



# SolarEdge Configuration Tool Software Guide

Version 1.0





## About This Guide

This user guide is intended for Photovoltaic (PV) system owners, installers, technicians, maintainers, administrators and integrators who are authorized to configure the SolarEdge power harvesting system.

This guide describes how to use the SolarEdge Configuration Tool that runs in a standard Windows GUI to configure SolarEdge site-specific parameters and to display and troubleshoot site-specific issues.

This guide assumes that you have read the SolarEdge Installation Guide.

The guide includes the following chapters:

- **Chapter 1, Introduction**, page 9, introduces the SolarEdge Configuration Tool and describes the workflow for installing and using this software application. This chapter also provides an overview of the user interface.
- **Chapter 2, Configuring an Inverter**, page 21, describes each of the configuration tabs provided in the Configuration Tool.
- **Chapter 3, Setting Up Multiple Inverters**, page 33, describes how to set up multiple Inverters in a Master/Slave configuration.
- **Chapter 4, Updating Inverter Firmware**, page 37, describes how to upgrade the Inverter's firmware in case an upgrade is necessary as per a directive from SolarEdge.
- **Appendix A, Verifying the RS-232 COM Port**, page 39, describes how to see which COM port on your computer is RS-232 in order to connect the Inverter.

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## Support and Contact Information

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

USA & Worldwide Support Line: +1.650.319.8843

Germany: +49.89.23513100

France: +33.(0)970.465.662

Israel: +972.73.2403116

Fax: +972.73.2403117

Email to: [support@solaredge.com](mailto:support@solaredge.com)



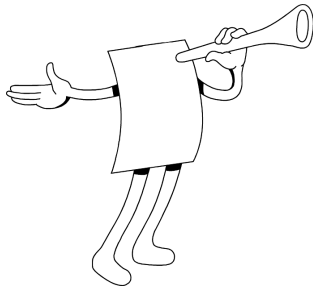
The **Support** option on the top right the Configuration Tool's main window can be used to automatically collect all relevant information to be sent to SolarEdge professional services for support. This option is described in more detail on page 18.

If you do not use the **Support** option, described above, then before contacting SolarEdge, please collect the following information:

- Inverter and PowerBox type.
- The serial number(s) of the relevant Inverter(s) and PowerBox(es) in question.
- The error indicated on the Inverter screen or on the SolarEdge Monitoring Portal.
- 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.

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# Chapter 1

## Introduction

### About This Chapter

This chapter introduces the SolarEdge Configuration Tool and describes the workflow for installing and using this software application. This chapter also provides an overview of the user interface.

This chapter contains the following sections:

- **What is the Configuration Tool?**, page 10
- **SolarEdge Configuration Tool Workflow**, page 11
- **Installing the SolarEdge Configuration Tool**, page 12
- **Setting Up the Connection to the Inverter**, page 13
- **Starting the Configuration Tool**, page 14
- **Main Window**, page 16

## What is the Configuration Tool?

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The following options may be used to configure a SolarEdge system:

- The LCD panel on the Inverter, as described in the SolarEdge Installation Guide.
- The SolarEdge Configuration Tool, as described in this guide.

The SolarEdge Configuration Tool is a software application that enables you to configure SolarEdge site-specific parameters and to display and troubleshoot site-specific issues. The Configuration Tool provides a standard Windows GUI that can be accessed by connecting a computer or laptop to the Inverter through its RS-232 connector.

The Configuration Tool enables you to define various kinds of installation site-specific parameters, such as the following:

- The county's grid power specifications of the installation site
- The Inverter communication option used to interact with the SolarEdge Monitoring server
- The Inverter's status and Master/Slave configuration
- The firmware versions installed on the Inverter

The Configuration Tool also enables you to easily display and verify various site parameters, such as the Inverters' and PowerBoxes' serial numbers and power output.

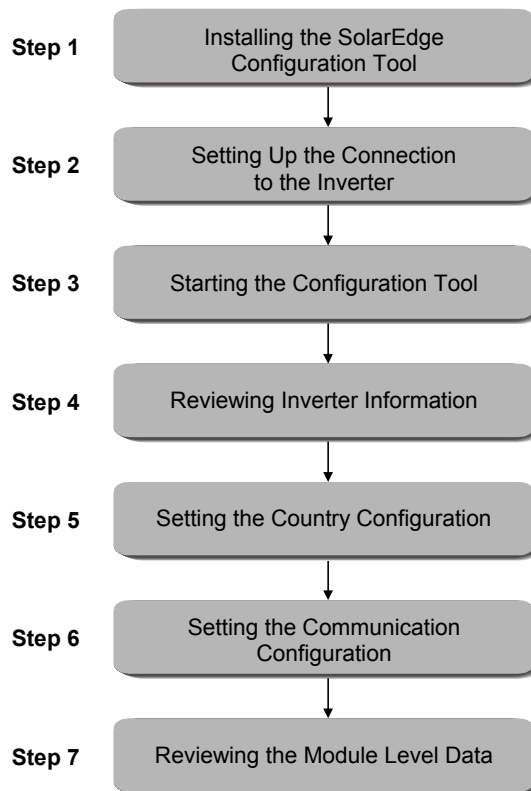
The SolarEdge Configuration Tool provides several additional options that are not accessible using the LCD panel, such as to enable a firmware upgrade of the Inverter and to retrieve a list of the serial numbers of the PowerBoxes connected to the Inverter.

# SolarEdge Configuration Tool Workflow

---

## When to Use the Configuration Tool

The following provides an overview of the workflow for configuring a single Inverter for a specific site.



**Figure 1: Configuration Tool Workflow**

The process for configuring multiple Inverters in a Master/Slave configuration is very similar to this workflow and is described in *Chapter 3, Setting Up Multiple Inverters* on page 33.

**Step 1: Installing the SolarEdge Configuration Tool**, as described in the *Installing the SolarEdge Configuration Tool* section on page 12.

**Step 2: Setting Up the Connection to the Inverter**, as described in the *Connecting to the Inverter* section on page 15.

