



Quick Start Guide

## Introduction

The InsightHome is a multi-function communication device that provides an overall view of system performance for residential power monitoring systems. It also provides a communications gateway between a network of Xanbus™-enabled devices and Modbus devices. Operators can configure the InsightHome system and monitor performance with third party software packages and building management systems.

### ⚠️ DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- Connect only to Safety Extra Low Voltage (SELV) circuits and limited power sources.
- All wiring must be done by qualified personnel to ensure compliance with all applicable installation codes and regulations.
- For Indoor Use Only.
- Do not disassemble. No user serviceable parts inside.
- Do not dispose of the internal battery in a fire or hot oven. Do not crush or cut the internal battery. Follow proper disposal procedures as outlined by your local codes.
- Do not subject the InsightHome to extremely high ambient temperatures or extremely low air pressure as flammable liquid or gas may leak from the battery.

Failure to follow these instructions will result in death or serious injury.

Other features of the InsightHome include: a real-time clock, a non-volatile memory, firmware storage and upgrade capability, and cloud storage capability. For more information, see the Owner's Guide (go to <https://solar.schneider-electric.com/product/insight-home/> > Downloads).

## Material List



InsightHome unit	
not shown	<ul style="list-style-type: none"> <li>• CAN terminator</li> <li>• 12-pin connector (see 12-Pin Connector Pinouts)</li> </ul>
not supplied	Ethernet cable (CAT5e)
not supplied	Power adapter: Manufacturer: CUI P/N: SMI18-12-V-P5 Description: AC-DC Power Supply, 12Vdc Output Voltage, 1.6Adc Output Current

### NOTE:

- Recycle the packaging box.
- The Wi-Fi password is printed on the InsightHome unit.

### ⚠️ DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

This document is in addition to, and incorporates by reference, the relevant product manuals for InsightHome. Before reviewing this document, you must read the relevant product manuals. Unless specified, information on safety, specifications, installation and operation is as shown in the primary documentation received with the product. Ensure you are familiar with that information before proceeding.

Failure to follow these instructions will result in death or serious injury.

#### Exclusion for Documentation

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#### Conventions Used

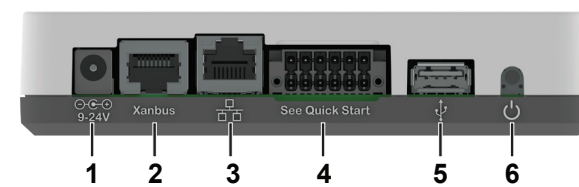
**A** Section **1** Step **!** Safety **↔** Direction **↗** Expand **A** Label

#### Contact Information

Schneider Electric Solar Inverters Inc.  
3700 Gilmore Way Burnaby BC V5G 4M1 Canada

Contact your local Schneider Electric Sales Representative or visit the Schneider Electric website at: <http://solar.schneider-electric.com/>

## Physical Features

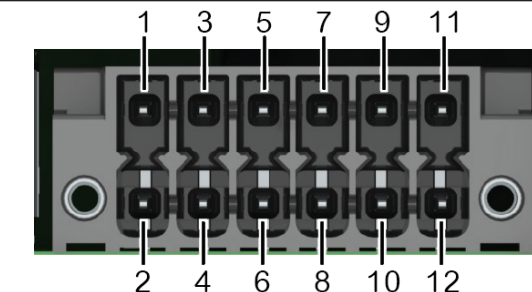


Item
1 Power port
2 Xanbus port
3 Ethernet port
4 12-pin port (see 12-Pin Connector Pinouts)
5 USB port
6 Power button
7 The "I" in InsightHome is an LED indicator used for signaling device status.

LED	STATE	Description
Green	Solid	The InsightHome is powered on.
Green	Blink	Device is booting up or logging data to internal memory when flashing.
Orange	Solid	Devices on the Power system have events to report.

