

Wi-Fi Guidance for the SolShare

vA9

For the SolShare to be commissioned, it must have an internet connection. This internet connection must be provided through a Wi-Fi network. It is highly desirable that this Wi-Fi network is permanent and stable.

This document will serve as guidance to an installer wishing to provide a Wi-Fi network for a SolShare installation.

For information about how to change which network the SolShare connects to, see the [How to set-up/change Wi-Fi credentials](#) document.

Key Requirements

- Wi-Fi network frequency = 2.4GHz
- Data Usage: < 250MB/month
- IPv4
- Permanent and stable internet connection
- Wi-Fi router/dongle has permanent power source (i.e., it is not powered from the output of the inverter or solar side of the SolShare)

FAQ's

Why is a Wi-Fi connection required?

In addition to requiring an internet connection to commission, the SolShare requires an ongoing internet connection for energy data transmission, fault reporting and software updates.

Can I use an ethernet connection to the SolShare?

No, the SolShare can only connect to wireless networks through Wi-Fi.

What is the preferred method to provide a Wi-Fi network?

A Wi-Fi router with a hardwired internet connection is always preferable. This is because locations where the SolShare is generally installed (e.g., basements, underground car parks, switchboards) often have poor 4G reception. See the questions below for more information.

How close does the Wi-Fi router have to be?

This will depend on the Wi-Fi router, but for best results install the router in the same room with line of sight of the SolShare. A rule of thumb would be, if your phone can connect to the network, the SolShare will be able to connect, too.

Can I use a Wi-Fi extender?

Yes, any method of providing Wi-Fi to the SolShare will work, provided the above requirements are met.

What if using a 4G Wi-Fi modem/router is my only option?

Sometimes the SolShare will need to be installed in a location where it is not practical to install a Wi-Fi network with hard-wired Internet. In this case, a 4G Wi-Fi solution may be the only option. At the SolShare's installation location, check the strength of the mobile network using your phone. If the network strength is poor, a 4G modem with an external 4G antenna may help. If this still doesn't provide a strong connection to the 4G network, then the 4G modem will need to be installed in a location where there is a better signal, and an Ethernet cable run from the modem to an additional Wi-Fi access point located closer to the SolShare.

Examples of routers that work well with SolShare:

- TP-Link Archer Wireless Dual Band Router AC750
- TP-LINK 300Mbps Range Extender TL-WA855RE
- Milesight UR32 3G/4G Industrial Cellular Router (used with Panorama PWB-BC3G-38-RSMAP antenna)

Can I use my mobile phone's hotspot to commission the SolShare?

This is possible, but it will mean that any remote monitoring of the SolShare post-installation will not be possible once your mobile phone leaves the premises. It is also likely that there will be network connectivity issues during commissioning if the SolShare is installed in a location with poor mobile phone signal.

Are there any special requirements for the modem?

The SolShare will only connect to 2.4GHz Wi-Fi networks. Note that the 2.4GHz frequency is standard, but some Wi-Fi routers will use 5GHz (or both). Have a look at the modem's specifications before purchasing and installing.

The SolShare does not require a fixed IP address (also known as a static or dedicated IP address) - neither at the local network level, nor from the Internet Service Provider (ISP)/mobile data provider.

Are there any network / firewall requirements?

The ISP/mobile data provider must provide a network with internet protocol version 4 (IPv4). Networks with only IPv6 are not supported.

Ensure the following ports are open in both directions:

- Port 9993 UDP
- Port 1883 TCP
- Port 8883 TCP
- Port 8888 TCP
- Port 80 TCP
- Ports 5001-5005 TCP

Please communicate these requirements to any IT or network administrators, if applicable.

Can I connect the SolShare to the same Wi-Fi network as I am using for other equipment (e.g., an inverter)?

Yes, you can use the same network for multiple devices. More than 1 SolShare can connect to the same network.

How much data does the SolShare use?

The SolShare will operate at under 250MB/month.

Can I power the Wi-Fi router or dongle from the solar side of the SolShare?

No, this will mean that there is no Wi-Fi network, and therefore no communications to the SolShare, when the inverter is not outputting. Use a standard general power outlet.