**Step 3: Starting the Configuration Tool**, as described in the *Starting the Configuration Tool* section on page 14.

**Step 4: Reviewing Inverter Information**, as described in the *Inverter Information* section on page 22.

**Step 5: Setting the Country Configuration**, as described in the *Country Configuration* section on page 25.

**Step 6: Setting the Communication Configuration**, as described in the *Communication Dataflow* section on page 26.

**Step 7: Reviewing the Module Level Data**, as described in the *Module Level Data* section on page 32.

The following procedures can be performed on an as-needed basis:

- Automatically collecting data and generating a support call to SolarEdge, as described on page 18.
- Updating Inverter firmware, as described in *Chapter 4, Updating Inverter Firmware* on page 37. This step should only be performed when you are requested to do so by SolarEdge.

## Installing the SolarEdge Configuration Tool

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► **To install the SolarEdge Configuration Tool:**

- 1** Download the application from the SolarEdge website or drag the **InConfTool** folder from the supplied CD on to your computer.
- 2** Double-click the **setup.exe** installation file and follow the displayed instructions to install the SolarEdge Configuration Tool.

# Setting Up the Connection to the Inverter

Any standard laptop or PC can be used to run the SolarEdge Configuration Tool.

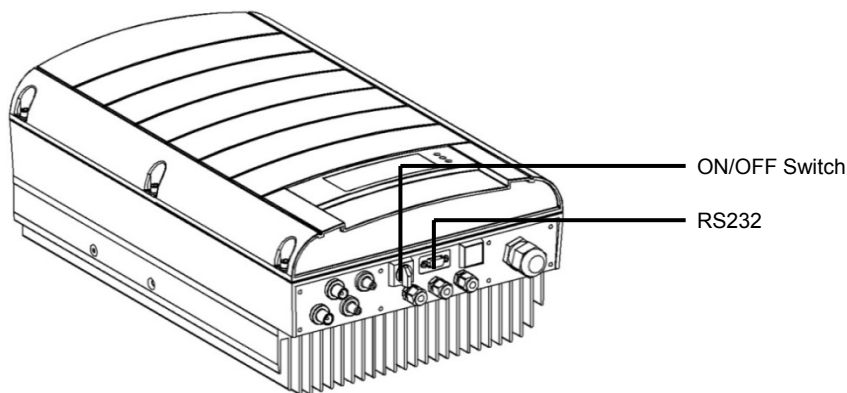
**NOTE:**

At any time you can connect a standard PC or computer to the Inverter without turning it off in order to display general information about the Inverter(s) and the PowerBoxes to which it is connected at the site. Be aware, however, that changing parameters or firmware results in the Configuration tool shutting off and restarting the inverter.

► **To connect to the Inverter:**

- 1 Connect the Inverter's RS-232 connector to a laptop or a personal computer (PC). If you are connecting multiple Inverters, then you should connect this laptop or PC to the Inverter that will be defined as the Master. You may refer to *Chapter 3, Setting Up Multiple Inverters* on page 33 for more information.

If the computer does not have an RS-232 connector, then you can use an RS-232/USB adapter.



**Figure 2: Inverter Connectors**

## Starting the Configuration Tool

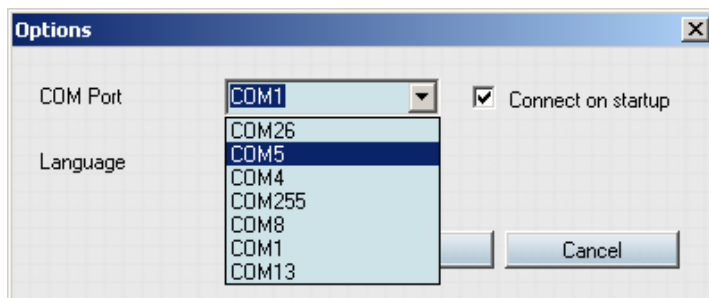
### ► To launch the Configuration Tool:

- Double-click the SolarEdge Configuration Tool icon, as shown below:




### ► To define the COM Port to the Inverter:

- 1 Verify the RS-232 COM port on your computer. Instructions are provided in *Appendix A, Verifying the RS-232 COM Port*, on page 39.
- 2 The first time that the Inverter is launched the following window is display in which you must select the COM port through which the computer can communicate with the Inverter:



Subsequent launches of the Configuration Tool automatically connect through the COM port specified previously and the window above is not displayed.

### ► To redefine the COM port through which the computer connects:


- If at any time you would like to change the COM port through which the component connects to the Inverter, select the **Options**  button to redisplay the window shown above.

## Connecting to the Inverter

When the computer is not connected to the Inverter, the status icon shows that the Configuration Tool is offline, as shown below:



### ► To connect to the Inverter:

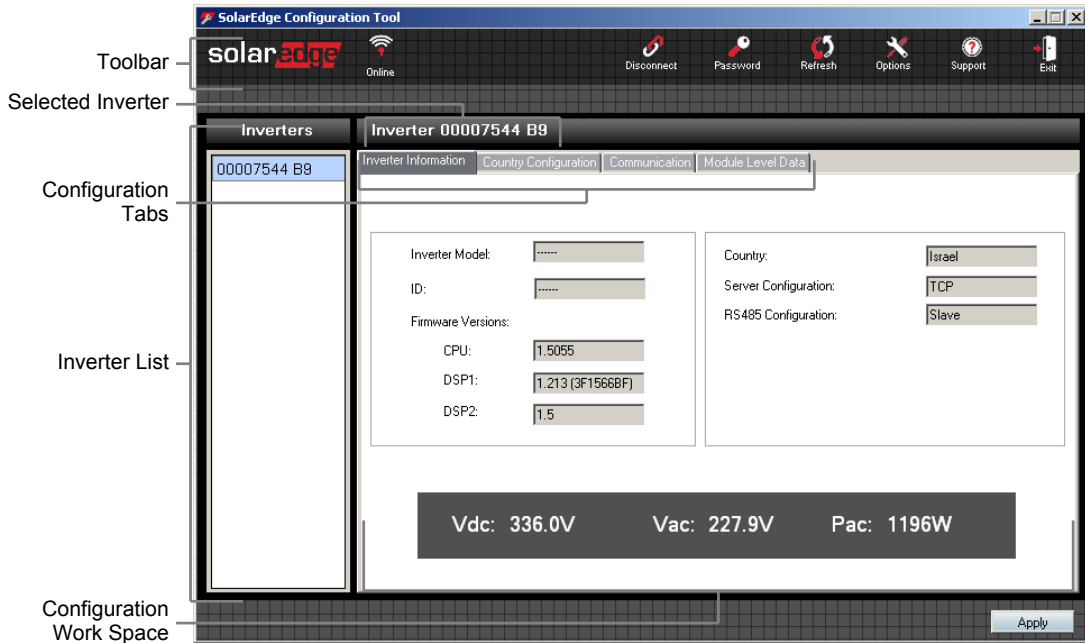
- Click the **Connect**  button to connect the computer to the Inverter through the defined COM port.

