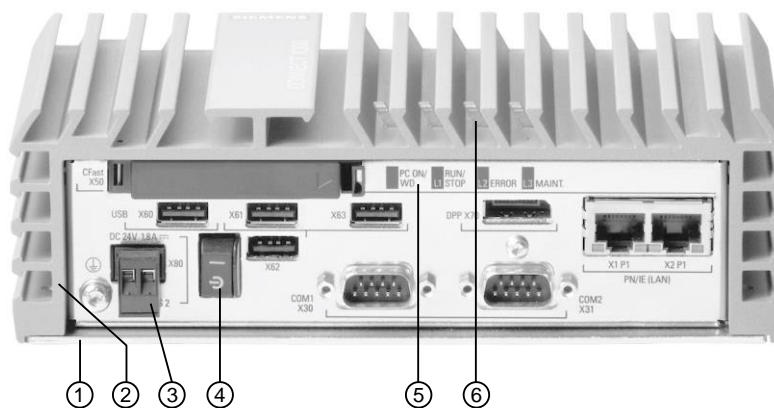
A broad range of devices can be integrated on the system level (Desigo, FS20, third-party systems). It supports various protocols (BACnet, Modbus) and various physical media (Ethernet, serial EIA-485 bus).

The device supports Ethernet and 4G on the cloud level via the MQTT protocol.

## Technical design/mechanical design

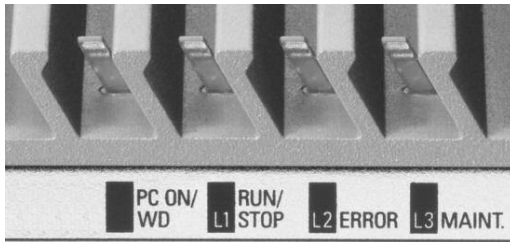
### Mechanical design

The device can be mounted on standard rails and walls.



- 1 Base plate
- 2 Cooling fins, aluminum
- 3 Connection: Power supply (**DC 24 V=**)
- 4 Main switch
- 5 Labeling of LED indicators on the front
- 6 LED indicators on the cover (light guides)

## LED displays



LED	Activity	Function
PC ON/ WD	Off	Device off
	Orange flashing	BIOS in Power On Self Test (POST)
	Solid Green	Device ready (otherwise re-start the device)
L1 RUN / STOP	Green, flashing	SW applications starting
	Solid Green	All SW application operational
L2 ERROR	Off	Approx. 1 minute off during start-up
	Solid Orange	Internet OK
	Orange flashing	X300 is registered properly and Cloud connection is OK.
	Off	No internet connection
L3	-	Not used

	LED	Color	Activity	Function
	Ethernet 1/2	Green	Steady ON	Link active
			Steady OFF	No connection
			Flashing	Sends 10 or 100 Mbps Ethernet IP packets
		Yellow	Steady ON	Link: 100 Mbps
			Steady OFF	Link: 10 Mbps

## Type summary

Device	Type	Description
CXG3.X300	SSN: S55842-Z121-A100	Connect X300

## Delivery

Pluggable terminal block for power

Mounting accessories for mounting on standard rails.

## Accessories

The accessories listed below are tested but not sold by Siemens Smart Infrastructure.

Manufacturer	Type	Description
Siemens	6EP3332-6SB00-0AY0	Power supply DC 24 V =
Siemens	BR2450A/SCN	Lithium battery with cable and plug 3 V, 0.55 Ah (BIOS backup battery, replace every 5 years)
Verizon	USB730L / MC730	4G USB Dongle
Huawei	E3372 / E3372h - 153	4G USB Dongle
Alcatel	IK40V-2AALDE1	4G USB Dongle

Please confirm compatibility of the chosen 4G Dongle according to the infrastructure of your regional Internet Service Provider before choosing and ordering a specific device (i.e.




compatibility of regional 4G frequency bands). Consult "4G Dongle Commissioning Guide" for further instructions and information.

## Product documentation

All relevant documents can be downloaded at the following Internet address:  
<http://siemens.com/bt/download> (Enter type CXG3.X300).

## Notes

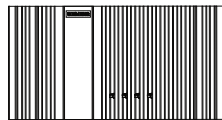
### Safety

	<b>⚠ CAUTION</b>
	<b>National safety regulations</b> Failure to comply with national safety regulations may result in personal injury and property damage. <ul style="list-style-type: none"><li>• Observe national provisions and comply with the appropriate safety regulations.</li></ul>
	<b>High temperature on device surface during operation (to 70 °C / 158 °F)</b>

### Mounting

The device is suitable for mounting on standard rails.

