

# User Manual

## XIG100 series - Internet of Things gateway

MANUAL NO: 1592011100



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## Introduction

### Where to find this manual

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An updated version of this manual can be downloaded from Copeland web site at <https://webapps.copeland.com/Dixell/Pages/Manuals> or using this QR Code

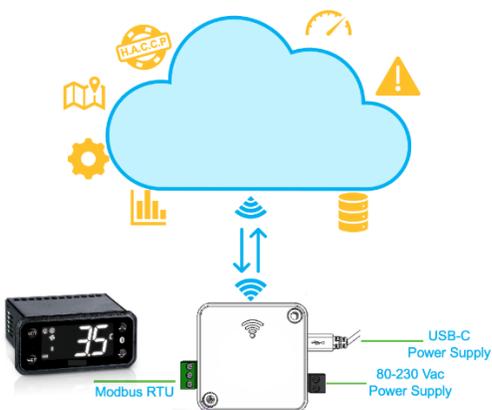


### System overview

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XIG100 is an Internet of Things enabler device, featuring Wi-Fi connectivity.

Its main purpose is connecting a single device, such as cabinet, refrigerator, walk-in cold room etc, to the software platform Copeland Equipment Manager.



Bi-directional Internet communication happens through the chosen Wi-Fi hot spot.

Many units in the same location can be connected and grouped by the system in a “site”.

Installation and commissioning are easy and no wiring across different equipment is necessary.

## General information

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This guide provides information for installing and setting up the XIG100 IoT gateway, to use it with Copeland Equipment Manager SaaS, available at <https://dama.copelandconnected.com>.

For further information and details, please contact your provider or our After Sales Service ([service.dixell@copeland.com](mailto:service.dixell@copeland.com)).

As the gateway is designed to work in conjunction with Copeland SaaS, some information in this document is describing topics that “lives” at cloud level rather than inside the gateway itself. Anyway, documenting all features provided by Copeland Equipment Manager is not in the scope of this document.

Screen-captures of the current version of the portal, at the time this document has been released, are used. Please note they could differ from the portal screens available at the time you use the software service, due to continuous improvement.

## Terminology

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Following terminology is adopted:

- **SaaS** (Software as a Service) : Copeland Equipment Manager cloud software
- **Portal**: the front-end for SaaS, available using Internet browsers
- **IoT**: Internet of Things – the system in which “Things” like thermostats controlling a refrigerator are connected to the cloud SaaS platform to get data or to interact with the controlled machine remotely
- **IoT gateway**: a device like XIG100 series who acts as a bridge between a controller without IoT capabilities and a SaaS
- **Site**: a group of units in the same location, associated to one or more users (i.e. a single food shop)
- **Site Admin** (and Site Owners): user who can associate a unit to a site and have full control over the unit
- **Hot spot**: Wi-Fi network signal that XIG100 uses to connect to the Internet

## Notes about Copeland Equipment Manager

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Copeland Equipment Manager is a cloud “Software as a Service” designed by Copeland, thanks to a decades long experience in electronics and supervisory systems for HVAC&R industry. It has been thought to enrich Copeland portfolio in terms of Supervisory/monitoring and connectivity solutions, when a complete supervisory system is overkill or a future option but there still is need of an easy to learn/easy to install way to connect and manage devices across the Internet.

Originally launched by the name “Food Service Data Management” to serve Food Service needs, the platform has been tested and improved over last 4 years thanks to customer feedback and continuous commitment in providing real value for users not only for all Refrigeration industry segments but also everywhere Copeland has a compatible electronic control for, being it food, pharmaceutical, air conditioning, Ho.Re.Ca and other applications.

It lets registered and authorized users to monitor and to interact with their Equipment, offering alarm management, data logging, remote settings.

The system is available at following URLs:

- <https://dama.copelandconnected.com>.

## Safety

### Disclaimer

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This manual must be considered part of the product and must be kept near the device, or immediately available for consultation and quick reference.

Each person, including the end user, is strongly advised to follow these safety instructions for equipment installation and usage.

Copeland Controls cannot accept any liability for damage caused by equipment that is not supported or not specifically required for the installation or by any misuse or not authorized usage.

Copeland reserves the right to vary the composition of its products, even without prior notice to the customer, ensuring the features are preserved

Copeland reserves the right to modify this manual without prior notice.

### Safety Icon Explanation

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**DANGER** warns the user about the presence of not-insulated "dangerous voltage", which may cause electric shock. If not avoided, will result in death or serious injury.



**WARNING** warns the user about the presence of important operating and maintenance (assistance) instructions described to indicate hazardous situations which, if not avoided, could result in death or serious injury.



**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**NOTICE** is used to address practices not related to personal or electronics injury.



**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

### Safety Instructions

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The device shall not be used for purposes different from those described hereunder

XIG100 (and its related software service) cannot be used as a safety device.

In case of failure or faulty operation, contact your supplier with a detailed description of the fault.

