SIEMENS

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 wall
- Multi-site management (depending on firmware)
- Remote operation & monitoring (depending on firmware)
- Alarm treatment (depending on firmware)
- Remote tool access, update and configuration via Siemens Cloud Services (depending on firmware)

Functions

Connect X300 is a gateway and edge device for large size or multi-application installations serving as the point of integration for Building Automation and Control Systems smart devices and cloud applications.

A broad range of devices can be integrated at the system level, for applications such as HVAC, security, fire safety, power and lighting applications. It supports a wide range of communication protocols for controllers, meters, sensors, and actuators. These include BACnet, Modbus and Siemens fire system protocols.

The gateway connects upstream over cable or mobile (4G), and downstream to the local network over Ethernet or EIA-485 serial bus. Transported data is protected by encryption, and the device can be managed remotely over a secure tunnel.

The specific set of supported functions may vary according to the region (for example UL markets) and according to the connected system. Detailed information about the latest supported functions can be found in the release notes of the installed software.

Type summary

Type	Order number	Description
CXG3.X300	S55842-Z121-A100	Connect X300

Equipment combinations

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 / 2.5 A
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
Huawei	E3372 / E3372h - 320	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.
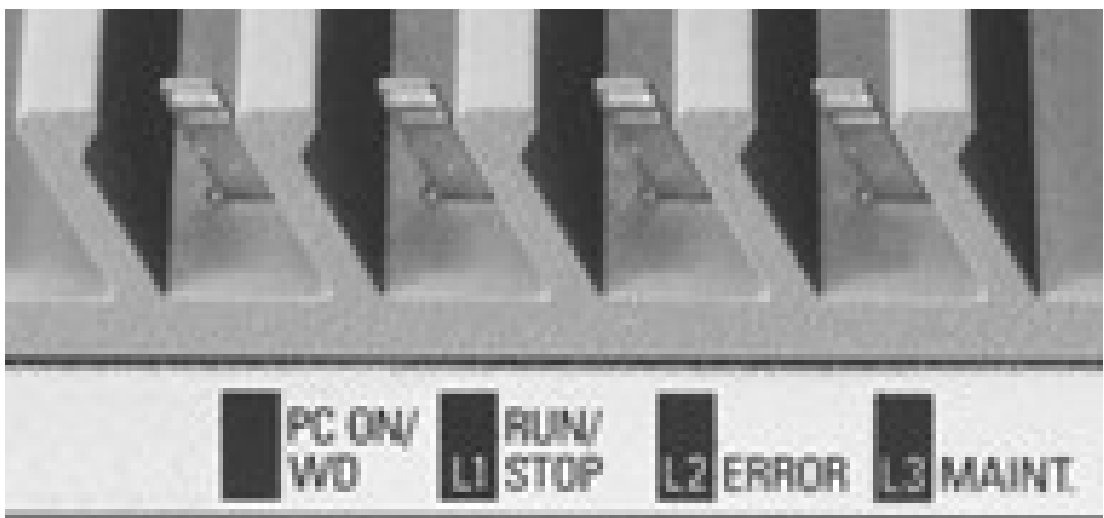
Technical and mechanical design

Mechanical design

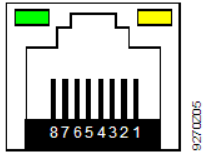The device can be mounted on standard rails and walls.
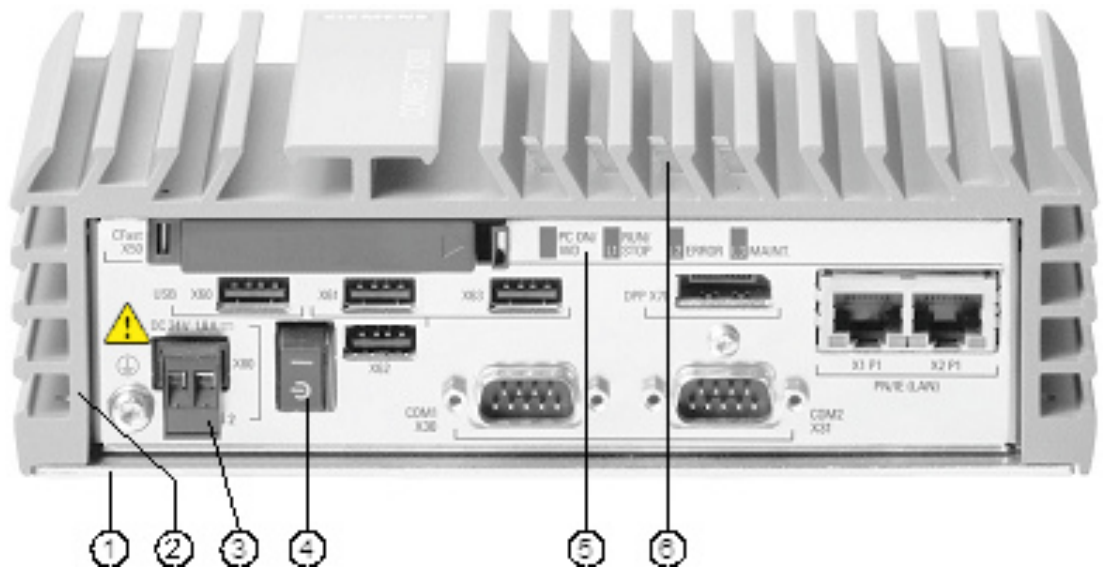
1   Base plate
2   Cooling fins, aluminum
3   Connection: Power supply **DC 24 V =**
4   Main switch
5   Labeling of LED indicators on the front
6   LED indicators on the cover (light guides)