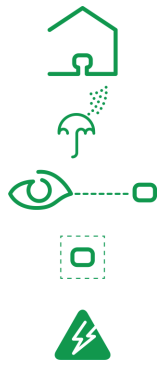
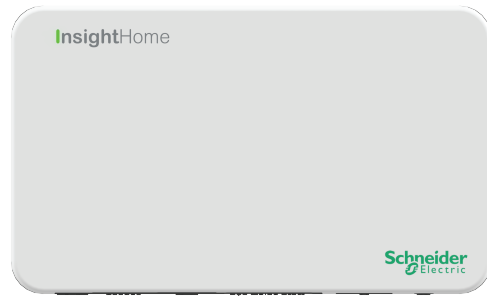
## 12-Pin Connector Pinouts

1 Digital output (0-40VDC)	3 GND	5 Do Not Connect
7 GND ISO	9 RS485 A ISO	11 RS485 B ISO



2 Digital input 1 (12VDC)	4 Digital input 2 (12VDC)	6 Do Not Connect
8 GND ISO	10 CAN L ISO	12 CAN H ISO

## Choosing a Location



- You should not run cables through conduits that can be exposed to lightning strikes. The following are recommended maximum cable lengths in a InsightHome system:
  - 131 feet (40 m) Total Xanbus network
  - 328 feet (100 m) Router to InsightHome
  - 164 feet (50 m) Modbus Master (RS 485) to InsightHome

- Choose a clean, dry, easily accessible location indoors.
- If you mount the InsightHome on a wall, the recommended height is at eye-level so that you can clearly see the LED indicator and have easy access to the data and communication ports.
- All of the ports on the InsightHome are accessible from the bottom of the device when mounted on a wall. Clearance of at least 2 inches (50 mm) below the device is needed to allow for the bending radius of cables that connect to the InsightHome.

## Mounting the InsightHome

- Using the mounting diagram that shipped with your product, mark the mounting holes on the wall with a pencil.
- Insert the two anchors and mounting screws supplied in the marked locations on the wall, leaving a space of about ¼ inch (6 mm) between the wall and screw head.
- If you are mounting the InsightHome on concrete, the supplied anchors and mounting screws are not suitable. Use two mounting screws that are equivalent to #6 screws.
- Place the InsightHome on the mounting screws, and confirm a snug fit.  
**Note:** Before placing the InsightHome, you may want to take a photograph of the label on the back, as it includes important password information.



## Connecting the InsightHome to the Xanbus Network

- Connect the InsightHome to the Xanbus network using daisy chain configuration.
- Xanbus components can be arranged in any order.
- The InsightHome must be one end of the network. Do not connect two end devices together to form a closed loop configuration. See illustration in the next column.

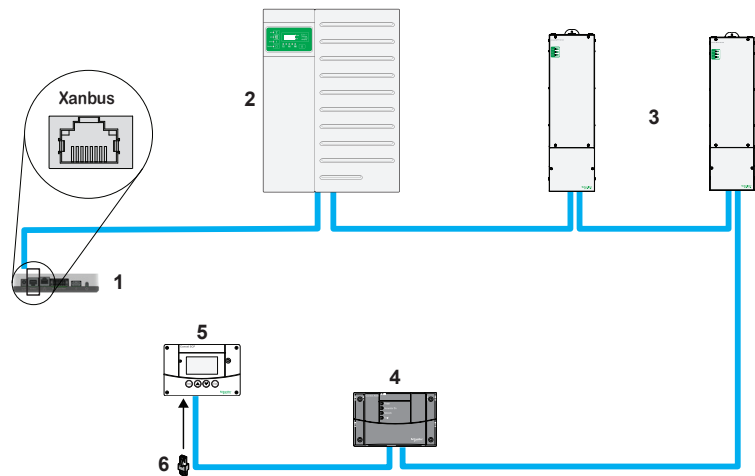
**NOTICE**

**EQUIPMENT DAMAGE**

- Do not connect a Xanbus cable plug into the Ethernet port on the InsightHome.
- Connect only to Xanbus ports and use a network terminator on the end device in the daisy chain.

**Failure to follow these instructions can result in equipment damage.**

Figure 1 Sample Xanbus network



**NOTE:** This Xanbus 1 network is for illustration purpose only.

1	InsightHome unit	4	Connext AGS (automatic generator start)
2	XW Pro	5	Connext SCP (system control panel)
3	MPPT 80 600	6	Network terminators

## Connecting the InsightHome to the Internet

Before connecting a computer and router to the InsightHome, make sure it meets the following prerequisites.