The device must not be opened. Please contact qualified service personnel for any assistance.

Verify that the power supply voltage is correct before connecting the devices.

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.**

Check the application limits before proceeding.

Do not expose to water or moisture: use the controller only within the operating limits, avoiding sudden temperature changes with high atmospheric humidity to avoid condensation. Prevent the electronic circuits from getting wet as contact with water, humidity or any other type of liquid can damage them

Verify the limits of application and the following before using the device:

- Comply with the temperature and humidity limits specified in the manual to store the product correctly.
- Prevent the devices from being dropped, knocked or shaken as either can cause irreparable damage.
- Do not clean the devices with corrosive chemical products, solvents or aggressive detergents.
- The device must never be hand-held while being used.
- The device must always be inserted inside an electrical panel that can only be accessed by authorized personnel.

## General Notes

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Since Copeland products form part of a very high level of technology, a proper installation with configuration/programming/commissioning stage is required to ensure correct operation and best performances.

The customer shall bear full responsibility for product installation and configuration to achieve the results pertaining to final equipment/system.



Separate the power supply of the device from the rest of the electrical devices connected inside the electrical panel.

Separate cables of probes and digital inputs from the cables of inductive loads and power cables to prevent any electromagnetic interference. Never run power cables and signal cables in the same ducts.

## Where It Can Not Be Used

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The gateway and/or the SaaS (Software as a Service) cannot be installed or used in the following cases:

- Systems or units installed in residential or commercial spaces with lifesaving functions.
- Systems installed for military use.
- Systems that serve equipment related to nuclear energy.
- All installations where the system is required to provide safety functions.

- All installations with functions not directly covered by those described in this manual.
- Countries for which there is not proper certification or clearance also according to radio signal requirements (please refer to dedicated section in this manual)

### Potentially explosive environments

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It is mandatory to check that all regulations, security requirements and best practices are followed when in the presence of appliances using potentially explosive gases. Consider adding elements like gas leak detectors

## Certifications and additional clearance for Wireless devices

### General certifications

The device has received following certification

General certifications	
CE	
UL	UL 62368-1, 3 <sup>rd</sup> Ed CAN/CSA C22.2 No. 62368-1:19, 3 <sup>rd</sup> Ed
IEC	IEC 62368-1: 2018 + EN IEC 62368-1:2020+A11:2020
Other	Informative test report according to IEC/UL/CSA 60335-2-40 and IEC/UL/CSA 60335-2-89

Additionally, some countries may require specific certifications or formal clearance procedures to allow the usage of any radio equipment like a Wi-Fi capable device.

### Wi-Fi clearance/certification

When the controller is mounted as an internal component of a machine, a clearance about XIG100 may not be required, if the manufacturer certified or got clearance for the entire machine.

Please check with your supplier that you are authorized to install and use the appliance in your country.

The following table lists some major countries or group of countries and relative information about specific Wi-Fi clearance or certification about XIG100. For many of them a specific authorization/certification is not required at all (descending from basic certification such as RED in EU) or depending on importers activity.

Countries	Time	Notes
EU countries & UK	OK	RED ETSI EN 300 328 Version 2.2.2 EN 62479 EN 62311
North America & Canada	OK	<b>FCC:</b> according to FCC Part 15.107 & 15.109 and FCC Parts 15.207, 15.209(a) & 15.247 <b>IC :</b> according to ICES 003 issue 7 from October 2020 and according to RSS-247 Issue 3 August 2023 and RSS-Gen Issue 5, April 2018 Amendment 2 (February 2021)
China	In progress ...	SRRC
Brasil	In progress ...	ANATEL
Israel	In progress ...	MoC
Australia / NZ		ACMA obtained through RED/EMC certification RSM obtained through RED/EMC certification
Puerto Rico	OK	No additional assessments are required for these countries
Botswana	OK	No additional assessments are required for these countries



## Hardware

### General introduction

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### Hardware models

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MODEL	POWER SUPPLY	FEATURES	MOUNTING
XIG100- 8BB1	90÷240 Vac and 5Vdc	NTC inputs	(*) electrical hazard!
XIG100- 7BA1	90÷240 Vac	----	(*) electrical hazard!
XIG100- 6BB1	5Vdc	NTC inputs	(**) external USB power supply (not included)

(\*) Fire and electrical enclosure as per standard IEC 62368-1 required for AC power supply versions

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

### Power supply options

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Depending on the model, there are two possible power supply:

- 110VAC/230VAC 50/60Hz power supply
- Low voltage 5VDC USB connector power supply



For models where both power-supply are present on board, it is mandatory not to connect both simultaneously.

## 110VAC/230VAC power supply

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### DANGER

To prevent malfunctioning or hazards, the electrical connections must be made by experienced and skilled people, who must consider the following recommendations:

- Separate signal cables (i.e. RS485 serial line) from power cables to prevent possible malfunction or reduced performance due to electromagnetic interference.
- Separate the power supply of the electronic devices from that of the other electrical components.
- The low voltage connections must have reinforced insulation.
- Never use power supply other than indicated to prevent device damage or hazard.

