SATFi
Enhanced LTE
4G

Quick Setup Guide
SatFi 4G WiFi System

1. Introduction

Congratulations on the purchase of your SatFi 4G WiFi system. This unit is designed for permanent installation in your caravan, motorhome, narrowboat, yacht or motorboat. The SatFi 4G WiFi system comprises of the following parts;

Basic Version 47-00-000-0
2 x Internal Wi-Fi Antenna
2 x Internal LTE Antennas
1 x SatFi 4G WiFi Router
1 x Mains Power Supply
1 x 12VDC Power Lead
1 x CAT 5 LAN Cable
1 x Set of 3M Dual Lock Velcro Squares
User Manual

Pro Version 47-00-001-0
As per the basic version with the addition of:
1 x High Gain External MIMO Antenna

Before setting up your SatFi 4G you should familiarise yourself with this User Manual and the manuals for any other equipment you wish to connect to it.

2. Before you start

The SatFi 4G is configured and controlled via its built-in web interface. In order to access this, you will need a wireless device such as a PC/Mac, Tablet or Smart Phone running a modern web browser such as Chrome, Safari, Edge or Firefox. No special drivers or software are required to make the SatFi 4G work.

Do not plug in the SatFi 4G to the Ethernet port of your computer whilst the SatFi 4G is powered up and always ensure that the SatFi 4G antennas are connected before powering up the SatFi 4G.

3. Installation

The SatFi 4G is designed to be mounted inside your vehicle/below deck. When deciding on the best location, the biggest factor will be 3G/4G reception. Use your mobile phone to test various locations inside the vehicle/boat to see where the best reception is found, usually close to an external side wall/hull, port hole, hatch or window.

On fibre-glass (GRP) hulled vessels, it should be possible to find a location that gives good reception but if this is not the case or you have a wooden, carbon fibre or steel hulled vessel, then you should consider purchasing the SatFi 4G Pro system or antenna upgrade kit which allows you to mount the 3G/4G antennas externally and provides the best possible reception/range.

Mounting location is always a compromise on caravans, motorhomes and boats and 3G/4G reception will have to be weighed against other conditions such as; space, visibility of the unit, Wi-Fi reception and cable runs. With the supplied 5dB Wi-Fi antenna, wireless network connection to the SatFi 4G should not be a problem on most touring vehicles/pleasure boats but we recommend mounting it centrally in the vehicle/boat or as close to the area where mobile devices will be used.

The power cable can be easily extended, as can the LAN/WAN Ethernet cables.

The default settings of the SatFi 4G have been chosen for optimum performance and we do not recommend users make any changes to them, except to change the default wireless network name (SSID) and wireless password.

3.1. Installation

The SatFi 4G should be mounted in position using the supplied 3M Dual Lock Velcro Squares or other fixings appropriate to the mounting location. It can be mounted in any orientation, as the antennas can be rotated and bent for best reception, although we recommend mounting the SatFi 4G vertically with the antennas pointing upwards, to avoid stress on the cables and to ensure any moisture/condensation falls away from the connectors.

When rotating the antennas, always rotate them clockwise to avoid loosening them. They each have a small threaded SMA connector and are removable, for fitting the SatFi 4G High Gain MIMO external antenna.

3.2 Power Requirements

The unit is designed to work on vessels with a 12V or 24V DC system (9-30V DC Input voltage). It should be wired to a 1 Amp fused or circuit breaker protected circuit and if connected to a higher amperage circuit, then a 1A in-line fuse should be used to protect the SatFi 4G wiring. The SAtFi 4G has a four core power cable with a Red (+) and Black (-) wire the green and white are not used. Be very careful to ensure that the correct supply voltage polarity is connected to the SatFi 4G, as reverse polarity will damage the unit. Once the SatFi 4G is correctly wired to the vessel's 12v/24v DC system, do not apply power to the unit but continue with the installation steps below. Alternatively you can use the supplied UK 230V AC power supply.

3.3 Network Connections

The SatFi 4G has four RJ45 Ethernet connectors; 3 x LAN and 1 xWAN. If you wish to connect additional wired devices to the SatFi 4G local area network (LAN) such as a Smart TV, fixed mount computer, VOIP Phone, etc. then using a conventional network cable connect the device to the LAN socket of the SatFi 4G. If you wish to connect multiple wired devices, then you will need a standard network switch. The SatFi 4G provides IP addresses automatically (via DHCP) to any wired devices that are connected to its LAN socket.

3.4 Inserting data SIM card

To connect to the internet via a 3G/4G mobile connection, the SatFi 4G must have a active 3G/4G data SIM inserted which is registered to a valid mobile operator account. Any mobile operator's data SIM card can be used but it must be a Standard SIM (15 x 25mm) size. To insert the SIM, it is necessary to unscrew the four screws of the SatFi 4G "antenna SMA connector".

With the "Remove antenna back cover to insert SIM", safely removed you can now access the 3G/4G router module. Insert your SIM card into the SIM holder position 1. Position 2 is available for advanced 4G WiFi sytems or optional remote monitoring service support only.

Once the SIM is correctly inserted, you should re-assemble the SatFi 4G, check that all power and Ethernet connections are correctly made and then apply power for the first time.