- Microsoft® Windows® 7 or later, Mac OS® X 10.4.8. or later
- Internet Explorer® 11.476 or later, Google Chrome™ 78.x or later, Safari® 5.x or later
- JavaScript and cookies must be enabled in your web browser.
- Router - the network router must be able to supply DHCP addresses automatically to connected devices. If your network router does not support automatic DHCP, refer to your network router's user guide or contact your system administrator.

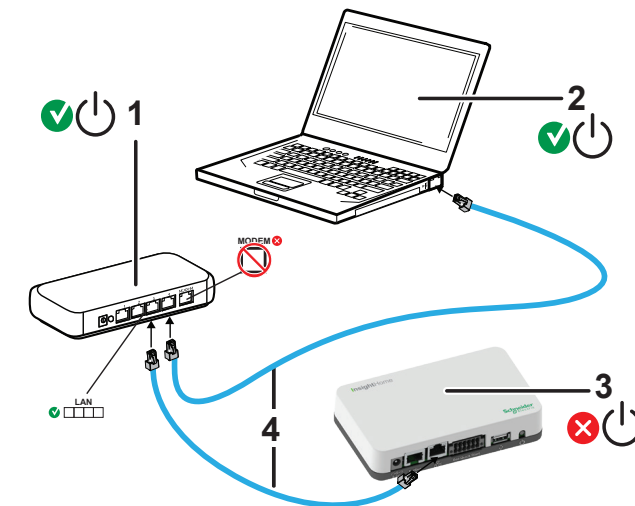
**NOTICE**

**EQUIPMENT DAMAGE**

- For a complete list of prerequisites, see the Owner's Guide.
- Do not connect an Ethernet cable from the InsightHome to the MODEM port on the network router.
- Do not connect an Ethernet cable plug into a Xanbus port on the InsightHome.

**Failure to follow these instructions can result in equipment damage.**

1. Make sure the computer and network router are turned on and the InsightHome is not turned on. Make sure the network router selected has DHCP enabled.
2. Connect an Ethernet cable between the computer's network port and a LAN port on the router.
3. Connect an Ethernet cable between a LAN port on the router and the Ethernet port on the InsightHome.



Item	
1	router/modem
2	laptop
3	InsightHome unit
4	Ethernet cables

## Turning the InsightHome On (or Off)

Before turning on the InsightHome, you must connect it to a power source - either:

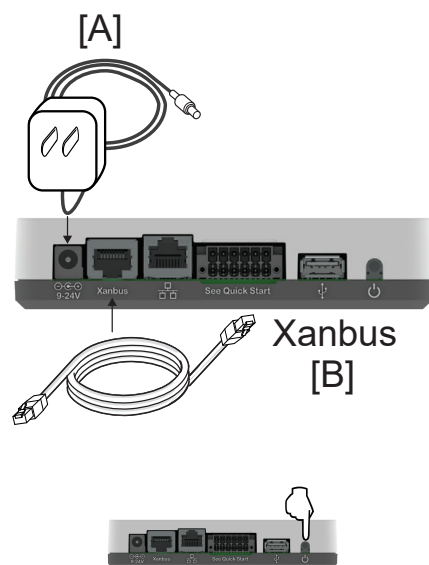
- by using an **(A)** AC/DC adapter (see *Material List* for specifications)
- by connecting it to a **(B)** Xanbus network

### **WARNING**

#### UNINTENDED OPERATION HAZARD

Xanbus is a valid power source for the InsightHome, however, if you use Xanbus for the first time set-up the InsightHome clock will override the other Xanbus devices' clocks and could trigger unintentional time-based events, such as a generator starting. Ensure that you set the InsightHome clock and time zone before performing any other commissioning steps, refer to the Owner's Guide for instructions.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**



