



SPARQLinq Low Cost Solar Power Conversion Installation Guide

[Home](#) » [SPARQ](#) » SPARQLinq Low Cost Solar Power Conversion Installation Guide 

Contents

- [1 SPARQLinq Low Cost Solar Power Conversion](#)
- [2 System Configuration and Monitoring](#)
- [3 SparqLinq Setup](#)
- [4 System Update & Setup Wizard](#)
- [5 Network Configuration](#)
- [6 SparqVU](#)
- [7 Documents / Resources](#)
 - [7.1 References](#)
- [8 Related Posts](#)

SPARQLinq

SPARQLinq Low Cost Solar Power Conversion



System Configuration and Monitoring

The SparqLinq is a communication gateway that uses Zigbee™ wireless mesh networking with the QUAD Microinverter(s). If it is connected to the internet (through Wi-Fi or wired connection), it can automatically upload performance information to the SPARQ cloud-based monitoring system called SparqVu (<http://sparqvu.com>). The SparqLinq internal web server and SparqVu cloud-based server enable an installer or system owner to quickly view the performance of every component of their SPARQ energy system via a web browser on their smart device or computer.

A setup wizard walks the installer through the simple configuration procedure for the SparqLinq and microinverter system. Once configured, the SparqLinq automatically collects data from each PV module and reports it to SparqVu, allowing a detailed real-time view of performance information from any PV module in the system. Information such as energy production, operational status, and power output can be easily reviewed at a glance. This guide is primarily designed for setting up the SparqLinq itself. For full instructions on the system please see the complete SPARQ Installation Manual.

SparqLinq Setup

NOTE: DHCP is used to automatically configure the SparqLinq to connect to the installation's network. DHCP must be configured on the router or cable/DSL/fiber modem to be able to connect to the internet. It is also required to connect the SparqLinq to the internet at least once before or immediately after installation so it can set the internal clock and perform any software updates before completing the installation.

A technician can start setting up the SparqLinq gateway for the site at any time but QUAD inverters can only be scanned for when DC power (from PV module) is available.

Preferred SparqLinq setup using Wired Ethernet cable and Wifi adapter:

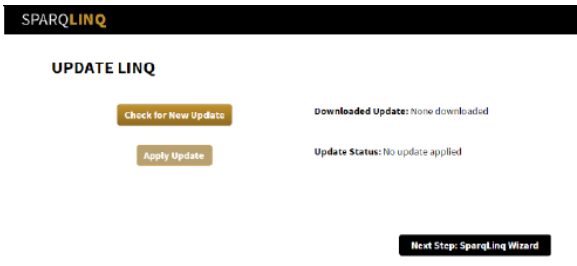

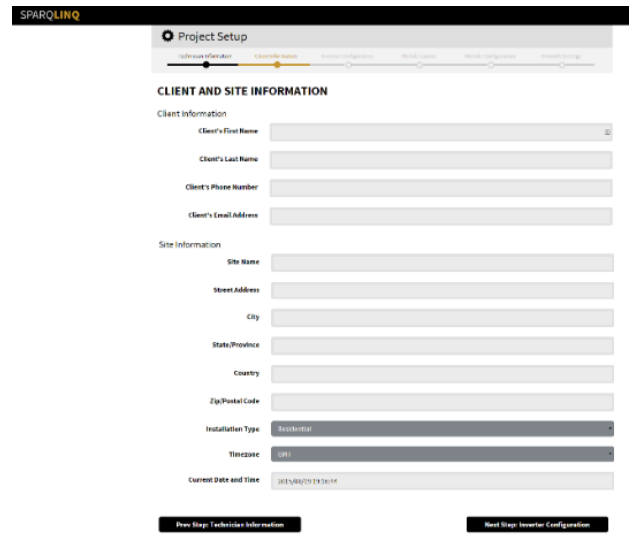
1. Plug in included Ethernet cable to Home Internet Router.
2. On a smart phone, tablet or PC, open Wi-Fi application to display available Network SSIDs.
3. The SparqLinq will create a Wi-Fi access point with SSID "SparqLinq". Select it for connection.
4. Enter the password "SparqLinq 80211" and make sure to include the space in the middle but without the quotes. Tick "Connect Automatically" on your device if option is available. Your device may indicate "No

Internet Access” which is OK. Do not connect to home network at this time.

- Open a web browser (we recommend Chrome or Firefox) and enter address <http://192.168.111.1/> to open network the configuration wizard page.

