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ZigBee Plug-in Installation Guide

For Inverters with SetApp
Configuration

Version 1.2

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Revision History

Version 1.2 - April 2019

- Removal of Monitoring support

Version 1.1 - February 2019

- Addition of Smart Energy Management support

Version 1.0 - January 2019

- First version of this guide.

Disclaimers

Important Notice

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The content of these documents is continually reviewed and amended, where necessary. However, discrepancies cannot be excluded. No guarantee is made for the completeness of these documents.

The images contained in this document are for illustrative purposes only and may vary depending on product models.

Emission Compliance

This equipment has been tested and found to comply with the limits applied by the local regulations.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

Support and Contact Information

If you have technical problems concerning SolarEdge products, please contact us:

Support Center: <https://www.solaredge.com/service/support>

Country	Phone	E-Mail
Australia (+61)	1800 465 567	support@solaredge.net.au
APAC (Asia Pacific)(+972)	073 240 3118	support-asia@solaredge.com
Belgium (+32)	0800 76633	support@solaredge.be
China (+86)	21 6212 5536	support_china@solaredge.com
DACH & Rest of Europe (+49)	089 454 59730	support@solaredge.de
France (+33)	0806 700409	support@solaredge.fr
Italy (+39)	0422 053700	support@solaredge.it
Japan (+81)	03 6262 1223	support@solaredge.jp
Netherlands (+31)	0800 7105	support@solaredge.nl
New Zealand (+64)	0800 144 875	support@solaredge.net.au
Republic of Ireland (+353)	1800 901 575	support-uk@solaredge.com
United Kingdom	0800 028	

Country	Phone	E-Mail
(+44)	1183	
US & Canada (+1)	510 498 3200	ussupport@solaredge.com
Greece (+49)	89 454 59730	support@solaredge.com
Israel (+972)	073 240 3122	
Middle East & Africa (+972)	073 240 3118	
South Africa (+27)	0800 982 659	
Turkey (+90)	216 706 1929	
Worldwide (+972)	073 240 3118	

Before contact, make sure to have the following information at hand:

- Model and serial number of the product in question.
- The error indicated on the inverter SetApp mobile application or on the monitoring platform or by the LEDs, if there is such an indication.
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The communication method to the SolarEdge server, if the site is connected.
- The software version as appears in the status screen.

About This Guide

This guide explains how to install and configure the ZigBee Plug-in to manage your Smart Energy devices.

This guide is intended for Photovoltaic (PV) system owners, installers, technicians, maintainers, and integrators who use the SolarEdge power harvesting system.

This guide assumes that the SolarEdge power harvesting system is already installed and commissioned. For additional information about how to install and commission the SolarEdge power harvesting system, refer to the relevant installation guide.

For further information, datasheets and the most up-to-date certifications for various products in different countries, please visit the SolarEdge website: www.solaredge.com.

Overview

ZigBee is a technology that enables wireless connection between several SolarEdge devices.

Smart Energy uses the ZigBee Home Automation protocol with up to 10 devices connected to a SolarEdge inverter that serves as a Smart Energy manager.

Smart Energy devices include:

- Smart Energy Hot Water
- Smart Energy Socket
- Smart Energy Switch
- Smart Energy Relay

For more information on how to add a device to your Smart Energy network, see the installation manual that comes with the device or go to:

[https://www.solaredge.com/products/device-control/#/](https://www.solaredge.com/products/device-control#/)



Package Contents

The package contains the following items. Other items may be included, if necessary.

- ZigBee Plug-in
- Antenna
- This installation guide

WARNING!



When installing the ZigBee Plug-in, follow the safety instructions of the inverter.

Installing the Antenna

There are two ways to install an antenna for ZigBee communication:

- Clipping the antenna to the inverter
- Installing the antenna on a vertical surface using a bracket (not provided by SolarEdge).

Clipping the Antenna to the Inverter

1. Power off the inverter:
 - a. Switch the inverter ON/OFF/P switch to OFF. Wait 5 minutes for the capacitors to discharge.
 - b. Turn the Safety Switch (if applicable) to OFF.
 - c. Disconnect the AC to the inverter by turning off the circuit breakers on the distribution panel.
2. Clip the antenna vertically to the heatsink fins or the inverter side.