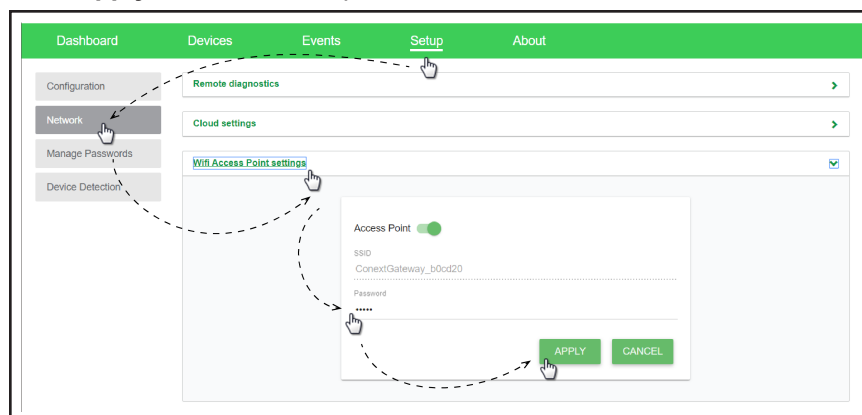
- Select a power source **(A)** or **(B)**.
- Connect **(A)** or **(B)**'s connector to InsightHome's Power port for **(A)** or Xanbus port for **(B)**, respectively.
- Connect **(A)**'s power plug to an AC wall outlet or **(B)**'s other Xanbus cable connector to a Xanbus port on a Xanbus device.
- Observe the LED indicator and wait for the LED to light up solid green. The InsightHome is now turned on.
- Proceed to *Logging in to the InsightHome Web Application*.
- Press the Power button to shut down the unit and turn it off.

## Logging in to the InsightHome Web Application

- If you have connected the InsightHome via Wi-Fi Access Point, go to the IP address <https://192.168.100.1> to access the web user interface.
- If you have connected the InsightHome via Ethernet or Wi-Fi Station, use the following steps:
  - Insert a blank USB drive into the InsightHome USB port. Ensure there are no firmware upgrade files on this USB drive.
  - After the InsightHome beeps twice, remove the USB drive.
  - Insert the USB drive into your laptop USB port.
  - Copy the HTML file to your laptop.
  - Remove the USB drive from your laptop.
  - Open the HTML file and click the link to the IP address of the InsightHome.
- Bookmark this address. **Important:** The web address is a locally and privately assigned (LAN) device address.
- Select your User Name. Select **Admin**.
- Enter your Password. The initial password is **Admin123**.
- Important:** When prompted, change the initial password immediately to protect the device from unauthorized users and to enable changes to device settings. Passwords must be at least 10 characters long, consisting of: one or more upper case characters; one or more lower case characters; one or more numbers; and one or more symbols.
 

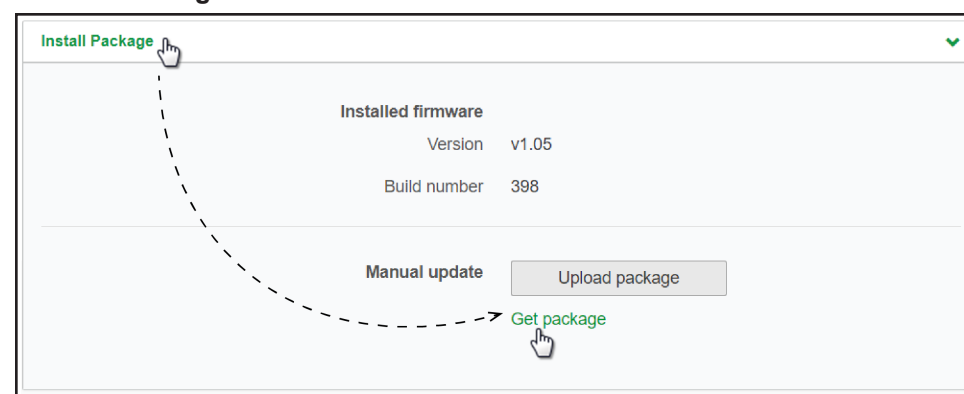
**NOTE:** To perform administrative functions such as a firmware update, set User Name to **Admin**. Settings are disabled until the initial password is changed.

- Change the InsightHome SSID and network password:
  - Go to **Setup > Network > Wifi Access Point Settings**
  - (Optional) Replace the current Wi-Fi network name under the **SSID** field with an appropriate name. You are limited to 64 alphanumeric characters including symbols.
  - Replace the current password under the **Password** field with your own password. **Important:** Passwords must be at least 10 characters long, consisting of: one or more upper case characters; one or more lower case characters; one or more numbers; and one or more symbols.
  - Click **Apply** to save the new password and/or SSID.



## Installing Upgrades Remotely

- From the InsightHome Web Application home page, go to **Setup > Configuration > Install Package**.