System Update & Setup Wizard

The following pages are displayed in sequence. Follow the on screen instruction to complete the setup procedure.

1.	Software Update <ul style="list-style-type: none">Press “Check for new Update”.If “Apply Update” button is highlighted, press and wait until complete.Press “Next Step” to continue.	
2.	Technician Information <ul style="list-style-type: none">Enter Technician as requested.If some information is not known at this time, it can be updated after the wizard is complete.	
3.	Site Information <ul style="list-style-type: none">Enter the site information as requested.If some information is not known at this time, it can be updated after the wizard is complete.Click “Next Step” to continue. <p>Note: Make sure the time is displayed correctly. Also, ensure that you choose the correct time zone. If this is not set accurately, data will not be recorded correctly.</p>	

Inverter Configuration

·Ensure that all inverters are powered up and each LED is lit. Note that inverters do not need AC to complete this step. A single DC channel is sufficient.

· Click “Next Step: Inverter Configuration” and the

SparqLinq will begin scanning for inverter.

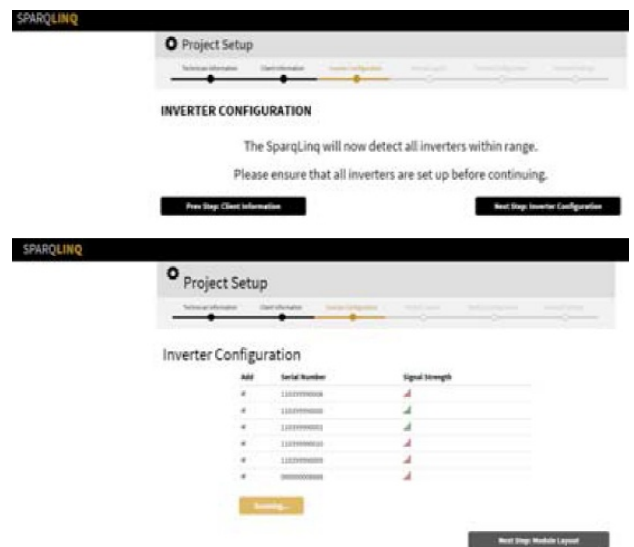
·It may take up to one minute to complete the scan.

· Once scanning is complete, check to see if all of the expected inverters are listed.

o If one or more inverters are missing, click the scan again button.

o If after several attempts to scan fail to locate all inverters, try relocating the *SparqLinq* closer to the inverters.

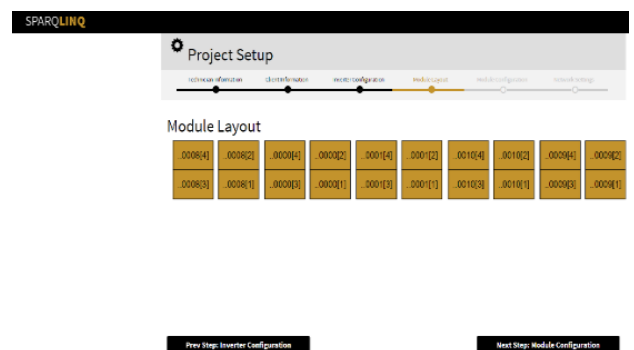
·Once all inverters are listed, click “Next Step” to continue.

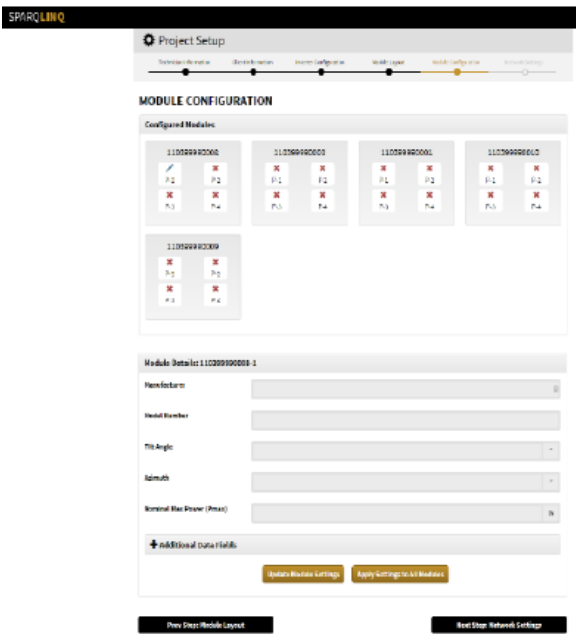


Module Layout

·Using the sticker map made during installation of the inverter, draw the layout as desired.