The **Connect** button then changes to **Disconnect**  and the status icon shows that the Configuration Tool is online, as shown below:



## Main Window

After the Configuration Tool is launched and connected, the main window is then displayed showing the Inverter Information, as shown below:



The main window is comprised of the following areas:

- **Inverter List**, page 16
- **Configuration Tabs**, page 17
- **Toolbar**, page 18

## Inverter List

The Inverter List shows each of the Inverters to which the Configuration Tool is connected and its serial number.

Selecting an Inverter in this list displays its information in the Configuration Workspace and enables you to configure it. The serial number of the selected Inverter also appears in the title bar above the configuration information.



**NOTE:**

Make sure to click the **Apply** button to save configuration changes to the selected Inverter before switching to a different Inverter by selecting it in the list.

If the installation site has more than one Inverter, then the laptop or PC on which the Configuration Tool is installed must be connected to the Master Inverter. The Slave Inverters will be connected to the Master Inverter in a bus through their RS485 connector. An RS485 bus of Inverters can consist of up to 30 Slave Inverters and one Master Inverter. The Inverter List indicates which the Master Inverter is by displaying an **(M)** next to its serial number.






## Configuration Tabs

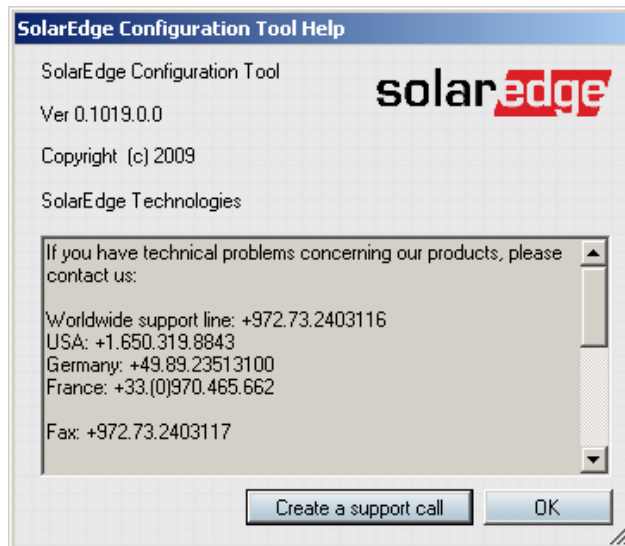
Each of the configuration tabs display information about the selected Inverter in the Inverter List, as follows:

- **Inverter Information**, displays general information about the selected Inverter and is not editable. For more information, you may refer to page 22.
- **Country Configuration**, displays various aspects (such as power and language) of the Inverter that relate to the country in which it is installed. For more information, you may refer to page 25.
- **Communication**, displays information about the communication method used to transfer SolarEdge site information to the SolarEdge Monitoring Portal. For more information, you may refer to page 26.
- **Module Level Data**, displays information about the PowerBoxes connected to the Inverter that is selected in the Inverter list. For more information, you may refer to page 32.
- **Update Firmware**, enables you to upgrade Inverter firmware. For more information, you may refer to *Chapter 4, Updating Inverter Firmware* on page 37.

## Toolbar

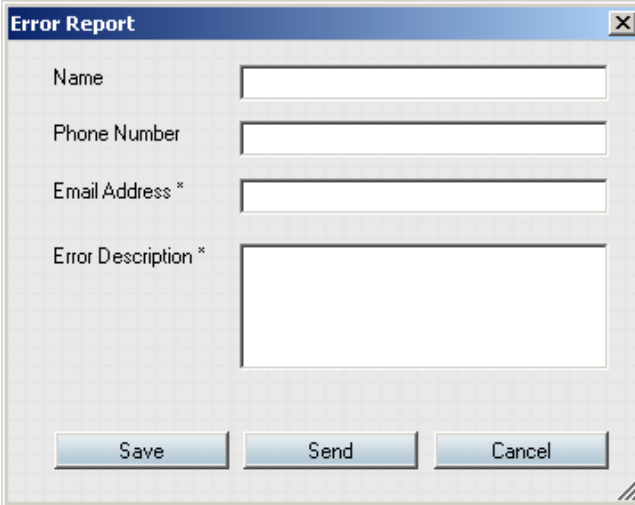
The following describes the buttons in the Configuration Tool toolbar:

-  **Connect:** Connects the computer to the Inverter through the defined COM port. You may refer to the *Connecting to the Inverter* section on page 15 for more information.
-  **Password:** Enables you to upgrade Inverter firmware. You may refer to the *Chapter 4, Updating Inverter Firmware* on page 37 for more information.
-  **Refresh:** Refreshes the currently displayed information on the screen in the Configuration Tool.
-  **Options:** Enables you to redefine the COM port through which the computer connects. You may refer to the *Defining the COM Port to the Inverter* section on page 14 for more information.
-  **Support:** Displays the following window which describes how to contact SolarEdge support.



Clicking the **OK** button closes this window.


Clicking the **Create a Support Call** button automatically creates a support report for the SolarEdge support team. The following window is displayed in which you can fill in your contact information.



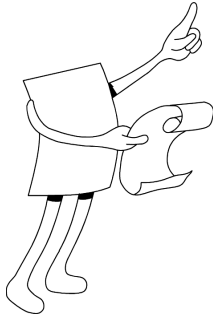
The screenshot shows a dialog box titled "Error Report" with a close button in the top right corner. The dialog contains four input fields: "Name", "Phone Number", "Email Address \*", and "Error Description \*". The "Error Description \*" field is a larger text area. At the bottom of the dialog, there are three buttons: "Save", "Send", and "Cancel".