LED indicators

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

Notes

Safety

|	⚠ **CAUTION**
	National safety regulations Failure to comply with national safety regulations may result in personal injury and property damage. • Observe national provisions and comply with the appropriate safety regulations.

Mounting

Provide sufficient ventilation in the control cabinet to maintain the ambient temperature (max. 50 °C) and extract residual device heat (up to 32 W).
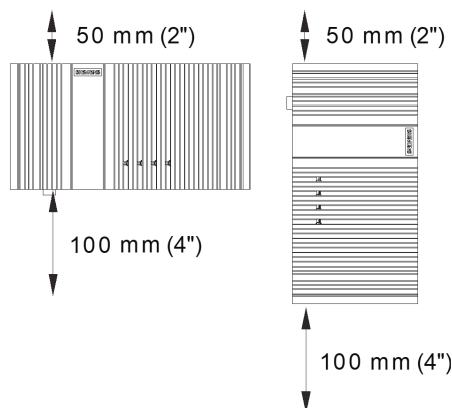
Mounting position and temperature range
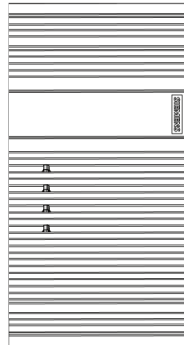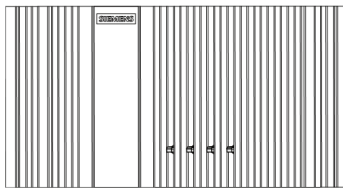
Max. 50 ° C (122° F)

Min. 0 ° C (32° F)

Required space around the device

50 mm (2") 50 mm (2")

100 mm (4") 100 mm (4")

Commissioning

Only qualified personnel may commission the device.

Additional documentation can be retrieved at https://www.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 plant (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).
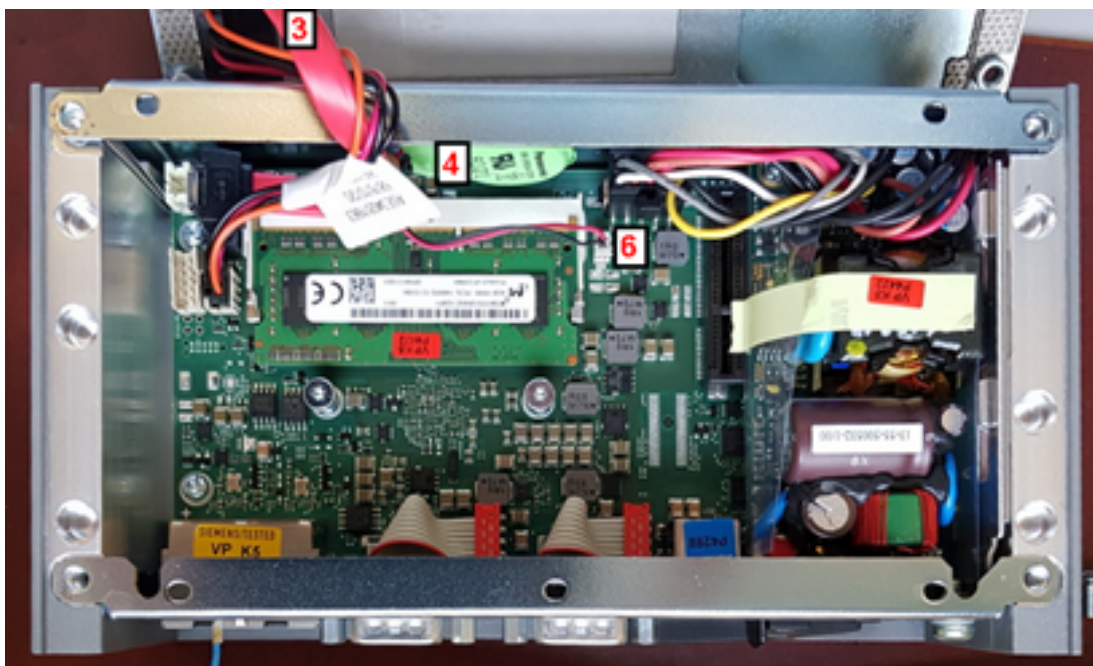
Disposal

	This symbol or any other national label indicate that the product, its packaging, and, where applicable, any batteries may not be disposed of as domestic waste. Delete all personal data and dispose of the item(s) at separate collection and recycling facilities in accordance with local and national legislation. For additional details, refer to [Siemens information on disposal](#).