## Low voltage power supply: 5VDC - USB Type C connector

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The USB Type C connector, available on some models, is intended only for power supply. It is not a USB port.

### WARNING

Low voltage models have to be used anytime the unit must be mounted outside a dedicated electrical and flame protecting enclosure.

## USB power requirements

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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

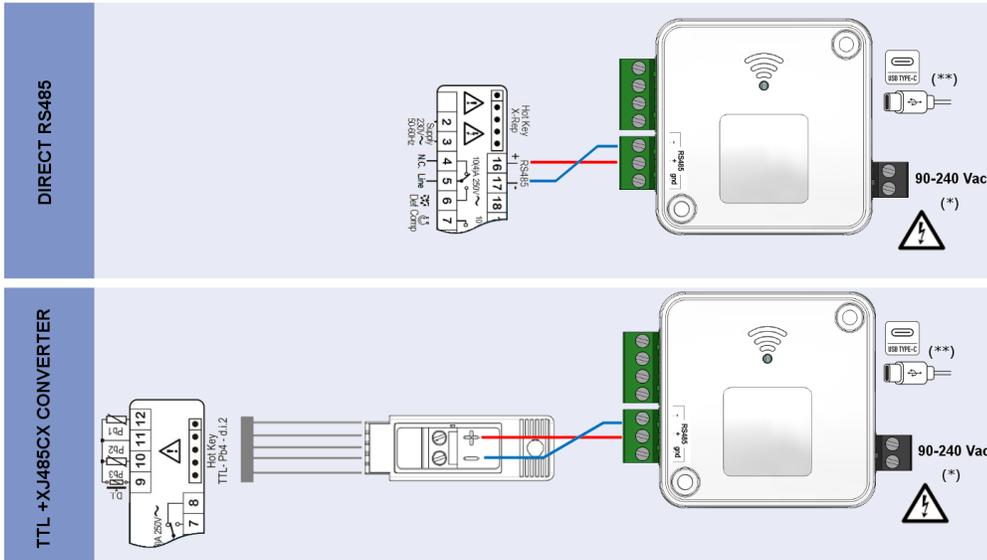
## Modbus RS485 serial port/ Field Assembly/ Wiring

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The gateway is connected to a main electronic control via an RS485 serial port.

Some Copeland controllers provide an RS485 Modbus RTU slave port. In this case the RS485 connection is direct.

For other Copeland controllers, featuring a TTL Modbus RTU slave port, a suitable TTL-RS485 adapter must be used.



(\*) Must be mounted inside the equipment or in a protected electrical and fire enclosure so to avoid electrical hazard!  
 (\*\*) Needs an external USB power-supply which must be compliant with requested characteristics

### Additional inputs

Some XIG100 models provide two extra inputs, named In1 and In2, which can be independently configured at cloud level to accept:

- NTC temperature sensors (-50T110°C; 10KΩ±1% @25°C)
- Voltage free open/close contacts (binary input, also called “digital inputs” )
- One or both can also be set to be left unconnected (values and alarms relative to the input are not considered and shown in system)

Note: In the first produced units the two inputs were named Pb1/Pb2: Regardless to the name, they can still be used to read binary inputs, but a firmware upgrade may be necessary.

See **XIG100 configurable inputs**



The wires must not exceed 10 meters



Be sure of connecting only NTC sensors or voltage free contacts

## Commissioning

### Overview

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The commissioning phase is a simple step-by-step process

- Physical installing and wiring
- Wi-Fi configuration in “configuration mode”
- Creating and/or signing on the portal with a user account
- Registering the gateway in the system
- Checking the current status is shown on the cloud
- Configuring extra inputs (if available and used)

Note: at the end of the commissioning process , XIG100 will download from the cloud repository the “profile” describing the firmware inside the connected device. From that point on, XIG100 will exchange data with the SaaS back-end, sending the status of the machine and all relevant metrics read by the main controller.

### Wiring XIG100 to a main controller via RS485 serial line

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If you purchased equipment (i.e. a refrigerator) with pre-mounted XIG100 inside, all wiring has already been done by the manufacturer or your supplier. In this case the XIG100 unit can be inside the machine and not visible/accessible at all. Skip this part

Otherwise, if you are the installer, you have two main use cases

- Using XIG100 with onboard inputs as standalone unit for retrofitting applications
- Using XIG100 connected to a main controller via RS485 port

Please check “Hardware wiring”

The connected device must be set to respond to Modbus RTU with the following communication parameters:

Item	Value	Notes
Unit address	1	This ensures fast detection
Baud rate	9600	
Parity	None	
Stop bits	1	

### Using XIG100 as a standalone wireless input module

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For models featuring 2 on board extra inputs, it is possible to have XIG100 working stand-alone, leaving the RS485 port unconnected. In this case XIG100 is used as a radio Input module, rather than a gateway.