Click the **Save** button to save the relevant site information in a textual .dat file. You can then attach this file to an email which you can send to SolarEdge. This file includes various details about your installation, including all the serial numbers of the Inverters and PowerBoxes at the site, how the Inverters are configured and a snapshot of the module level monitoring data. This information is in text format so that you can review it before sending it. These details help the SolarEdge support team diagnose the installation and provide site-specific troubleshooting information.

Alternatively, you can click the **Send** button to save the relevant site information in a .dat file and then attach this file to an email which you can send to SolarEdge.

-  **Exit**: Exits the Configuration Tool application. Make sure to save all changes before exiting. Before disconnecting the Inverter, make sure that you have saved all changes and exited the Configuration Tool application.

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# Chapter 2

## Configuring an Inverter

### About This Chapter

This chapter describes each of the configuration tabs provided in the Configuration Tool.

This chapter contains the following sections:

- **Inverter Information**, page 22,
- **Country Configuration**, page 25
- **Module Level Data**, page 32



#### NOTE:

The **Update Firmware** tab can be displayed by entering the required password, as described on page 37.

## Inverter Information

The **Inverter Information** tab displays general information about the selected Inverter. This information can be edited in the other tabs described in the subsequent sections of this chapter.

The screenshot shows the 'Inverter Information' tab selected in a software interface. The interface is divided into several sections:

- Navigation Tabs:** Inverter Information (selected), Country Configuration, Communication, Module Level Data.
- Left Column:**
  - Inverter Model: SE4000
  - ID: 1234567890
  - Firmware Versions:
    - CPU: 1.5055
    - DSP1: 1.213 (3F1566BF)
    - DSP2: 1.5
- Right Column:**
  - Country: Israel
  - Server Configuration: TCP
  - RS485 Configuration: Slave
- Summary Bar (Dark Grey):**
  - Vdc: 336.0V
  - Vac: 227.9V
  - Pac: 1196W

The following describes the fields in this window:

- **Inverter Model:** Specifies the Inverter model such as SE3300, SE4000, SE5000 and so on.
- **ID:** Specifies the serial number of the Inverter. This serial number appears on the sticker on the side of the Inverter, as shown below:

SE5000 <b>solar<b>edge</b></b>					
Photovoltaic Power Inverter					
Serial #					
Electrical Ratings					
DC	Max. Operating Voltage	550V	AC	Nominal Operating Voltage	230V
DC	Operating Voltage Range	270-450V	AC	Nominal Operating Frequency	50Hz
DC	Max. Input Current	20A	AC	Nominal Output Power	5000W
	Operating Temp. Range	-20...+50°C	AC	Max. Output Power	5000W
	Enclosure	IP65	AC	Max. Power Current	24.5 A RMS
	Safety Standard	IEC 62103	AC	Grid Connection Standard	VDE 0126-1-1, RD-1663, AS-4777
For more details see installation guide				<a href="http://www.solaredge.com">www.solaredge.com</a>	

**Figure 3: Inverter Serial Number**

The Inverter serial number is also indicated on the warranty card that is provided with the Inverter.

- **Firmware Versions:** Specifies the firmware versions of the Inverter's CPUs.
- **Country:** Specifies the country for which the Inverter is configured. The Country Configuration can be changed in the **Country Configuration** tab, as described in the *Country Configuration* section on page 25.

- **Server Configuration:** Specifies the communication method used to transfer the monitored information from the Inverter to the SolarEdge Monitoring Server:
  - **None:** Specifies that the Inverter is not configured to communicate with the SolarEdge Monitoring Server.
  - **Ethernet (TCP):** Specifies that the Inverter is connected directly to a LAN.
  - **RS485:** If multiple Inverters are connected through an RS485 bus in a Master/Slave relationship, then the Slaves on this bus will output the monitoring data via this RS485.
  - **RS232 (UART):** Specifies that the Inverter is connected to an external modem through the RS-232 port.
  - **ZigBee:** Specifies that this Inverter is wirelessly connected to an external ZigBee modem or a Master modem for outputting monitoring data.

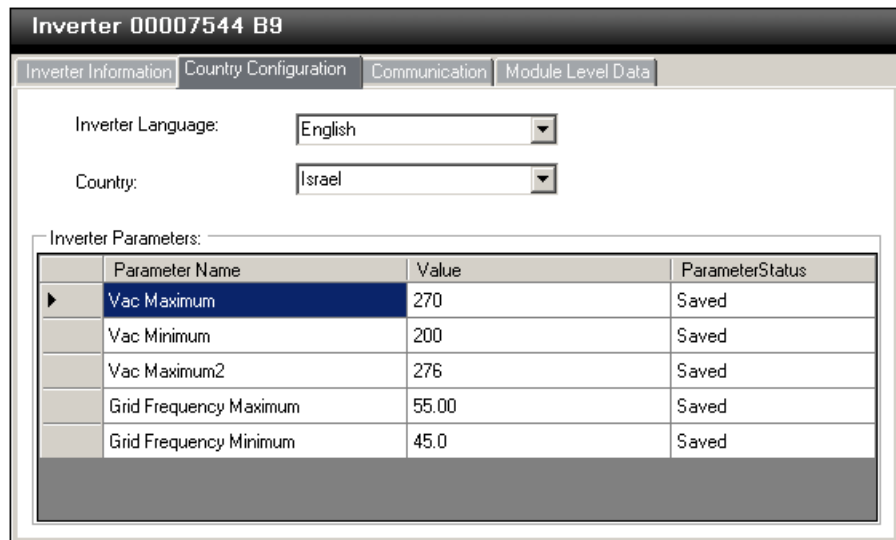
For more information, you may refer to the *Communication Tab* section on page 27.

- **RS485 Configuration:** When more than one Inverter is connected at a site, you can create an RS485 bus connection. This field specifies whether this Inverter is a **Slave** or a **Master**. You may refer to *Chapter 3, Setting Up Multiple Inverters* on page 33 for more information.
- **Vdc:** Specifies the DC input voltage, in Volts.
- **Vac:** Specifies the grid's correct AC output voltage, in Volts.
- **Pac:** Specifies the AC output power, in Watts.