·Click on Next Step once you are happy with the layout.



6.	<p>Module Details</p> <ul style="list-style-type: none"> ·This screen allows you to enter the details of all of the modules that are attached to each Quad. The modules are listed by inverter at the top of the page. ·Click Apply and select the next module to edit. ·Note: If all modules are identical, you can click “Apply to all modules” to save the same details for all modules. ·Once complete, click one “Next Step”. 	
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Network Configuration

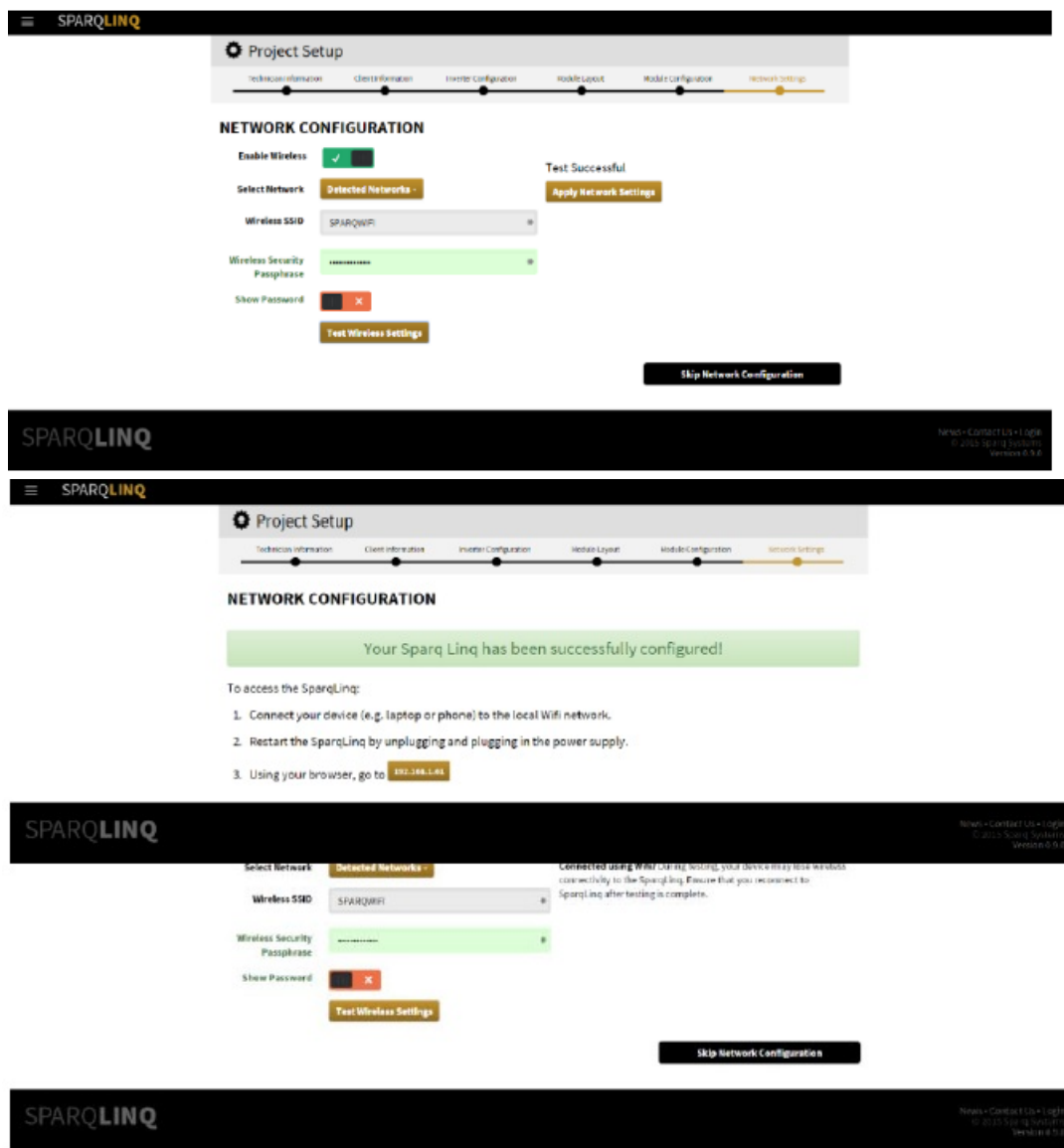
If network communication is to be done using a wired Ethernet connection or if Wi-Fi settings are not known at this time, then this screen can be bypassed and filled in at a later date.