## Wi-Fi Hot spot and network requirements

### Wi-Fi hot spot requirements

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The device operates on 2.4Ghz Wi-Fi networks. If your hot spot is generating only 5GHz signal, please contact your IT Manager to check if the 2.4Ghz signal can be turned on or add a dedicated hot spot.

The hot spot must not be a “Captive portal”.

A **captive portal** is a landing/log-in web page accessed with a [web browser](#) that is displayed to newly connected users of a Wi-Fi network before they are granted broader access to network resources. Captive portals may require [authentication](#), [payment](#), acceptance of an [end-user license agreement/acceptable use policy](#), survey completion, or other valid credentials that both the host and user agree to adhere by.

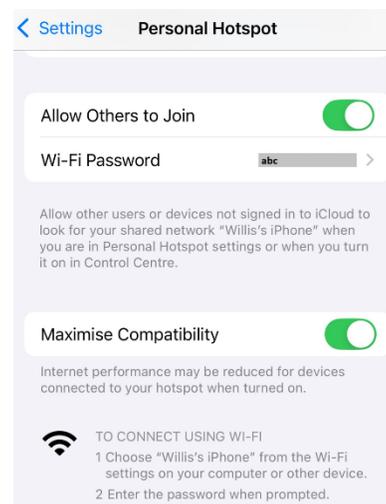
Please ensure that, at device's location, the Wi-Fi signal from the hot-spot is steady and not weak, to avoid recurrent disconnections.

### Using a mobile phone as Wi-Fi hot spot

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Smartphones and other devices may be used as (temporary) hot-spot, but some settings may be required.

On Apple iOS device it is necessary to turn on “Maximise Compatibility”



### Using a mobile phone as Wi-Fi hot spot to emulate final Wi-Fi network

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Sometimes it is useful to setup the gateway, installed on the equipment, before the equipment is moved to its destination, where the real Wi-Fi hot spot is present.

So, if Wi-Fi credentials are known ( Network name , also called SSID, and password), it possible to use a mobile phone to create a hot-spot with same SSID and password.

Doing so the full commissioning process can be completed before going on site: if all is correct, the only operation on site is powering the equipment on, to see the device back on line.

**Tip:** using two mobile phones is best if you need to emulate a Hot spot to register the device

## Other network requirements and protocol notes

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The device operates in DHCP mode (Dynamic IP addresses); please ensure a DHCP server is active on the Wi-Fi network. This is the default situation for almost all Wi-Fi networks.

The device answers to PING

Ensure these communication ports or protocols are not blocked by any firewall.

Port/Protocol	Direction	Mandatory	Notes
TCP 443	Outgoing	yes	
TCP 8883	Outgoing	Optional	MQTT traffic for best performances
NTP protocol			



## Wi-Fi configuration

### Operation

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When properly set up, the gateway behaves in “**running mode**” as Wi-Fi client (also called STA, Station mode) connecting to Internet through a Wi-Fi hot spot.

Before this is possible, it is necessary to enter “**configuration mode**” (also called Access Point mode) , to set up the data the gateway will use when in running mode, like Wi-Fi network credentials. Configuration is done through a web interface available.

See next in this chapter.

### Quick reference

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This table summarizes useful data for configuration mode

Item	Data	Notes
XIG100 access point SSID	XIG-yyyyyyy	Network name, where yyyyyy is the final part of the ID code in XIG100 label
XIG100 Wi-Fi Frequency	2.4Ghz	
XIG100 access point Wi-Fi password	12345678	
XIG100 web interface	<a href="http://192.168.1.1">http://192.168.1.1</a>	This is not an Internet Address, it is available when the XIG100 AP is connected
PIN	Used defined	PIN may be asked or not depending on configuration and conditions

### First configuration

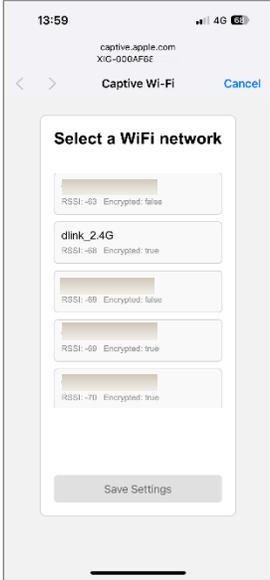
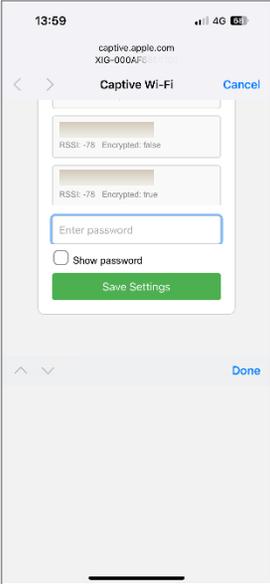
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The device allows Wi-Fi configuration through a web interface available in Access Point mode.