## Country Configuration

The **Country Configuration** tab enables you to configure various aspects of the Inverter that relate to the country in which the site is installed.



Inverter 00007544 B9

Inverter Information | **Country Configuration** | Communication | Module Level Data

Inverter Language: English

Country: Israel

Inverter Parameters:

	Parameter Name	Value	ParameterStatus
▶	Vac Maximum	270	Saved
	Vac Minimum	200	Saved
	Vac Maximum2	276	Saved
	Grid Frequency Maximum	55.00	Saved
	Grid Frequency Minimum	45.0	Saved

The window displays the current values taken from the Inverter. The Inverter may arrive pre-configured to the local language.

To change the country for which the Inverter is configured, simply modify the fields in this window. A confirmation message is displayed. Click **Yes** and then a progress message is displayed while the new parameters are uploaded to the Inverter.



### NOTE:

After the Configuration Tool finishes uploading the parameters to the Inverter, the Inverter automatically shuts down and restart.

The following describes the fields in this window:

- **Inverter Language:** Select the language in which the LCD panel of the Inverter should be displayed.
- **Country:** Select the country for which the Inverter's power parameters are configured. The parameters in the Inverter parameters list, described below, are automatically set according to the country that is selected in this field.
- **Inverter Parameters:** Specifies the Inverter's power parameters. These values are set automatically according to the country that is selected in the **Country** field, as described above. The parameters for each country are specified according to each country's local certification requirements. However, if you get proper authorization from your local grid and code bodies, then these parameters may be changed to accommodate different grid parameters. After getting this authorization, please contact SolarEdge for instructions on how to change these parameters.

## Communication Dataflow

The SolarEdge site information can be accessed remotely using the SolarEdge Monitoring Portal, as described in the *SolarEdge Monitoring Portal User Guide*.

In order to transfer monitoring data from a SolarEdge site to the SolarEdge Monitoring Portal, a communication connection must be set up, as described below. Communication setup is not required for power harvesting.

PowerBoxes send information to the SolarEdge Inverter via DC lines. No added wires or configuration are required for this purpose. The Inverter sends this information to the SolarEdge Monitoring Server through the Internet.

For more information about installation and connection, you may refer to the *SolarEdge Installation Guide*.

## Communication Tab

The **Communication** tab enables you to define the communication method used to transfer SolarEdge site information to the SolarEdge Monitoring Portal.

The screenshot shows the 'Communication' tab in the SolarEdge Configuration Tool. The window has four tabs: 'Inverter Information', 'Country Configuration', 'Communication' (selected), and 'Module Level Data'. The 'Communication' tab contains several sections:

- Inverter Server Communication:** A dropdown menu set to 'TCP'.
- RS485 Configuration:** A dropdown menu set to 'Slave'.
- TCP Network Settings:** A group box containing fields for Current IP Address (192.168.2.32), Manual IP Address, Subnet Mask, Default Gateway, DNS Server IP, Server Address (172.20.101.4), Server Port (22222), and Ping Test Address. There is a checked checkbox for 'Enable DHCP' and a 'Ping' button.
- RS485 Slave Detection:** A group box with a 'Detect Slaves' button and a checked checkbox for 'Auto Configure Slaves'.
- ZigBee Settings:** A group box with fields for Pan ID (82) and Scan Channel (20), and an 'Apply ZigBee Changes' button.
- Status:** Two green indicator lights labeled 'Cable Connected' and 'TCP Connected'.

Set the required fields in this window and then click the **Apply** button. A progress message is displayed while the new parameters are uploaded to the Inverter. After the Configuration Tool finishes uploading the parameters to the Inverter, the Inverter automatically shuts down and restarts.

The following describes the fields in this window.

- **Inverter Server Communication:** Specifies the communication method used to transfer the monitored information from the Inverter to the SolarEdge Monitoring Server:
  - **None:** Specifies that the Inverter is not configured to communicate with the SolarEdge Monitoring Server.
  - **Ethernet (TCP):** Enables the connection of the Inverter directly to a LAN.

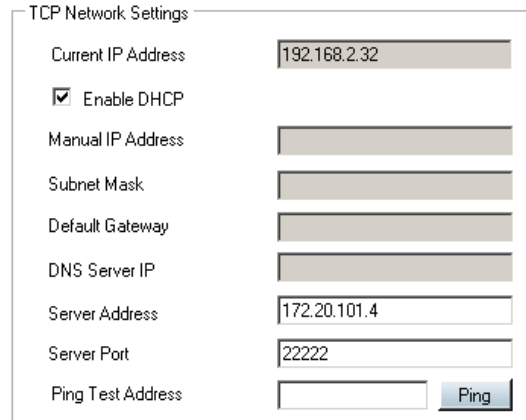
- **RS485:** If multiple Inverters are connected through an RS485 bus in a Master/Slave relationship, then selecting this option specifies that the Slaves on this bus will output the monitoring data via this RS485.
- **RS232 (UART):** Enables the connection of the Inverter to an external modem through the RS-232 port.
- **ZigBee:** Enables you to specify that this Inverter is wirelessly connected to an external ZigBee modem or a Master modem for outputting monitoring data.
- **RS485 Configuration:** Specifies whether the Inverter selected in the Inverter's list is a Slave (the default) or a Master. This option applies when multiple Inverters are installed at a single site and are connected through a RS485 bus. You may refer to *Chapter 3, Setting Up Multiple Inverters* on page 33 for more information about defining an Inverter as a Master or a Slave.

This field has no relationship to the definition of the communication method used to transfer the monitored information from the Inverter to the SolarEdge Monitoring Server, as defined in the **Inverter Server Communication** field, described above.

- **Current IP Address:** Displays the current IP address of the Inverter. This address was either configured using the **Manual IP Address** field, described below, or automatically set by the Internet Gateway (in case of a DHCP server).

