

SolShare internet guide

For SolShare system designers and installers

NOTICE

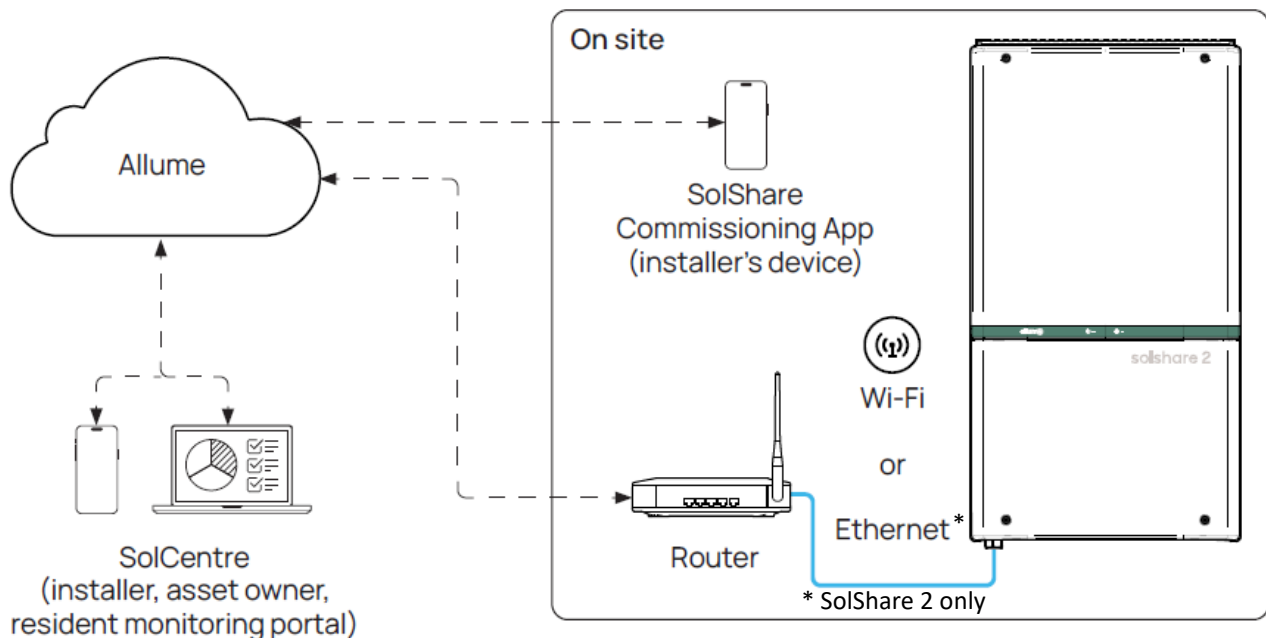
SolShare must be connected to the internet for commissioning and ongoing operation.

SolShare 2 supports both Ethernet (recommended) and Wi-Fi internet connections.

SolShare 1 supports Wi-Fi internet connections only.

NOTICE

It is a condition of warranty that SolShare is always connected to the internet throughout the warranty period.



TIP

You can always access the most up-to-date versions of any documents (including this document) in the Resource Library on Allume's website at <https://allumeenergy.com/uk/resource-library-uk/>.

If you have any further questions, contact the Allume support team by phone on +44 20 8156 2818 or by email at uk.support@allumeenergy.com.