- Use your mobile phone or PC to scan for available Wi-Fi networks, and search for a network named XIG-yyyyyyy where yyyyyy is the final part of the ID code in the label stuck to the unit.
- Connect to the network, and insert 12345678 as Wi- Fi password. You are then connected to the internal Access Point featured by XIG100
- After connecting to the XIG100 Access Point, your Mobile should automatically open the Wi-Fi Configuration page. If the page doesn't appear, open a browser and go to: <http://192.168.1.1>.
- XIG100 scans for 2.4Ghz WiFi networks and shows a list
- Choose the network that has to be used by XIG100 to connect to the cloud
- Enter the Wi-Fi password for the network and click “Save and reboot”

- If the gateway is visible, check the green led blinks (this is explained in detail in next section), you should see status 6 (6 slow blinks after 2 very quick blinks). If this is shown the device is connected to cloud and there is no issue

The steps are illustrated in the following screenshots

<p>Search for Wi-Fi Network" XIG-xxxxxxxxxxx (Gateway ID)"</p>  <p>Connect to the Wi-Fi with fixed password: 12345678</p>	<p>Select a Wi-Fi network from the list</p>  <p>The gateway is now configured to use the selected Wi-Fi network for connecting to the cloud.</p>
<p>Enter the Wi-Fi password and tap on "Save And Reboot"</p> 	<p>NOTE: the gateway will complete the "first cloud connection procedure" in few minutes.</p> 

## Led behavior

The gateway features a led , to show its current status through through LED blinking: two quick synchronization blinks followed by 1 to 6 slow blinks.

The number of slow blinks corresponds to the operating status (e.g., 1 blink for mode 1, 2 blinks for mode 2, etc.)

LED	Short Description	If You See This...	If It Hangs Here...
Status 1	Connecting to Wi-Fi	The gateway 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 (as only 2.4 GHz is supported) and re-enter the Wi-Fi password if necessary. Restart the hotspot configuration if needed
Status 2	Verifying Internet Connectivity	The gateway is connected to the Wi-Fi network, but it is still verifying the internet connection	Ensure the gateway can access the internet, which may require the router to assign an IP address via DHCP. Note: Only DHCP is supported, and NTP must function correctly for time synchronization
Status 3	Getting Cloud Authorization	The gateway has internet access and is attempting to connect to the cloud but isn't yet authorized or it's waiting for the first assignment of the license	This may occur if the cloud registration is incomplete. Ensure the QR code registration process was followed properly, as the gateway might not be registered with the cloud
Status 4	Device Discovery in progress	The gateway is scanning for a connected controller on the RS485 line	Confirm the RS485 connection is stable
Status 5	Description File Not Available	The controller is connected to the gateway, but its specific configuration is unsupported or missing	Try restarting the controller discovery. If issues persist, contact Technical Support to request a configuration update for the device
Status 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
<b>Configuration Mode</b>			
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

## Configuration mode

In order to configure XIG100, it must be in **configuration mode** (i.e. it enters this mode automatically, for 10 minutes, if it has never been configured before).

This is needed especially to configure the Wi-Fi network that XIG100 must use to connect to the Internet when in Running mode. There are different scenarios when changing Wi-Fi network configuration is needed:

- First configuration
- hot spot password has been changed, so every gateway must be reconfigured to be back on-line
- the equipment has been moved to the final/to another location, where a different hot spot is present and previous network data must be replaced
- old hot spot is no more available or no more allowing the communication, and user wants to try a different one
- old hot spot offers a weak signal or a better one is available

When configuration mode is active, XIG100 behaves as a hot-spot generator, letting the installer to connect to it directly and access its internal web server pages.

The name of the Wi-Fi network is XIG-yyyyyyy where yyyyyy is the final part of the ID code in the label stuck to the unit.

- Use your mobile phone or PC to scan for available Wi-Fi networks and search for the network name. Depending on your mobile or PC, some seconds are needed before the network gets detected

#### Procedure

- look for Wi-Fi network among available and select
- provide the Wi-Fi password 12345678.
- reach for <http://192.168.1.1>
- The internal web pages are shown

If user does not connect to the hot-spot within the time-out then the device switches automatically to running (normal) mode, and tries to connect to the facility Wi-Fi

### Initial automatic configuration mode at power on

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If the gateway has never been configured before, after power on, it automatically enters configuration mode for 10 minutes, enabling its internal hot-spot and generating the XIGxxxx network signal.

**Starting from firmware xxxxx:** the device can be set so that configuration mode can be activated for 2 minutes at every power-on cycle, so it is possible to just power cycle the machine to enter in configuration mode, without any need to act physically on XIG100.

To enable the automatic Hot spot mode, after first configuration, it may be needed to enter in configuration mode manually (see "hidden push button for configuration mode) and then activate this feature in the check-box.

