

XIG100 – 1To1 Internet of Things Wi-Fi Gateway

This guide provides brief information about installation and configuration of XIG100 in the portal:
<https://cem.copelandconnected.com>



For additional documentation you can: scan this QR code or go to <https://cem.copelandconnected.com/docs> or contact our After Sales Service coldchain.technicalservices@copeland.com or dixell.service@copeland.com

SAFETY INFO

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The device shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Copeland Controls S.r.l. reserves the right to change the composition of its products, even without notice, ensuring the functionality.
- The device must not be opened.
- In case of faulty operation, contact your supplier or Copeland After sales, with detailed description.
- Check the application limits and the correct power supply voltage before proceeding. Do not expose to water or moisture, avoiding sudden temperature changes with atmospheric humidity condensation
- ⚠️ If the AC mains input is connected, the maintenance is reserved for skilled person only (as defined according to IEC 62368-1 3rd Ed.)
- ⚠️ Caution: AC mains input and 5Vdc input cannot be connected simultaneously.
- ⚠️ Caution: Fuse may be on neutral input: disconnect mains and all other electrical connections before any kind of maintenance.

MODELS

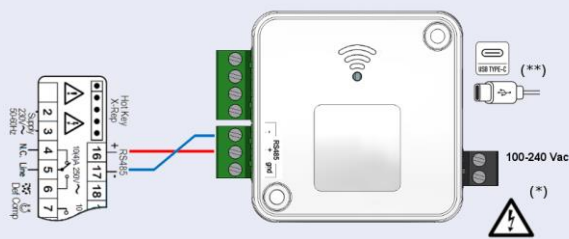
MODEL	POWER SUPPLY	FEATURES	MOUNTING
XIG100- 8BB1	100÷240 Vac and 5Vdc	NTC/Digital inputs	(*) (**) electrical hazard!
XIG100- 7BA1	100÷240 Vac	----	(*) electrical hazard!
XIG100- 6BB1	5Vdc	NTC/Digital inputs	(*) (**) external USB power supply (not included)

(*) Fire and electrical enclosure as per standard IEC 62368-1 required

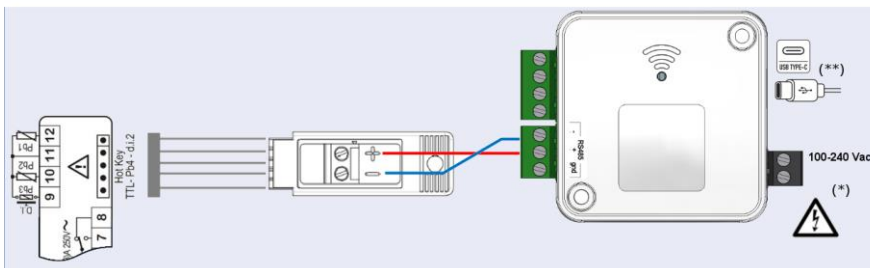
(**) Needs/May need an external USB power source which must be compliant with requested characteristics

FIELD ASSEMBLY WIRING

DIRECT RS485



TTL + XJ485CX CONVERTER



CYBERSECURITY INFO

- This device has been designed to protect against malicious or unauthorized access and assessed according to EN 18031 requirements (RED-DA). Please use all available security features and best practices
- Internal configuration pages (see Wi-Fi configuration) are redirected to HTTPS to protect against any attempt to intercept settings or credentials. It is totally normal and unavoidable that your browser raises a "security alert" at that stage. Just proceed to the HTTPS pages
- Only authorized and qualified personnel may have access to the devices and to the wiring supporting communication protocols
- A general rule of thumb for extra security is avoiding any configuration in presence of nearby unauthorized people

BEFORE INSTALLATION

- Read the documentation available at <https://cem.copelandconnected.com/docs>, section "Documents". User registration is needed (see below).
- Check the list of officially supported devices and the full user manual.
- If you are using XIG100 to connect to an electronic controller via RS485, please ensure the controller is in the list of compatible devices.
- Get sure that a 2.4Ghz Wi-Fi network with good signal and DHCP service is available, that you know the credentials for the network, and that no firewall is blocking the communication (Ports 8883 and 443). Contact the IT manager of the final site, before commissioning, if you are not sure.
- Get sure you can access your e-mail account.
- Get sure you can read the ID in the label stucked on the unit XIG100.
- Have a small screwdriver or equivalent tool to press the hidden button on XIG100 (hole located at the base of the Wi-Fi symbol)

USER REGISTRATION: CREATE YOUR ACCOUNT IF YOU DO NOT HAVE ONE

- Navigate to <https://cem.copelandconnected.com>
- Click on **Sign up now** link to create a new user account (the e-mail address used must already be in the subscription)
- Follow the steps for the registration (including code verification via e-mail)

GATEWAY REGISTRATION

Follow these steps:



1. Scan the QR code with your smartphone
2. Open the link and proceed with the Gateway registration in the portal (you need your user account)
3. You will be asked to associate the device to an existing "site" or to create a new one. A site is a collection of gateways and devices, located in the same place and identified by a site name,

WI-FI CONFIGURATION

The device must be set up before it can connect to the Internet. Follow these steps to enter Configuration Mode.