1. Ethernet (recommended)

TIP

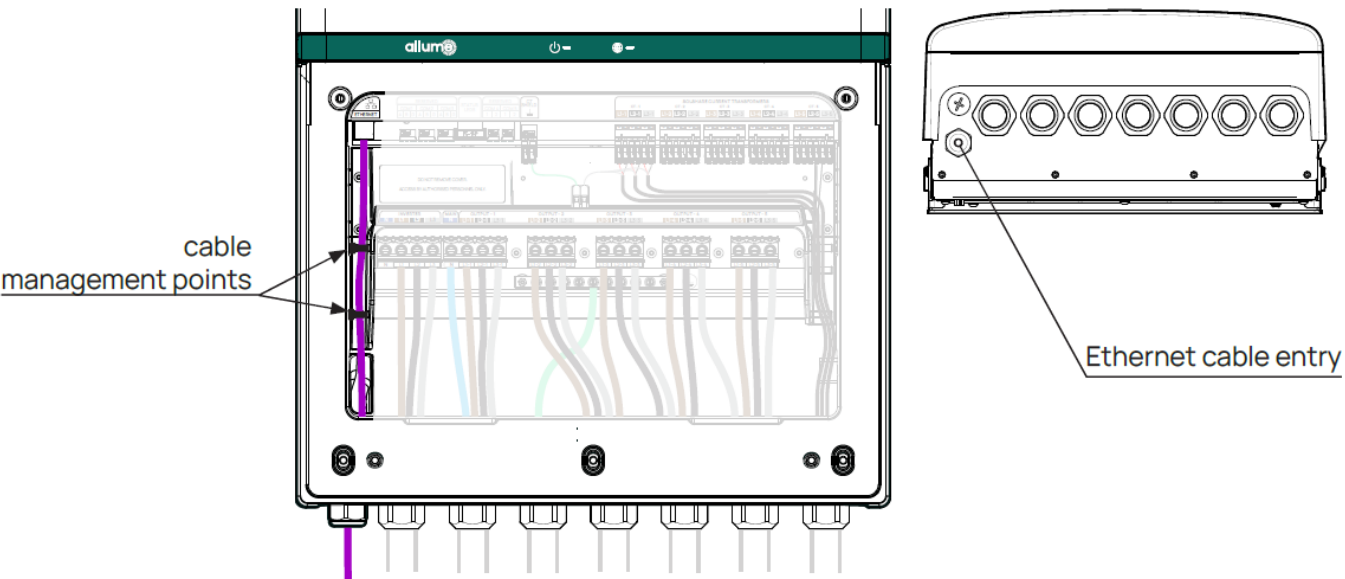
Ethernet is supported for SolShare 2 only. Refer to Section 2 for all internet connections with SolShare 1.

1.1. Ethernet requirements

Plug type	RJ45
Cable	Ethernet cable, e.g., Cat5e/6/6a
Internet protocol	IPv4
Forward/open ports	TCP 80, 8883, 443 UDP 53, 123
Data requirement	Typically <250MB / month / SolShare

1.2. How to connect SolShare 2 via Ethernet

1 Ensure SolShare is de-energised and insert the Ethernet cable into SolShare as shown:



NOTICE

Use the supplied communications cable gland to maintain the IP rating of SolShare.

2 SolShare will automatically connect to the internet when powered on with a suitable Ethernet connection. The Internet/network LED will be **white**.



2. Wi-Fi

1.3. Wi-Fi requirements

Network frequency	2.4GHz
Compatible protocols	802.11 b/g/n
Internet protocol	IPv4
Encryption	WPA2
Forward/open ports	SolShare 2: TCP 80, 8883, 443 and UDP 53, 123 SolShare 1: TCP 80, 443, 1883, 8883, 8888 and UDP 53
Data requirement	Typically <250MB / month / SolShare

1.4. Other requirements

- Device (such as smart phone) with Wi-Fi connectivity
- Wi-Fi network credentials (SSID and password) of the network that you want to connect SolShare to

① TIP

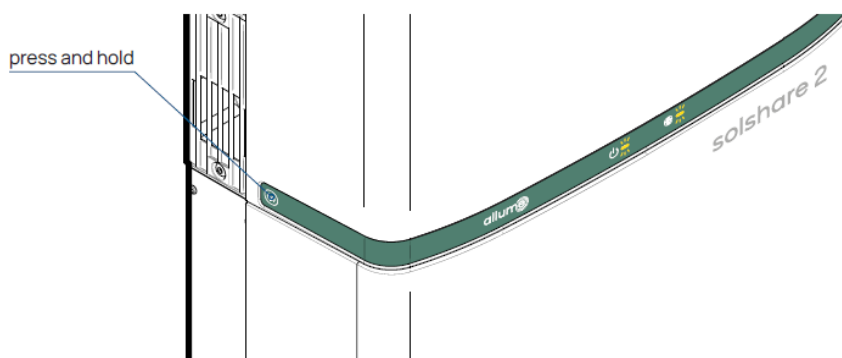
The Wi-Fi network must provide a strong and stable internet connection at SolShare's installation location.