- Download the firmware package.
  - Click **Get package**. This will take you to the InsightHome product webpage.
  - From the product webpage, go to **DOWNLOADS > Firmware**.
  - Search for the latest firmware package from the list and click it to begin downloading.
  - Save the **.epkg** file to a local directory.

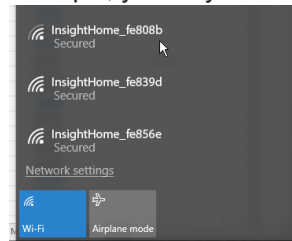
- Go back to the InsightHome Web Application.
- Click **Upload package**.
- Search and select the firmware package (**.epkg** file) you saved in a local directory from the InsightHome product webpage.
- Click **Open** from the Windows dialog. The upgrade begins automatically.
- As the firmware package is transferred to the InsightHome, progress is indicated in percentage, and a message screen indicates when the file transfer has been completed successfully.
- When prompted, reboot the InsightHome.

## Using the InsightHome Web App via Wi-Fi Access Point (AP)

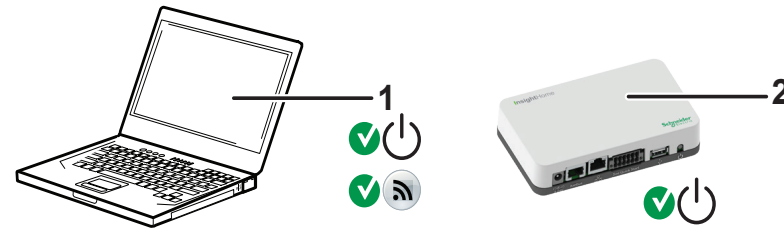
**NOTE:** This procedure is not about connecting to a local area network (LAN) via Wi-Fi. It is possible to connect to the InsightHome web app via its Wi-Fi Access Point. The following are the pre-requisites:

- Laptop with Microsoft® Windows® 7 or later, Mac OS® X 10.4.8. or later
- Wi-Fi setting for the laptop is enabled
- Web browser such as Google Chrome™ 78.x or later, Microsoft® Windows® Internet Explorer® 11.476 or later, Safari® 5.x or later
- JavaScript and cookies must be enabled in your web browser.

1. Make sure the laptop and InsightHome are turned on.
2. Enable Wi-Fi on the laptop, if not already.
3. Open Wi-Fi Settings, then look for and connect to the InsightHome SSID. For example, you may look for something similar to **InsightHome\_fe808b** below.



4. Enter the **Password** when prompted.  
**NOTE:** The password is printed on a label on the back panel of the InsightHome unit.
5. Proceed to *Logging in to the InsightHome Web Application* (IP address: 192-168-100.1).



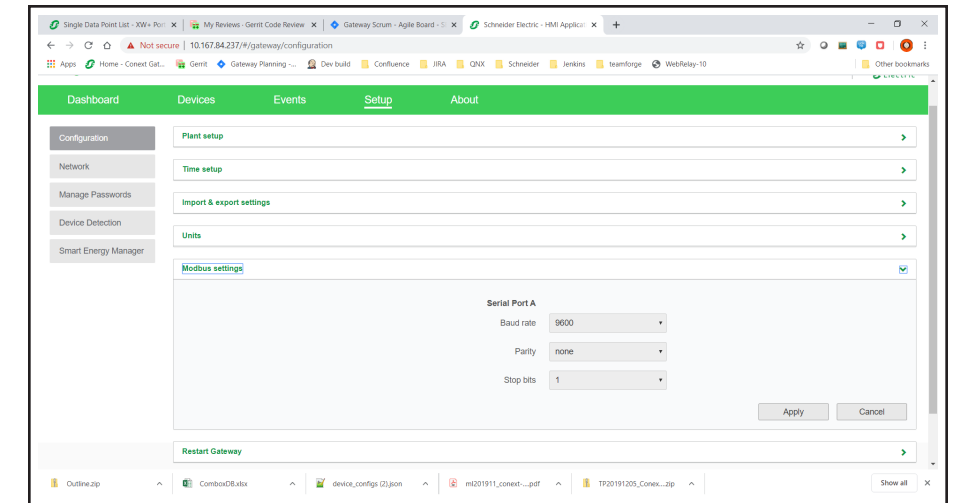
1 Laptop 2 InsightHome unit. Wi-Fi password label is on the back panel.