- Using a small screwdriver to press the hidden button for 5 seconds (hole located at the base of the Wi-Fi symbol) to activate Access Point mode, needed for setup. You see the LED blinking regularly. You now have 10 minutes.
- Use your phone or PC to search for Wi-Fi Network "XIG-xxxxxxxxxxx (Gateway ID)" and connect it with password **12345678**
- Open a browser on <http://192.168.1.1> to see the gateway configuration page, if your browser has not been re-directed automatically
- Select or manually set the destination 2.4 Ghz Wi-Fi network name (SSID) and enter the relative Wi-Fi password
- Tap on **"Save and Reboot"**: The device is now configured to use the selected Wi-Fi network for connecting to the cloud.
NOTE: the gateway will complete the first cloud connection procedure in few minutes.
- If the device does not connect to the Cloud, start all over again and check settings, check the LED behaviour.

LED behavior

Operating state is shown through LED blinking: two quick synchronization blinks followed by 1 to 6 slow blinks, where the number of slow blinks corresponds to the operating mode (e.g., 1 blink for mode 1, 2 blinks for mode 2, etc.).

LED	Short Description	If You See This...	If It Hangs Here...
Mode 1	Connecting to Wi-Fi	It is attempting to connect to the Wi-Fi network but hasn't succeeded yet. This might be due to a weak signal, incorrect credentials, or other connectivity issues	Check that the network is 2.4 GHz and re-enter the Wi-Fi password if necessary. Restart the hotspot configuration if needed
Mode 2	Verifying Internet Connectivity	Connected to the Wi-Fi network, but still verifying the Internet connection	Ensure the gateway can access the internet, and IP address has been assigned by DHCP. Note NTP must function correctly for time synchronization
Mode 3	Getting Cloud Authorization	Internet access is ok and it is attempting to connect to the cloud, but it isn't yet authorized or it has not been registered	This may occur if the cloud registration is incomplete. Ensure the QR code registration process was followed properly
Mode 4	Device Discovery in progress	Scanning for a connected controller on the RS485 line	Confirm the RS485 connection is stable
Mode 5	Description File Not Available	The controller is connected to the gateway, but the firmware is not recognized or is unsupported	Try restarting the controller discovery. If issues persist, contact Technical Support to request a configuration update for the device
Mode 6	Normally Working	Everything is working correctly, with communication established between the gateway and the controller	There should be no issues; this mode indicates normal operation. RS485 LED should blink continuously during data transfer
Configuration Mode			
Slow Blinking	Hotspot active	The Wi-Fi configuration hotspot is active and ready to connect	Connect your mobile phone to the hotspot to begin Wi-Fi setup
Fast Blinking	Hotspot off	The hotspot was automatically disabled after 10 minutes of inactivity	Restart to re-enable the hotspot

TROUBLESHOOTING & FAQs

What should I do if my gateway has the wrong Wi-Fi password?	Use a small screwdriver to press and hold for 5 seconds the hidden button (hole located at the base of the Wi-Fi symbol) while the gateway is powered on and running normally. The unit will restart in Access Point Mode, allowing you to reconnect
Why Access Point connection gets lost while setting up?	The Access Point Mode remains active for 10 minutes, then it turns off for security reasons. Restart the procedure
What information is required to register a new gateway?	A site is a collection of gateways and devices. The site is the entity describing the location where devices are installed. Site and devices need a name to identify them when navigating the portal.
How do I configure and enable the on-board inputs, i.e. to connect an NTC sensor for reading a temperature	Read the full user manual. The configuration is done via XIG100 internal configuration parameters, which are accessible on the Copeland Equipment Manager portal, once the device has been connected.

TECHNICAL SPECIFICATIONS

FEATURES	DESCRIPTION
Housing	Self-extinguishing PC/PC+ABS
Dimensions	61 mm x 61 mm x 29 mm depth
Mounting device	2 mounting holes for screws up to Φ 4 mm
Degree of protection	IP20
Power supply	100÷240 Vac 50/60Hz and/or 5Vdc (depending on model)
Overvoltage category	II
Rated power	5VA
Rated impulse voltage	2500V
Software class	A
Terminal blocks / Terminal connections	Plug-in terminal blocks, wire section between 0,5 and 2,5 mm ² Max tightening force: 0.3 N/m for 3,5mm pitch, 0.4 N/m for 5,0mm pitch
Pollution degree	2, non-condensing humidity
Ambient operating temperature and humidity	-20T55°C; 20-85 rH% (non-condensing humidity)
Shipping and storage temperature	-20T85°C; 20-85 rH% (non-condensing humidity)
Enclosure flammability	UL 94 V-0
Certification & compliance	2014/53/EU 2014/30/EU 2014/35/EU UL 62368-1, 3 rd Ed, 2021-10-22 CAN/CSA C22.2 No. 62368-1:19, 3 rd Ed, 2021-10-22 IEC 62368-1: 2018 + EN IEC 62368-1:2020+A11:2020 Informative test report according to IEC/UL/CSA 60335-2-40 and IEC/UL/CSA 60335-2-89 RED 2014/53/EU ETSI EN 300 328 Version 2.2.2 2019 EN 62479 EN 62311 EN 18031-1:2024 FCC Part 15.107 & 15.109 and FCC Parts 15.207, 15.209(a) & 15.247 ICES 003 issue 7 from October 2020, RSS-247 Issue 3 August 2023,RSS-Gen Issue 5, April 2018 Amendment 2 (February 2021)

USB POWER SUPPLY REQUIREMENTS (FOR MODELS WITH USB CONNECTOR TYPE C)

FEATURES	DESCRIPTION
Power supply	5Vdc + 3%
USB cable	Type C connector, max length 3 Meters
Min rated power	2,5 Watt
Max rated power	100 Watt
Other requirements	5Vdc source must be classified ES1/PS2 as per standard 62368-1

COPELAND

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