#### Mounting position and temperature range

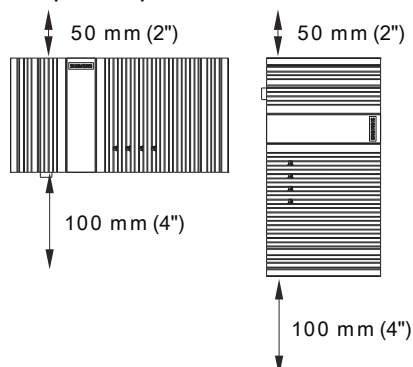


Max. 50 °C (122 °F)

Min. 0 °C (32 °F)

Provide sufficient ventilation in the control cabinet to maintain the ambient temperature (max. 50 °C) and extract residual device heat (up to 32 W).

#### Required space around the device



### Commissioning

Only qualified personnel may commission the device.

Additional documentation: See <http://siemens.com/bt/download>

## Maintenance: Replace battery

The BIOS backup battery is installed ex works and must be replaced **every 5 years**. See accessories for type number.

### Procedure:

1. Assure protection against electrostatic discharge (ESD).
2. Disconnect device from power.
3. Unscrew 6 screws on the base plate (T20) and carefully remove the base plate.
4. Disconnect the ribbon cable on the SSD (not on the motherboard).
5. Remove the battery from the housing wall.
6. Remove the remaining Velcro strips from the housing wall.
7. Unplug the old battery.
8. Carefully install the new battery  
(The realtime clock information is lost after 30 seconds without power). In this case, plug in the WAN cable at start up for the device to acquire the time from the Internet).
9. Attach the new battery with the new Velcro strip to the housing wall.
10. Plug in the ribbon cable on the SSD.
11. Reinstall the base plate (maximum torque: 5 Nm / 3.7 lbf ft).



## Disposal





The device is considered an electronic device for disposal in terms of the European Directive and may not be disposed of as domestic waste.

- Dispose of the device through channels provided for this purpose.
- Comply with all local, applicable regulations.
- Dispose of empty batteries in designated collection points



### Power supply

Operating voltage (M, L+)	DC 24 V = $\pm 20\%$ Safety extra-low voltage SELV per IEC/EN / DIN EN / UL 60950-1 or NEC Class 2 or LPS per IEC/EN / DIN EN / UL 60950-1
 <b>DC 24 V = Direct current only!</b>	
Protective earth  Cross section min. 2.5 mm <sup>2</sup> /14AWG	The protective earth connection must be connected on the installation side with the building grounding system (PE).
Power consumption	Max. 1.8 A / 43 W at DC 24 V = Typically 510 mA / 13 W
Internal fusing	None

### Function data

Hardware information	
Processor	Intel Celeron N2807, dual core, 1,58 GHz
RAM	4 GB DDR3L
SSD	128 GB, 2.5" SATA
Software information	
OS	Linux
Response to a power outage	
Loss of power buffering	20 ms
BIOS backup battery	

### Connections

Power: Pluggable screw terminals,	
Cu-wire or Cu-strand with wire end sleeve	0.75 to 2.5mm <sup>2</sup> (28 to 14 AWG)
Cu-strand without wire end sleeve	0.75 to 2.5mm <sup>2</sup> (28 to 14 AWG)
Stripping length	6...7.5 mm (0.24...0.29 in)
Screwdriver	Slot screws with a ca. 3 mm blade
Max. tightening torque	0.6 Nm (0.44 lb ft)

Ethernet interfaces	
Plug	2 x RJ45, screened
Interface type	10 / 100 / 1000 Mbps, IEEE 802.3 compatible
Galvanic isolation of system neutral M	Yes

USB interface (Unused)	
Plug	Type A
1 x USB3.0	4 Gbps, 900 mA
3 x USB 2.0	0.48 Gbps, 500 mA
Max. load for all USB consumers	Max. 6 W
Galvanic isolation of system neutral M	No

Serial interface (Unused)	
2x COM	D-sub plug, 9-pin
Protocol	EIA-485
Bit rate	Max 115 Kbps