① TIP

Ensure the Wi-Fi router/dongle has a permanent power source (i.e. it is not powered from the output of the inverter or solar side of SolShare).

1.5. How to connect SolShare via Wi-Fi

- 1 Safely power on SolShare. Press and hold the Wi-Fi button on SolShare for **3 seconds** to put SolShare into Wi-Fi access point mode. The Wi-Fi button is located:
 - SolShare 2: the left side (marked) as shown
 - SolShare 1: on the bottom side



The Internet/network LED (SolShare 2) or Wi-Fi LED (SolShare 1) will **flash blue**.





2. Connect your device to SolShare's Wi-Fi network: **SolShare:[serial number]**.

① TIP

Your device may display a "no internet connection" pop up. This is normal, click "accept" and continue.

① TIP

SolShare will exit Wi-Fi access point mode after 4 minutes if no Wi-Fi network connection has been made.

3. On your device's internet browser, navigate to <http://192.168.4.1>

4. Enter the Wi-Fi network details of the router.

5. Confirm SolShare is connected to the internet:

SolShare 2:  Internet/network LED is solid white

SolShare 1: Wi-Fi and Internet LEDs are solid blue



1.6. Troubleshooting

If the  Internet/network LED on SolShare 2 or Wi-Fi LED on SolShare 1 is still **flashing blue** after entering Wi-Fi network details:

- Ensure the SSID and password have been entered correctly
- Ensure the Wi-Fi network meets the requirements in Section 1.3.

If the  Internet/network LED on SolShare 2 is **flashing yellow** (or Wi-Fi LED on SolShare 1 is **yellow**):

- Ensure the Wi-Fi network has a strong and stable internet connection and fix any connection issues, e.g. by restarting the router
- Ensure SolShare can initiate connections to forwarder.allumeenergy.com.au and/or make DNS requests to ports listed in Section 1.3.
- Re-attempt connection using the steps in Section 1.5.

If the  Internet/network LED on SolShare 2 is **(solid) yellow**, SolShare is re-attempting an internet connection.

① TIP

If the  Internet/network LED is still not solid white (SolShare 2) or Wi-Fi LED is solid blue (SolShare 1), indicating SolShare is not connected to the internet, contact the Allume support team by phone on +44 20 8156 2818 or by email at uk.support@allumeenergy.com.



3. Frequently asked questions (FAQs)

Why is an internet 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.

NOTICE

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What is the preferred method for providing an internet connection?

Allume recommends SolShare 2 is connected to the internet via Ethernet. Wi-Fi is also available. SolShare 1 only supports internet connection via Wi-Fi.

If connecting via Wi-Fi, 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 car parks) often have poor cellular reception.

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 within 5m of 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 1 or 2, or directly to SolShare 2.

Examples of routers that work well with SolShare:

- Teltonika RUT200
- Teltonika RUT901
- Proroute H685 4G

Can I use a mobile 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.



① NOTICE

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Are there any special requirements for the modem?

All requirements are set out in Section 1.1 (when using Ethernet) and Section 1.3 (when using Wi-Fi).

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) 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?

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?

A network must be provided with internet protocol version 4 (IPv4). Networks with only IPv6 are not supported.

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

- TCP 80, 443, 8888

SolShare must be allowed to initiate connections to mqtt.allumeenergy.com.au on the following ports:

- TCP 1883, 8883

SolShare must be allowed to make DNS requests to 8.8.8.8 (port 53 and 123 UDP).

How much data does SolShare use?

Each SolShare will typically require under 250MB/month.