If the SparqLinq will be connecting to the internet through Wi-Fi, then follow these steps:

1. Press the Enable Wi-Fi button so it changes green
2. Click the detected network button to find the desired access point (consult with the site owner)
3. If required, enter the homeowner's Wi-Fi password (Press “Show Password” to display text)
4. Press the “Test Wireless Settings” button.

The SparqLinq will take down its Wi-Fi access point and attempt to connect to the wireless network selected using the credentials provided. After testing it will re-enable its Wi-Fi access point. The installer may need to re-connect to the SparqLinq access point unless “Connect Automatically” was set on the installer's device.

If the test was successful the following screen will be displayed.
Click on the “Apply Network Settings” button and the following screen should appear.
Now your setup is Complete! Unplug the SparqLinq power supply and then re-connect to enable it to connect to the wireless internet connection and start logging performance data.



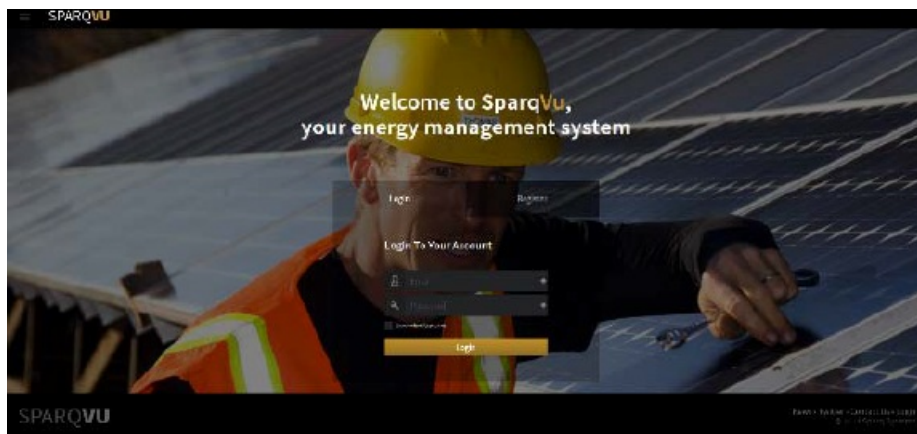
If the Wi-Fi connection was not successful you will see this screen. Try unplugging and moving the SparqLinq to a different location and re-run the test from the Settings menu.

SparqVU

SPARQ offers complete system management for initial installation as well as ongoing monitoring of the SPARQ System production and performance. Named "SparqVu", it offers a mobile friendly, easy to use solution for installers and end customers. The first step is to create your SparqVu account.

To create an account:

1. Connect to the Welcome Screen
2. Login with username and password
3. Create one if you do not have one already



Once logged in to a given site, the user will see a dashboard of their daily performance

- Connecting to the SparqLinq using a wired Ethernet connection

Use a browser on a device connected to the local network to access the Routers administration page. On the

Netgear router shown below you enter <http://192.168.0.1/> in the browser address bar. You will then be asked for the administrator ID and password. Many devices use the ID “admin” and password left blank or set to “password”. Contact the system owner or look at the label on the router for more information.

After connecting to the router go to the routers “Attached Devices” table to determine the SparqLinq’s local IP address (circled in red in image below). Illustration below is just an example of a Netgear router. Actual router used maybe different. Once you have determined the SparqLinq’s local IP address, type it in the browsers address bar to connect to the Dashboard or Wizard. In the example below you would type in the following: <http://192.169.0.5/>



NOTE: For the complete Installation Manual plus warranty terms and conditions, please see: www.sparqsys.com.

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E: support@sparqsys.com
W: www.sparqsys.com

Warning

FCC/IC Statements:

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.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. 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, the user is 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 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.

Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

Documents / Resources

	<p>SPARQ SPARQLing Low Cost Solar Power Conversion [pdf] Installation Guide SPARQGWV02, A2XSPARQGWV02, SPARQLing Low Cost Solar Power Conversion, Low Cost Solar Power Conversion</p>
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References

-  [SparqVu](#)
-  [Sparq Systems – Low Cost Solar Power Conversion](#)