Screen interface (Unused)	
1x DisplayPort	640 x 480 ... 2560 x 1600 Pixel

## Conformity

Ambient conditions and protection classification	
Design	Protection class I per IEC 61140
Degree of protection of housing to EN 60529	IP40
Dust protection	Against foreign particles $\geq 1$ mm
Climatic ambient conditions <ul style="list-style-type: none"> <li>Transport (packaged for transportation) to EN 60721-3-2</li> <li>Operation as per IEC/EN 60721-3-3</li> </ul>	<ul style="list-style-type: none"> <li>Temperature -20...60 °C (-4...140 °F) Air humidity 5...95% (non-condensing)</li> <li>Temperature 0...50 °C (32...122 °F) Air humidity 5...85% at 30 °C (86 °F) (non-condensing)</li> </ul>
Mechanical ambient conditions <ul style="list-style-type: none"> <li>Transportation</li> <li>Operation (standard rails)</li> </ul>	<ul style="list-style-type: none"> <li>5 ... 9 Hz: 3.5 mm, 9 ... 500 Hz: 9.8 m/s<sup>2</sup></li> <li>10 ... 58 Hz: 0.075 mm, 58 ... 200 Hz: 4.9 m/s<sup>2</sup></li> </ul>
Air pressure.	1080...795 hPa, -1000...2000 m (-3000...6000 ft)

Standards, directives and approvals	
Product standard IT devices - Security	EN 60950-1 through 06/2019 (then EN 61010-2-201)
Electromagnetic compatibility (EMC) Emissions Immunity	For residential, commercial, and industrial environments EN 61000-6-3 EN 61000-6-2
EU conformity (CE)	See CE declaration A5W00052529 <sup>1)</sup>
EAC conformity	Eurasia conformity
RCM	Meets EN 61000-6-3
UL, cULus-LISTED (US / Canada))	Underwriters Laboratories (UL) to Standard UL 60950-1 Second Edition, File E115352 (I.T.E) UL 508 (IND.CONT.EQ), File E85972 Canadian National Standard CAN/CSA-C22.2: No. 60950-1-07 CAN/CSA-C22.2: No. 142 Identical to the authorized Listee's model numbers - SIMATIC IPC227E <a href="http://ul.com/database">http://ul.com/database</a>
FCC	CFR 47 Part 15 Class A CAN ICES-3 (B)/NMB-3(B)
Environmental compatibility <sup>1)</sup>	The product environmental declaration contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

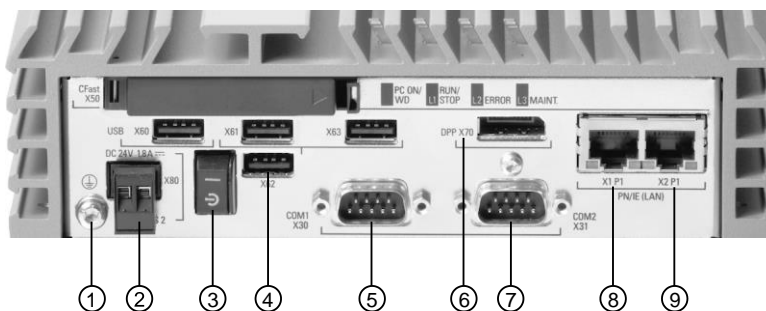
<sup>1)</sup> Documents can be downloaded at <http://siemens.com/bt/download>.




## Housing

Dimensions	See "Dimensions"
Weight without / with packaging	1590 g / 1940 g

## Connections and indicators



- 1 Protective earth  The protective earth connection must be connected on the installation side with the building grounding system (PE). Diameter min. 2.5 mm<sup>2</sup> / 14 AWG
- 2 Pluggable terminal block for operating voltage **DC 24 V =**
- 3 On/off switch. OFF, when pressing symbol "C-"
- 4 USB 2.0, 3.0 interfaces (unused)
- 5 Serial interface, 9-pin for RS 232, EIA-422, EIA-485 (unused)
- 6 DisplayPort interface (unused)
- 7 Serial interface, 9-pin for RS 232, EIA-422, EIA-485 (unused)
- 8 X1P1 = LAN (customer network) Ethernet 10/100/1000 Mbps (with 2 LEDs per port for indicators)
- 9 X2P1 = WAN (Internet access) Ethernet 10/100/1000 Mbps (with 2 LEDs per port for indicators)

## Dimensions

### Dimensions in mm and inches