## Connecting and Configuring Modbus Devices

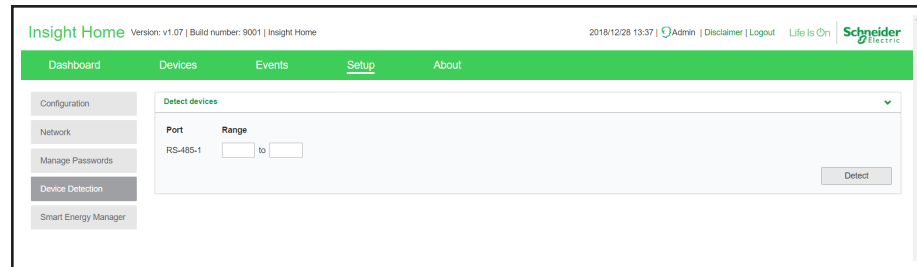
**NOTE:** For Modbus map information, contact Schneider Electric.

Connect Modbus wires to pins 16, 18, and 20 (see *Physical Features*), and then complete the following steps in the InsightHome web application:

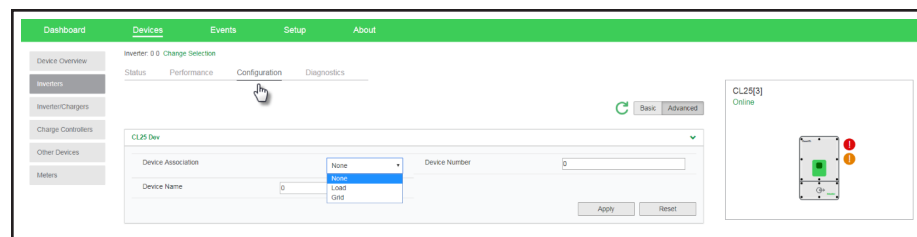
1. Go to **Setup > Configuration > Modbus Settings**.
2. Complete the **Serial Port** setup and then click **Apply**.



3. Go to **Home > Setup > Device Detection**.
4. Under **Range**, enter a Modbus address range and then click **Detect**.



5. Go to **Devices** and then select a device.
6. Go to **Configuration** and configure the device. Repeat steps 5 and 6 for each device.



### FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Electrical Specifications

**NOTE:** Specifications subject to change without prior notice.

Power Consumption	2 W average / 10 W peak
AC/DC adapter	Input: 100-240 V AC, 50-60 Hz, 0.48 A, Output: 12 V DC, 1.6 A, 5.5 mm outer, 2.1 mm center-positive jack. <b>NOTE:</b> Required when used with the Conext SW.
Xanbus	When connected to XW Pro/XW+ or MPPT 80 600 providing network power
Operation Frequency	2412–2472 MHz (Europe) 2414–2462 MHz (N. America)
Max. radio frequency power transmitted	17.06 dBm (E.I.R.P., Declaration for EU)

## Features

Programmable dry contact relay	Screw 3-terminal, 16-24 AWG, NC-Com-NO, Form: Class 2, 24 V DC, 4 A max SELV input only
Web-based user interface	Google Chrome 78.x or later, Microsoft Windows Internet Explorer 11.476 or later, Safari 5.x or later Microsoft Windows 7 or later, Mac OS X 10.4.8. or later
Remote firmware upgrades	Yes (InsightHome and connected Xanbus devices)

## Physical Specifications

Weight (device only)	337 g (0.74 lb)
IP rating / Mounting Location	IP 20, NEMA 1, Indoor only
Status Display	1 x LED
Temperature	Operating: 32 to 113 °F (0 to 45 °C) Storage: -40 to 185 °F (-40 to 85 °C) Maximum case temperature: 140 °F (60 °C)
Humidity	Operating: < 95%, non-condensing Storage: < 95%

## Regulatory

Safety	EN 62368-1
EMC emissions	EN61000-6-3 EN 55032 EN 62311
	EN 300 328 EN 301 489-1, -17
	FCC part 15B ICES-003
EMC immunity	EN61000-6-1 EN 55035 EN 301 489-1, -17
Substances / environmental	RoHS
FCC ID	Contains 2AODL-CONEXTGTWY
IC ID	Contains 24209-CONEXTGTWY
Model number	865-0330