SolShare Wi-Fi guidance and FAQs

Each SolShare requires a stable internet connection for:

- commissioning,
- ongoing monitoring via SolCentre, and
- enabling effective technical support from Allume.

This internet connection must be provided using a Wi-Fi network.

This document is intended as guidance for those providing a Wi-Fi network for a SolShare installation. For information about how to set-up or change which Wi-Fi network a SolShare connects to, see the How to set-up/change Wi-Fi credentials document.

I/ 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 SolShare)

II/ FAQs

Why is a Wi-Fi connection required?

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

Can I use an Ethernet connection to provide internet to SolShare?

No, SolShare can only connect to the internet 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 SolShare is generally installed (e.g., basements, underground carparks, switchboards) often have poor cellular 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 up to 5m from SolShare and with line of sight to SolShare.

Can I use a Wi-Fi extender?

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

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

Sometimes, SolShare needs 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 cellular Wi-Fi solution may be the only option. At SolShare's installation location, check the strength of the mobile network using your phone. If the

network strength is poor, a cellular modem with an external cellular antenna may help. If this still doesn't provide a strong connection to the cellular network, then the cellular modem may 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 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 SolShare?

This is possible, but it will mean that any remote monitoring and technical support of 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 SolShare is installed in a location with poor cellular signal.

Are there any special requirements for the modem?

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.

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.

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

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

Can I connect a 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 one SolShare can connect to the same network, provided that each SolShare is located for sufficient coverage and signal strength.

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.

SolShare should be allowed to initiate connections to **forwarder.allumeenergy.com.au** on the following ports:

- Port 8888 TCP
- Port 80 TCP
- Port 443 TCP
- Port 1883 TCP (required for SolShares with serial numbers ending in -0001 to -0399 only)
- Port 8883 TCP (required for SolShares with serial numbers ending in -0001 to -0399 only)

In addition, SolShare should be allowed to make DNS requests to 8.8.8.8 (port 53 UDP).

How much data does SolShare use?

Each SolShare will typically require under 250MB/month.