Technical data

Power supply

Operating voltage (M, L+)		DC 24 V = ± 20 %
⚠	**DC 24 V = Direct current only!**	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

Protective earth ⏚ Cross section min. 2.5 mm²/14AWG	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

Connections

Power: Pluggable screw terminals	
Cu-wire or Cu-strand with wire end sleeve	0.75 to 2.5mm2 (28 to 14 AWG)
Cu-strand without wire end sleeve	0.75 to 2.5mm2 (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)

Interfaces

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	IP 40
Dust protection	Against foreign particles ≥1 mm

Climatic ambient conditions
● Transport (packaged for transportation)
   as per IEC EN 60721-3-1 / IEC EN 60721-3-2
 	
● Operation as per IEC/EN 60721-3-3
	● Temperature -20...70°C (-4...140°F)
	   Air humidity 5...95% (non-condensing)
	● Temperature 0...50°C (32...122°F)
	   Air humidity 5...85% at 30° C (86°F) (non-condensing)

Mechanical ambient conditions ● Transportation ● Operation (standard rails)	● 5 … 9 Hz: 3.5 mm, 9 … 500 Hz: 9.8 m/s2 ● 10 ... 58 Hz: 0.075 mm, 58 ... 200 Hz: 4.9 m/s2
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[1]
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 http://ul.com/database
FCC	CFR 47 Part 15 Class A CAN ICES-3 (B)/NMB-3(B)
Environmental compatibility[1]	The product environmental declaration contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

[1] Documents are available at https://www.siemens.com/bt/download.

Housing

Dimensions	See "Dimensions"
Weight without / with packaging	1590 g / 1940 g
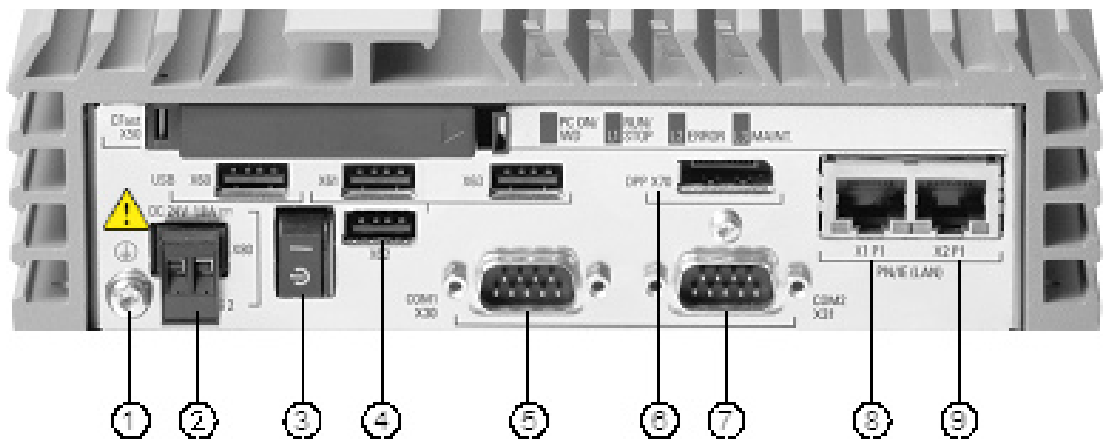
1   Protective earth ⏚

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)

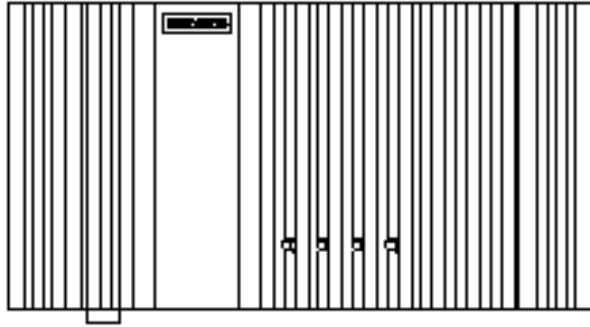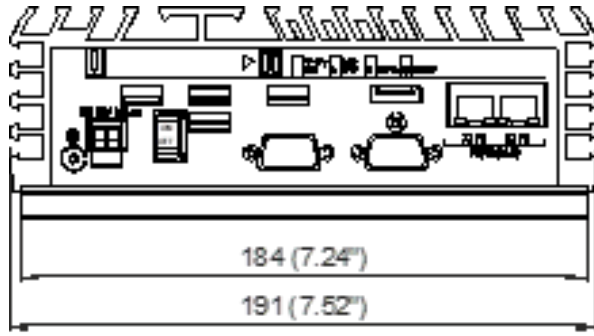9   X2P1 = WAN (Internet access) Ethernet 10/100/1000 Mbps (with 2 LEDs per port for indicators)

Warranty

The application-specific technical data is guaranteed only in combination with the Siemens products listed in the 'Device combinations' section. If third-party products are used, any guarantee provided by Siemens will be invalidated.

Dimensions

Dimensions in mm and inches

184 (7.24")

191 (7.52")

35 (1.38")

8.5 (0.33")

60 (2.36")

50 (1.97")

100 (3.94")