### Hidden push button for configuration mode

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It is possible to force XIG100 to activate configuration mode If the gateway has never been configured before, after power on, it automatically enters configuration mode for 10 minutes.

Otherwise it goes to running mode directly after power on and it tries to connect to the hot spot with the credentials it has been previously given.

In all these cases the user can press a hidden push button, available on XIG100 in a little hole. The operator needs a thin tool, like a screwdriver, to reach that button and press it for 4 seconds.

**⚠ DANGER**

For 110/230Vac powered models, the gateway must be inside an electrical enclosure to avoid contact, so only skilled/trained personnel, who understand how to operate, can access the push-button. For USB 5V powered device, there is no electrical hazard, so even not skilled/trained people can press the push-button.

## Unit (Gateway) registration

### Portal user account creation

Before one or more devices can be connected to the SaaS, the user must register himself in the system.

Navigate to <https://dama.copelandconnected.com/>

Click on **Sign up now** link to create a new user account.

Follow the steps for the registration (including code verification).

The image displays three sequential steps of the user registration process:

- Step 1: Sign in with your email address**. This screen includes fields for 'Email Address' and 'Password' (with a 'Forgot your password?' link). A 'Sign in' button is present, and a 'Sign up now' link is circled in red.
- Step 2: Please provide the following details.** This screen includes fields for 'Email', 'Secondary Verification Code', and 'Display Name'. A 'Send verification code' button is circled in red.
- Step 3: New Password**. This screen includes fields for 'Surname', 'New Password', and 'Confirm New Password'. A checkbox for 'I Accept Service Terms & Conditions' is present, and a 'Create' button is circled in red.

**Note:** The e-mail address is used as username credential and for system communication. It could be shown to other users, which may be later on associated with the equipment.

### Gateway registration

The Wi-Fi gateway has a unique code, called ID, that is different from all other devices, and that is same as the MAC address of the Wi-Fi module inside it.

This code is used to identify the unit and must be associated to the users who can access the equipment from the cloud: this process is here called “gateway registration” or “unit registration”.

User needs access to Internet and his e-mail to complete the operation.

There are two ways:

- Scanning the QR code shown in the label sticked to XIG100 and/or the equipment
- Inserting the ID code manually

## Scanning the QR code

Xig100 features a label showing the QR code.

Users can use a mobile phone, connected to the Internet, to scan the code. This will open a browser page to carry on the registration of the unit in the SaaS platform.

Installer must use a previously created user account, or create one, and then sign-on.

The browser redirects to the page where the unit can be associated to a new “site” or to an existing one (i.e. registering next units after the first). The installer user gets contextually associated to the site.

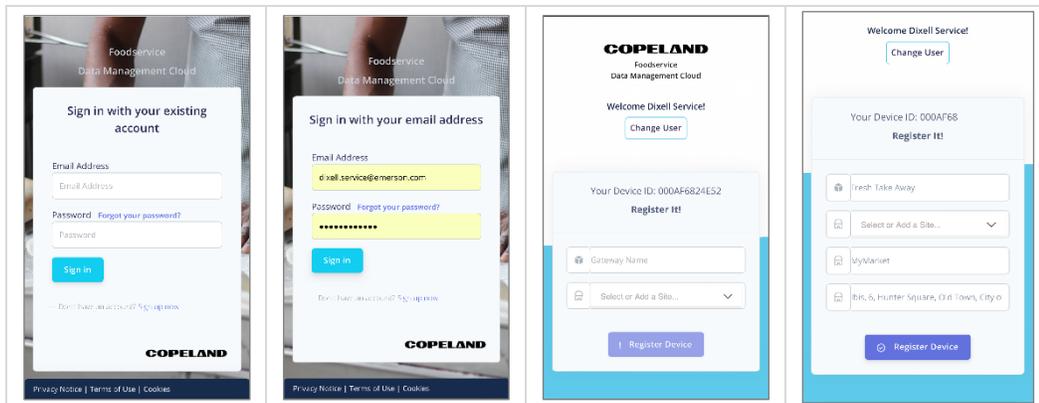
A “site” is a set of gateways in the same place, user needs to assign a name to the site, so he can find it in his list of sites.

XIG100 can be registered before or after it is correctly wired and powered on.

Follow these steps:



1. Scan the QR code with your smartphone.
2. Open the link and proceed with the Gateway registration
3. Connect RS485 and Power Supply - switching on the Gateway