If after 60 seconds, you scan for wireless networks and cannot see "SatFi_LTE" contact SatFi Ltd support by email support@satfi.co.uk

4. Configuration

Assuming that your wireless device can see the "SatFi_LTE" WiFi SSID, connect to it using the default wireless password, which is:

WiFi SSID: SATFI_LTE
WiFi Key: 12345678

Once connected, your device should automatically get an IP address, via DHCP, in the 192.168.65.xxx range. You should now be able to type http://192.168.65.1 in to the address bar and of your browser and see the SatFi 4G user configuartion login page.

The Login Page gives you the key status information about your mobile network connection.

Now login to the SatFi 4G by entering the default login password which is:

URL: http://192.168.65.1
User Name: admin
Password: CAClase1

Once logged in you will be taken to the main Overview Page as shown.

This page provides a "Dashboard" showing the status of the SatFi 4G network connections and settings. From this page, you can access the main menu bar along the top of the page which will take you to various status, configuration, tools and services menus.

The default SatFi 4G settings have been carefully chosen to work well in most situations/installations, commonly found on pleasure boats and touring leisure vehicles.

SatFi LTD strongly recommend that you do not change any settings except those specifically mentioned in this manual and we cannot support or warranty repair any SatFi 4G's that fails due to incorrect settings being used.

The key settings that all customers must set are:

1.   The APN connection settings for the 3G/4G Mobile network of the Data SIM they are using with SatFi 4G these must be set to enable the mobile braodband connection

2.   The Wireless Network settings (SSID and Password) which secure and control how you wirelessly connect to the SatFi 4G

We do not generally recommend changing the Admin password of the router, as this can be difficult to reset when forgotten. Also, this can only be used by someone wirelessly connected to the SatFi 4G, so make sure your wireless security is good and that you trust the people you allow to connect to the network and there should be no need to change the default Admin password.

If you do decide to change the Admin password, make sure you record the new password somewhere you can easily refer to in the future, as resetting this involves opening the SatFi 4G box.

4.1   Changing the APN Settings

Every data SIM network provider has different Access Point Name (APN) settings that allow the SatFi 4G to register and connect to the mobile data network. These settings can usually be found online for example Google "APN settings for Vodafone" or requested from the network provider. In the following example, we are using the recommended Vodafone settings, but you will need to enter the correct details for the SIM network provider you are using. If unsure of the best APN setting to use for your SIM please email support@satfi.co.uk.

To enter the APN settings, login to the SatFi 4G web interface and click on the Network>Mobile menu options.

Enter the APN settings for your network provider which generally are the APN name plus the username and password. Once you have changed the settings, scroll to the bottom of the page and click the "SAVE" button. The SatFi 4G will apply the changes and reboot, so after 20-30 seconds just refresh the page and you will need to login again.

To check that the 3G/4G mobile connection is working, make sure the wired WAN connection is disconnected (if you have one), and click on the Status>Network>WAN menu options.

4.2   Changing the Wireless Network Settings

It is very important that you "lock down" your wireless network, with your own network name (SSID) and wireless password. This ensures that only people that you give the network information to can connect and stops other less trust worthy individuals from connecting to your network and using your internet connection.

To change the default wireless network name and password of your SatFi 4G, login to the web interface and click on the Network>Wireless menu options.

Click the "EDIT" button and you will be taken to the page where you can change the Network Name (SSID) on the General Setup tab and the Password on the Wireless Security tab.

When choosing network names, it is best to avoid spaces and special characters (such as apostrophies) in the SSID or password, otherwise some wireless devices will not connect properly. Instead of using a space, use the underscore character, i.e. for "My Network" use "My_Network".

The best password encryption to use is "WPA2 PSK" and try to use a strong password with at least one capital letter and a mix of numbers and letters.

Make sure to record the details of your password somewhere secure but easy for you to access, as resetting a wireless password requires a wired connection to the SatFi 4G which is not always easy or practical.

Once the Network Name and Password have been entered click the "SAVE" button and the SatFi 4G will apply the new settings and reboot. Due to the network name change, your wireless device will be disconnected, so wait for the new wireless network name to appear in your Wi-Fi scan list (50-60 secs) and connect to it using the new password. Those are all the settings you need to change and you can now proceed to the Normal Operation section.

5.   Normal Operation

The SatFi 4G will always create its own wireless network within 50-60 seconds of being powered up and any wireless device should be able to scan for wireless networks, select the SatFi 4G and connect if you have given them your wireless password.

Assuming you are within 3G/4G coverage, then any device connected to the SatFi 4G wireless network, or wired to the LAN socket should be able to access the internet, if you have a registered SIM card and have not used up your 3G/4G data limit.

SatFi 4G is designed to be as automatic as possible and once you have used it for a while, you will quickly become confident in its operation and there should be very few times when it is necessary to login to the web interface. However, it is probably a good idea to bookmark the http://192.168.1.1 web address in your browser.

For technical assistance and advanced stup please contact our customer service department:

SatFi Limted
2 Mornington Place
Waterberry Drive
Waterlooville
Hampshire
PO7 7XX

Telephone +44 (0) 2392 247 920
Email support@satfi.co.uk
www.satfi.co.uk