- **Enable DHCP:**

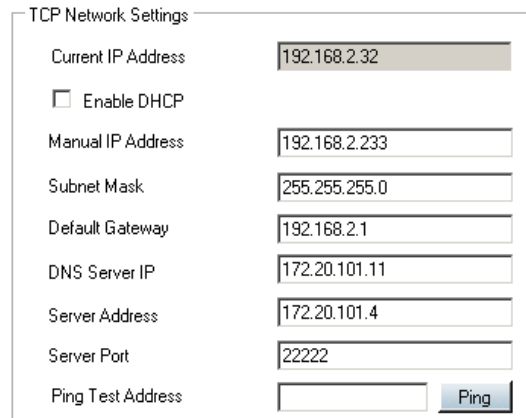
- When the **Enable DHCP** field is checked, the Inverter's IP address is automatically set by the Internet Gateway. The Inverter's IP address is shown in the **Current IP Address** field.



TCP Network Settings

Current IP Address	192.168.2.32
<input checked="" type="checkbox"/> Enable DHCP	
Manual IP Address	
Subnet Mask	
Default Gateway	
DNS Server IP	
Server Address	172.20.101.4
Server Port	22222
Ping Test Address	<input type="text"/> <input type="button" value="Ping"/>

- When the **Enable DHCP** field is not checked, you must enter a fixed IP address of this Inverter. The **Manual IP Address, Subnet Mask, Default Gateway, DNS Server IP** fields enable you to enter a value, as shown below:

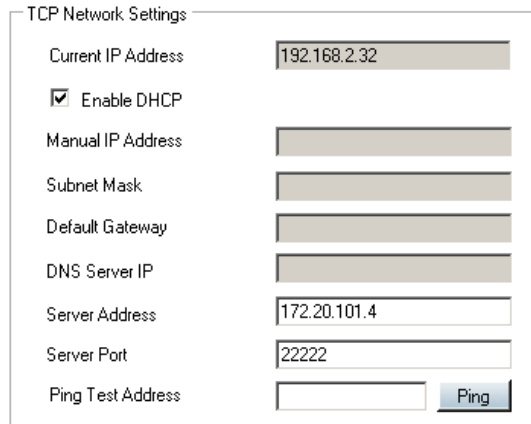


TCP Network Settings

Current IP Address	192.168.2.32
<input type="checkbox"/> Enable DHCP	
Manual IP Address	192.168.2.233
Subnet Mask	255.255.255.0
Default Gateway	192.168.2.1
DNS Server IP	172.20.101.11
Server Address	172.20.101.4
Server Port	22222
Ping Test Address	<input type="text"/> <input type="button" value="Ping"/>

The Server Address and the Server Port of the SolarEdge Monitoring server configure the address of the SolarEdge Server and generally should not be changed

Otherwise, when the **Enable DHCP** field is checked, the Inverter only requests that you enter the **Server Address** and the **Server Port** of the SolarEdge Monitoring server, as shown below:



TCP Network Settings

Current IP Address	192.168.2.32
<input checked="" type="checkbox"/> Enable DHCP	
Manual IP Address	
Subnet Mask	
Default Gateway	
DNS Server IP	
Server Address	172.20.101.4
Server Port	22222
Ping Test Address	<input type="text"/> <input type="button" value="Ping"/>

After you click the **Apply** button, this information is uploaded to the Inverter.

- **Ping Test Address:** Enables you to test the connection between the Inverter to any address that you specify in this field. Simply enter an address and then click the **Ping** button. A success or failure message is then displayed.



#### NOTE:

If your Inverter does not indicate a proper connection to the SolarEdge Server (indicated by **S\_OK** on the Inverter's LCD screen), then you can use the ping option to ping any Internet site in order to verify whether the problem is an Internet connection or configuration problem. If you cannot ping any sites, then you should check the IP configuration and your local firewall settings.

- **ZigBee Settings:** This option is only relevant if you have the ZigBee modem option installed and the **ZigBee** option is selected in the **Inverter Server Communication** field.
  - **Pan ID:** Specifies the external ZigBee modem PAN ID, in hex.
  - **Scan Channels:** Specifies the external modem network channel, in hex.

The **Apply ZigBee Changes** button must be clicked when you configure the ZigBee communication option in order to configure internal parameters to the ZigBee card, such as its channels.

- **RS485 Slave Detection:** The Configuration Tool is connected to the Master Inverter which is connected to the Slave Inverter through the RS485 bus. Click the **Detect Slaves** button to detect all the Slave Inverters connected to this Master Inverter and to display them in the Inverter list on the left. Each Inverter shows its serial number. The Inverter List indicates the Master Inverter by displaying an **(M)** next to its serial number.

Check the **Auto Configure Slaves** checkbox, before clicking the **Detect Slaves** button to automatically define all the other Inverters as Slaves that report their monitored information to the Master Inverter.

- **Cable Connected:** Displays a green indicator when a cable is properly connected from the Inverter to the network and is red otherwise.

**NOTE:**

If this indicator is red, then your Inverter is not physically connected properly to the Internet. Check your communication wires or in case of multiple Inverters, check the Slave Inverter's physical connection to the Master Inverter.

- **TCP Connected:** Displays a green indicator when the Inverter is properly connected to the Internet and is red otherwise.

**NOTE:**

If this indicator is red, then your Inverter is not properly configured to connect to the Internet. Check the IP configuration and your local firewall settings.

## Module Level Data

The **Module Level Data** tab displays information about the PowerBoxes connected to the Inverter that is selected in the Inverter list. This list is refreshed periodically, thus displaying the latest statuses of the PowerBoxes connected to the Inverter(s).