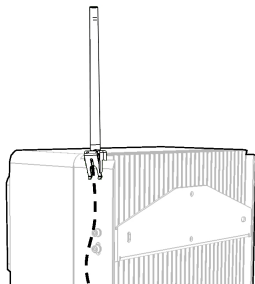


Figure 1: Antenna mounted on the inverter

3. Pass the antenna cable between the mounting bracket and the rear side of the inverter or along the heatsink fins.
4. Open the communication gland at the bottom of the inverter.
5. Remove the rubber seal from the gland and insert the cable through the gland.
6. Insert the rubber seal with the cable into the gland body and reconnect the gland to the inverter. Tighten the sealing gland.

Connecting the Antenna to a Vertical Surface using a Bracket

For connecting the antenna to a vertical surface, use a bracket with the following recommended dimensions (not supplied by SolarEdge):

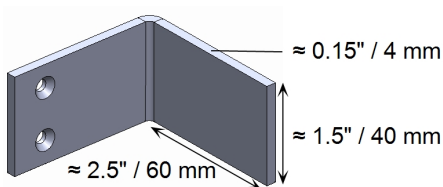
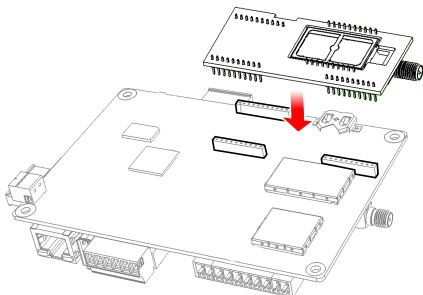


Figure 2: Example of an antenna bracket

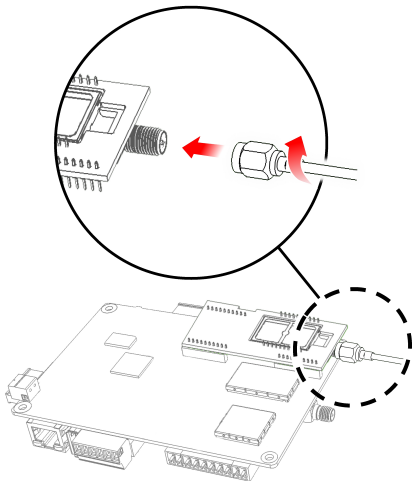
1. Drill two holes in the surface and attach the bracket to it with two screws.
2. Clip the antenna onto the bracket. Make sure the antenna is positioned vertically.

Installing the ZigBee Plug-in

1. Make sure the inverter is powered off.
2. Remove the inverter cover as explained in the inverter installation manual.
3. Install the ZigBee Plug-in on the communication board as shown below.



4. Connect the antenna cable to the ZigBee Plug-in and tighten the connector.



5. Close the inverter cover as explained in the inverter installation manual.

Configuring Communication

1. Access SetApp and select **Commissioning** → **Communication**.

solar edge		
Communication		
Server	LAN	>
LAN	DHCP	>
RS485-1	SolarEdge Slave	>
RS485-2	Multi - Device (Modbus)	>
ZigBee	None	>
Wi-Fi	None	>
Cellular	PCL	>
Modbus TCP port	Disable	>

2. From the Communication screen, select the following:
■ **ZigBee** → **Protocol** → **Home Automation**.

Appendix A: Technical Specifications

Performance			
	North America	Worldwide	Unit
Transmit power	22.8	11.8	dBm
Receiver sensitivity	-102		dBm
EIRP with antenna	27.8	16.8	dBm
Outdoor (LOS) range*	400/1300		m/ft
Indoor range*	50/160		m/ft
Operating frequency range	2.4 - 2.5		GHz
Maximum emitted power	≤ 30	≤ 20	dBm
Bandwidth	2		MHz
Modulation	O-QPSK with DSSS coding		
Antenna gain	5		dBi
Dimensions	78x32/3x1.3		mm/in
Certification			
Regulatory approvals	FCC (USA), IC (Canada), ETSI (Europe), C-Tick (Australia), Telec (Japan)		

* Approximate values, may differ depending on specific installation conditions

If you have technical queries concerning our products, please contact our support through the SolarEdge service portal:

www.solaredge.com/service/support

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Netherlands (+31)	0800-7105
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