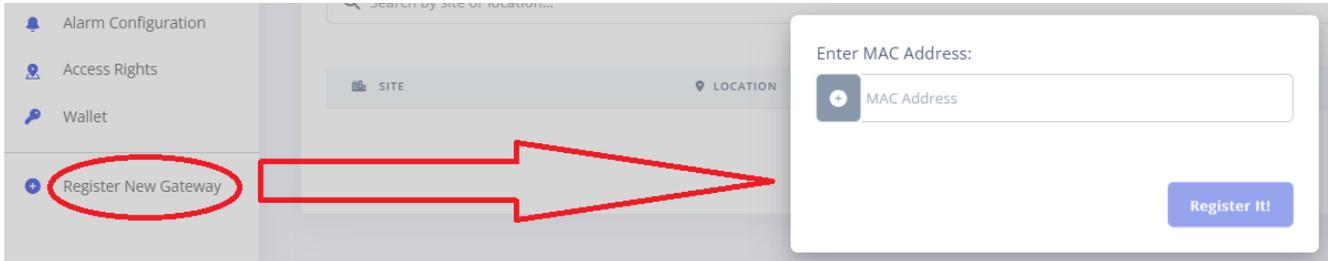
## Inserting the ID code (MAC address) manually

The ID code is visible on the label stuck on XIG100 and/or the equipment, below the QR code.

In case XIG100 is mounted inside the machine (i.e. a refrigerated cabinet with pre-mounted XIG100 module) the ID code may not be visible to the registering user.

In this case it should have been communicated to the installer in some other form.

**TIP:** if you are the supplier mounting XIG100 inside an equipment and the QR code will not be visible to the installer, then take photos of all IDs for the shipped units and provide them to the installer.



## Main controller detection

### Main controller detection and authentication

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XIG100 automatically scans the RS485 Modbus RTU port to detect the connected electronic control.

If the controller is detected as a Copeland controller, its internal firmware data gets read and XIG100 tries to download the proper “profile descriptor library” from the cloud repository present in the platform.

#### Necessary conditions

The device is correctly wired on the RS485

The device is set to work with proper Modbus communication parameters

The device is supported (the “profile descriptor library” has already been developed by Copeland (check the list of officially supported devices)

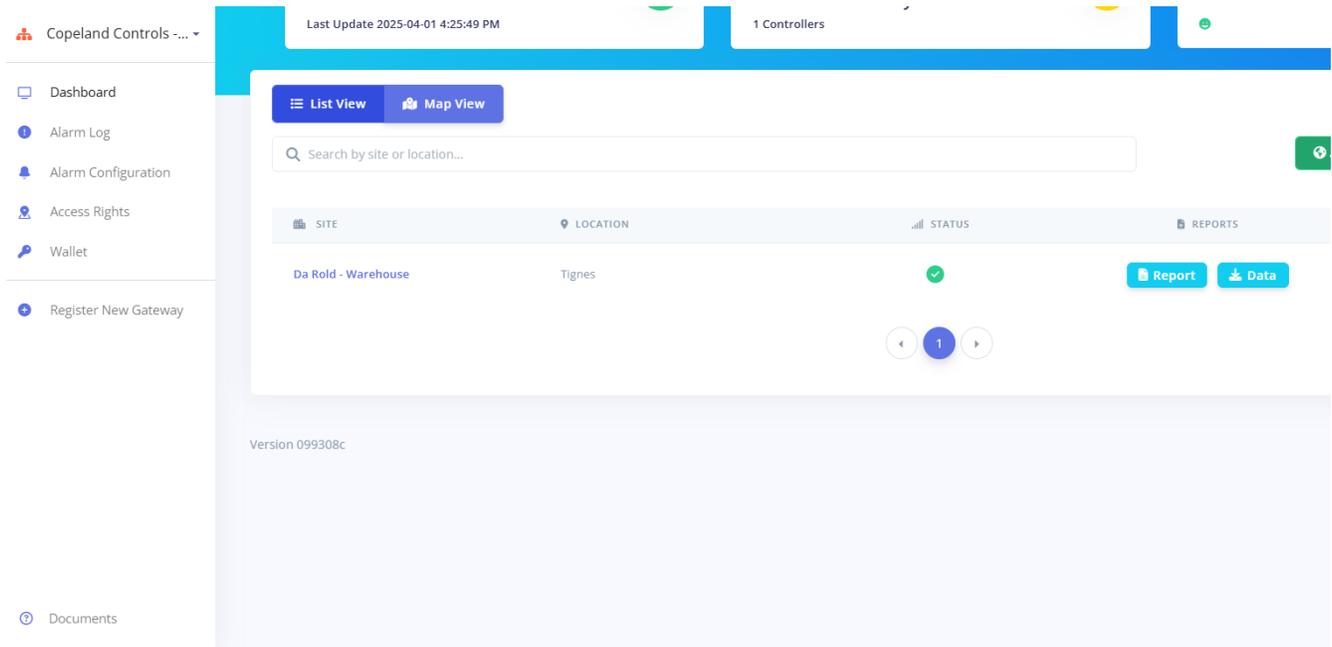
All necessary TCP port are open, allowing the download (no firewall blocking the communication)

### List of supported devices

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Only the devices officially listed in [List of supported devices](#) can be connected to XIG100 through the RS485 serial port.

This list is easily available on-line, from the portal, to signed- on users.



## Configurable inputs

Some models of XIG100 feature two extra inputs which can be independently configured to read temperature sensors or voltage free contacts (digital inputs) directly wired to it.