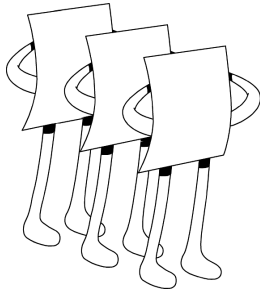
Inverter Information   Country Configuration   Communication   <b>Module Level Data</b>							
<a href="#">Export To Excel</a>							
	Index	ID	Vin	Vout	Iin	Energy	Timestamp
▶	1	00000776 7D	27.75	14.75	0.8	3.5	2/16/2010 4:22:03 PM
	2	0000073A 41	27.875	15.25	0.85625	3.25	2/16/2010 4:20:44 PM
	3	00000729 30	27	14	0.64375	0.5	2/16/2010 4:26:46 PM
	4	00000730 37	27.375	14	0.63125	1.25	2/16/2010 4:27:01 PM
	5	0004123E 54	27.25	13.375	0.875	1.75	2/16/2010 4:17:16 PM
	6	0004123C 52	26.5	13.875	0.65625	5.25	2/16/2010 4:27:05 PM
	7	000412AB C1	27.25	13.5	0.61875	5	2/16/2010 4:27:02 PM
	8	0004127E 94	26.75	13.75	0.625	5	2/16/2010 4:26:55 PM
	9	00000728 2F	27	13.75	0.65625	1.75	2/16/2010 4:26:31 PM
	10	00040825 31	26.625	12.875	0.6125	5	2/16/2010 4:27:07 PM
	11	000412AA C0	27.75	14.125	0.80625	3.5	2/16/2010 4:21:58 PM
	12	0004122E 44	26.75	13.75	0.63125	5	2/16/2010 4:27:07 PM
	13	00000732 39	27.625	13.5	0.86875	0.5	2/16/2010 4:14:27 PM
	14	00000735 3C	28	13.25	0.79375	0.5	2/16/2010 4:21:35 PM

The following describes the columns of this window:

- **Index:** Specifies a sequential number of the rows in this window.
- **ID:** Specifies the unique identifier of the PowerBox.
- **Vin:** Specifies the DC input voltage to the PowerBox, in Volts.
- **Vout:** Specifies the DC output voltage from the PowerBox, in Volts.
- **Iin:** Specifies the input current to the PowerBox.
- **Energy:** Specifies the energy harvested by the PowerBox.
- **Timestamp:** Specifies the last time that the parameters specified above were sampled from the PowerBox.

You can click the **Export to Excel** button to save these values in an Excel file. A standard file selection window is displayed enabling you to specify a file with an .xls file extension.





## Chapter 3

# Setting Up Multiple Inverters

### About This Chapter

This chapter describes how to set up multiple Inverters in a Master/Slave configuration.

## Master/Slave Configuration

The following describes how to set up multiple Inverters at a single site in a Master/Slave configuration.

Connect the Inverters to each other in an RS485 bus. An RS485 bus of Inverters can consist of up to 30 Slave Inverters and one Master Inverter. Inverters are connected to each other in a chain, meaning that the first Inverter in the chain is connected to the next Inverter in the chain via its RS485 connector. The first Inverter in the chain and the last Inverter in the chain must be terminated, as shown below:

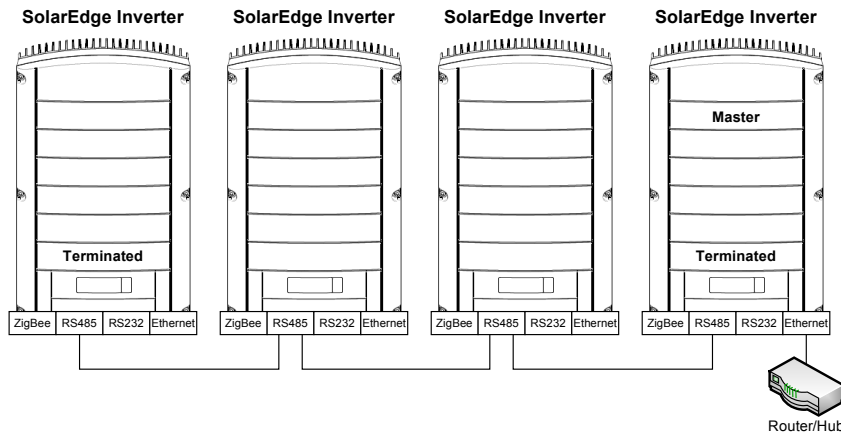


Figure 4: Example of RS485 Bus Connection

## Setting the Communication Configuration of the Master

By default, all Inverters are provided as a Slave. Connect the standard laptop or PC (on which the Configuration Tool is installed) to the Inverter that will be defined as the Master. This enables you to configure the Master Inverter and all the Slave Inverters through a single interface (the Configuration Tool).

► **To setup the Master Inverter:**

- 1** In the **Communication** tab, in the **RS485 Configuration** field, change the value to **Master**.
- 2** In the Inverter Server Communication field, define the communication method used to transfer SolarEdge site information from the Master (and collected Slave site information) to the SolarEdge Monitoring Portal, as described in the *Communication Dataflow* section on page 26.

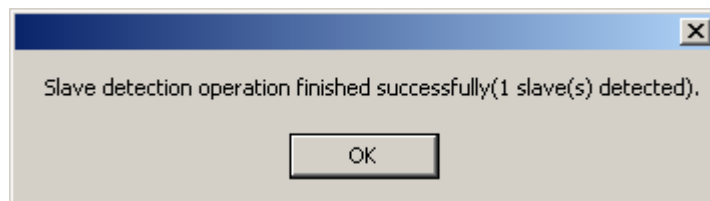
► **To setup the Slaves Inverters on the RS485 Bus:**

- 1** Check the **Auto Configure Slaves** checkbox, to specify that when the **Detect Slaves** button is clicked, as described below, that it will automatically define all the other Inverters as Slaves that report their monitored information to the Master Inverter.

Checking this option assigns the value **RS485** to all other Inverters in their **Inverter Server Communication** field in the **Communication** tab.

- 2** Click the **Detect Slaves** button to detect all the Slave Inverters connected to this Master Inverter and to display them in the Inverter List on the left.

A progress message is displayed during the detection process. Wait until the following message is displayed:



Each Inverter shows its serial number. The Inverter List indicates the Master Inverter by displaying an **(M)** next to its serial number.

If the **Auto Configure Slaves** checkbox is not checked, then clicking the **Detect Slaves** button does not reconfigure the Slave Inverters, but only displays the list of connected Slave Inverters.

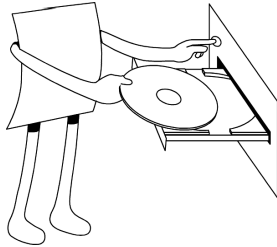
► **To setup each Slave's configuration:**

- 1** The Configuration Tool is connected to the Master Inverter which is connected to the Slave Inverters through the RS485 bus. This enables you to configure the Master Inverter and all the Slave Inverters through a single interface (the Configuration Tool). Select a Slave Inverter in the Inverter List to display its configuration.
- 2** Change the configuration parameters as necessary. For example, set the Country Configuration in the **Country Configuration** tab, as described in the *Country Configuration* section on page 25.
- 3** Perform steps **1** and **2** above for each Slave Inverter.

## Step 7: Reviewing Installation Information

The Inverter List shows each of the Inverters to which the Configuration Tool is connected and its serial number.

Selecting an Inverter in this list displays its information. You can review each Inverter's information in the **Inverter Information** tab, as described on page 22, and in the **Module Level Data** tab, as described on page 32.



## Chapter 4


# Updating Inverter Firmware

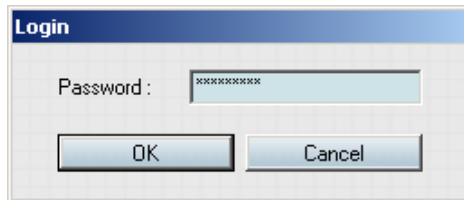
### About This Chapter

This chapter describes how to upgrade the Inverter's firmware in case an upgrade is necessary as per a directive from SolarEdge.

# Firmware Update

► **To update the Inverter's firmware:**

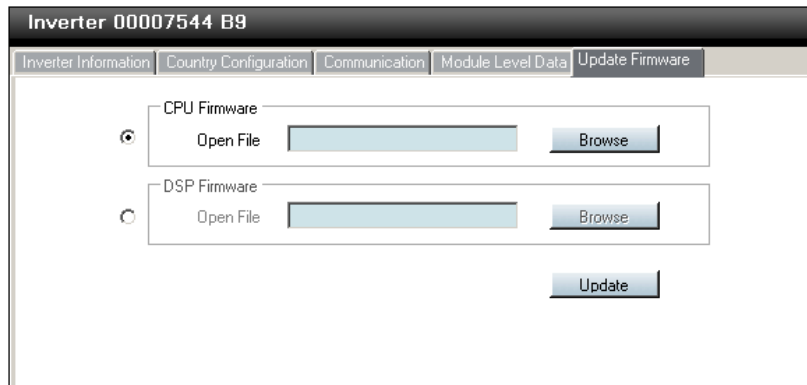
- 1** Click the  button. The following window is displayed:



A dialog box titled "Login" with a blue header. It contains a "Password:" label followed by a text input field containing "xxxxxxxx". Below the input field are two buttons: "OK" and "Cancel".

- 2** Enter the password given to you by the SolarEdge support team that allows you to update Inverter firmware and click **OK**.

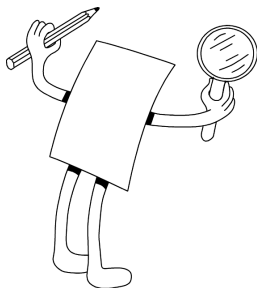
The following window is displayed in which a new tab appears called **Update Firmware**, as shown below:



A window titled "Inverter 00007544 B9" with a tabbed interface. The "Update Firmware" tab is selected. It contains two sections: "CPU Firmware" with a radio button (selected) and "Open File" text next to a text input field and a "Browse" button; and "DSP Firmware" with a radio button (unselected) and "Open File" text next to a text input field and a "Browse" button. At the bottom right is an "Update" button.

- 3** Select whether to update the **CPU Firmware** or the firmware of DSP1. The firmware of DSP2 cannot be updated.
- 4** Select the **Browse** button to display a window in which you can select the new firmware file (.dat file extension).
- 5** Click the **Update** button to update the Inverter.

After the firmware is uploaded, the Inverter automatically shuts down and restarts. We recommend performing these actions when the restart least interferes with performance, such as after sundown.



## Appendix A

# Verifying the RS-232 COM Port

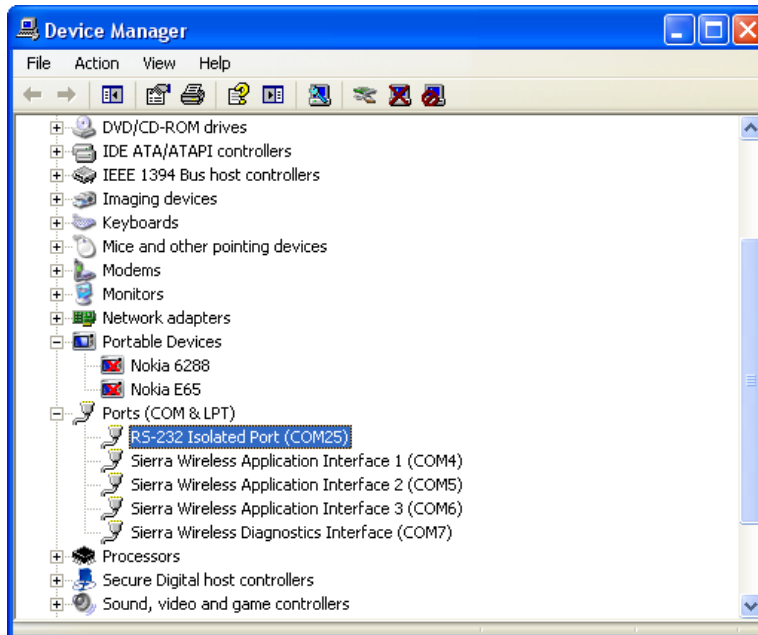
### About This Appendix

This appendix describes how to see which COM port on your computer is RS-232 in order to connect the Inverter.

## Verifying the RS-232 Port

► **To verify the RS-232 COM port on your computer:**

- 1 Right-click on the **My Computer** icon on your desktop and select the **Properties** option. The *System Properties* window is displayed.
- 2 Select the **Hardware** tab.
- 3 Click the **Device Manager** button. The *Device Manager* window is displayed.
- 4 Expand the **Ports (COM & LPT)** branch, as shown below:



Take note of the COM port that is displayed in the **RS-232 Port** branch. For example, the screen above shows the **COM25** port. The number of this COM port must be specified by you later when you use the Configuration Tool to connect to the Inverter, as described in the *Defining the COM Port to the Inverter* section on page 14.

The example above shows the **RS-232 Isolated Port** branch because an RS-232/USB adapter is used to connect the Inverter to the computer. The RS-232/USB adaptor must be installed according to its manufacturer's specifications.



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