Application example:

- Monitoring environment or external temperature
- Monitoring temperature controlled by third parties electronic controllers
- Reading the status of an alarm relay (voltage free) controlled by third parties electronics
- Reading the status of a door switch

Value	Stands for	Meaning/behaviour	Notes
NP	Not present	The input is not used	It can be left unconnected
NtC	NTC sensor	NTC sensor for reading temperature	
DI	Digital input	Voltage free contact	

If the input is set as NP, it can be left unconnected: values and alarms relative to the input are not considered and shown in system.

If the input is set to DI then another parameter is available to select the polarity.

Note: The very first series of XIG100 the two inputs are named Pb1/Pb2 : Regardless to the name, they can still be used to read binary inputs, but a firmware upgrade may be necessary.

To change the configuration XIG100 must be pre-registered and on-line.

XIG100

Variables    **Parameters**    Chart    Details

Write Changes    Forget Changes

GROUP	LABEL	DESCRIPTION	VALUE
Configuration	i1C	Input 1 configuration	NP ▼
Configuration	i2C	Input 2 configuration	NP ▼

## XIG100 Firmware update

The firmware of XIG100 can be updated to the last version, from the cloud portal.

The device must be on-line and pre-registered.

- Click on the tab representing the controller connected to XIG100 (or XIG100 itself if present)
- Click “Details” on the right
- Click on “Gateway”
- You now see details about the connected controller and the XIG100
- Click on Update Firmware to start the procedure
- XIG100 will download the latest available firmware (for itself) and enter the procedure to upgrade its internal firmware. The procedure is taking several minutes to complete

000AF68 [REDACTED]  
NORMAL RUNNING

Name: 000A [REDACTED]

MAC Address: 000A [REDACTED]

Release: 1.2.1

Site: D [REDACTED] [REDACTED] [Change Site](#)

Push Interval: 5 min

[Save](#) [Forget](#) [Rescan Network](#) [Reboot](#) [Update Firmware](#)

[Collapse Controllers \(1\)](#)

CONTROLLER NAME	MODEL	FAMILY	RELEASE FIRMWARE	MAP LAYOUT	ADDRESS	CREATED AT	MODIFIED AT
XH50P	XH50P	55	2.1	7	1	3/25/2025, 7:20:57 AM	3/25/2025, 8:02:09 AM

## Troubleshooting

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<b>What should I do if my gateway has the wrong Wi-Fi password?</b>	Try powering off-on the unit to try to activate the configuration mode. If it does not work use a small screwdriver to press and hold the button through the hole (located at the base of the Wi-Fi symbol) for about 5 seconds while the gateway is powered on and running normally. The device will restart in Access Point Mode, allowing you to reconnect as described in the Wi-Fi Configuration section
<b>Why did I lose connection with the Gateway Access Point while setting it up?</b>	The Access Point Mode remains active for 10 minutes. After this time, it automatically turns off for security reasons. If your gateway is new (with no settings configured), simply power cycle the device to restart the setup procedure. If it's already configured, use a small screwdriver to press the reset button through the hole (located at the base of the Wi-Fi symbol), this will reactivate Access Point Mode.
<b>What information is required to register a new gateway? What are the Gateway Name and Site Name?</b>	A site is a collection of gateways. Each site can contain multiple gateways, making it the entity that describes the location where the gateway is installed. For this reason, both the gateway and the site need a name to make them easier to identify when navigating the portal.

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## Technical specifications

### General 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 $\Phi$ 4 mm
Degree of Protection	IP20
Power Supply	90÷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 <sup>2</sup> 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

### USB Power supply Requirements

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

### Certifications

	General certifications
CE	
UL	UL 62368-1, 3 <sup>rd</sup> Ed CAN/CSA C22.2 No. 62368-1:19, 3 <sup>rd</sup> Ed
IEC	IEC 62368-1: 2018 + EN IEC 62368-1:2020+A11:2020
Other	Informative test report according to IEC/UL/CSA 60335-2-40 and IEC/UL/CSA 60335-2-89

Countries	Time	Notes
EU countries & UK	OK	RED ETSI EN 300 328 Version 2.2.2 EN 62479 EN 62311

North America & Canada	OK	<b>FCC:</b> according to FCC Part 15.107 & 15.109 and FCC Parts 15.207, 15.209(a) & 15.247 <b>IC :</b> according to ICES 003 issue 7 from October 2020 and according to RSS-247 Issue 3 August 2023 and RSS-Gen Issue 5, April 2018 Amendment 2 (February 2021)
China	In progress ...	SRRC
Brasil	In progress ...	ANATEL
Israel	In progress ...	MoC
Australia / NZ		ACMA obtained through RED/EMC certification RSM obtained through RED/EMC certification
Puerto Rico	OK	No additional assessments are required for these countries
Botswana	OK	No additional assessments are required for these countries

## COPELAND

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