Getting Started Guide
sq hub
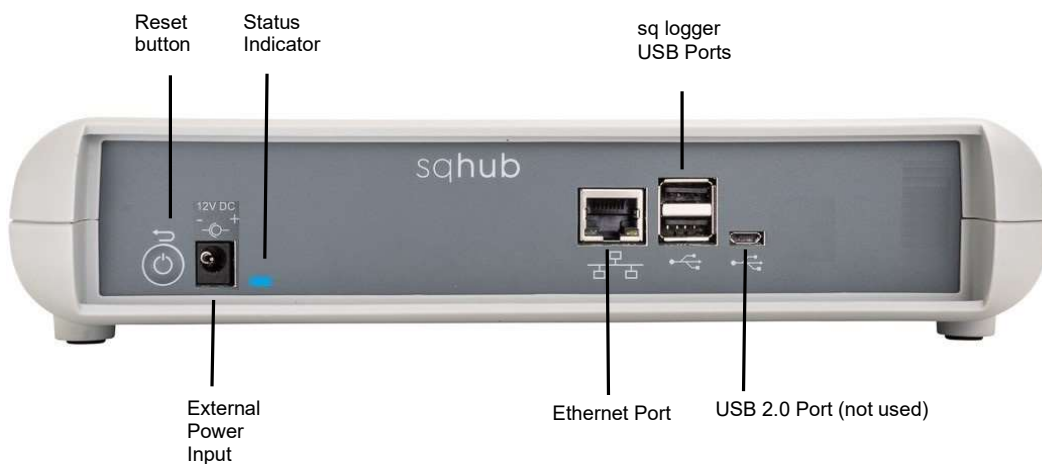
1 Box contents

sq hub Communications Gateway
Mains Adapter MPU 12V
Getting Started Guide (this booklet)
Warranty Card

Unpack the contents, check everything is present and retain the outer packaging for future use.

2 sq hub front panel connections and indicators

Status Indicator colour	What this means
Blue Amber Green	Power ON sequence
Amber Red Blue	Power OFF sequence
Continuous Amber Flashing	Busy, please wait
Green double Flash every 3 seconds	Wi-Fi Access Point Mode
Green single Flash every 3seconds	Wi-Fi Network connected
Red single Flash every 3 seconds	Unable to connect to Wi-Fi Network

Reset button function	Action	Status Indicator colour
Reset Wi-Fi to Network Access mode	Press and hold button (LED immediately goes blue), wait for LED to go green then release	

3 Essential Safety information

3.1 Meaning of safety symbols on equipment

	Read these instructions before installation or use of the sq hub
	Warning, hazard: read these instructions before proceeding to ensure you understand the nature of the hazard.

3.2 Safety warnings

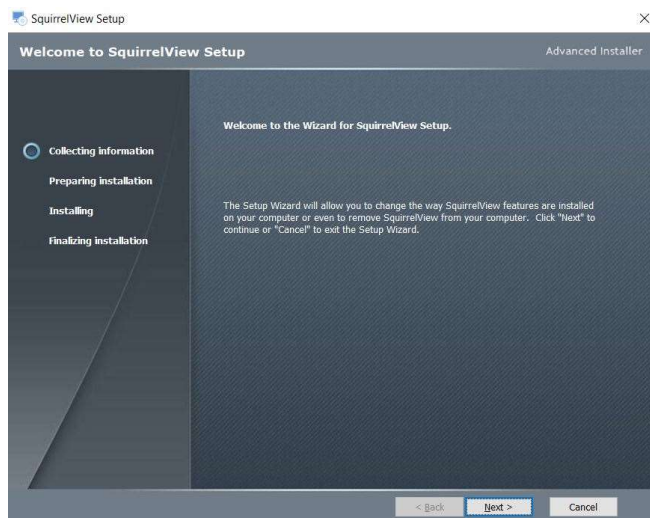|	
	Use only as specified by the operating instructions: if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. Please refer to full manual "34707 Operating Manual "
	The sqhub contains a rechargable lithium ion battery. The battery will last the lifetime of the sqhub and no user replacement is required. Do not remove the battery. There is a risk of fire if the battery is damaged or submerged in water. At the end of the product life, dispose of the sqhub in accordance with local regulations
	The sq hub is designed to be powered by a class II power supply (no Earth connection) for maximum flexibility.
	This sqhub is not designed for safety critical applications: do not rely on it to verify safe conditions before carrying out any potentially hazardous activities.

4   Download and install SquirrelView desktop software

Minimum PC requirements: Windows 10.
Ensure you have administrative rights for the PC on which to install the software
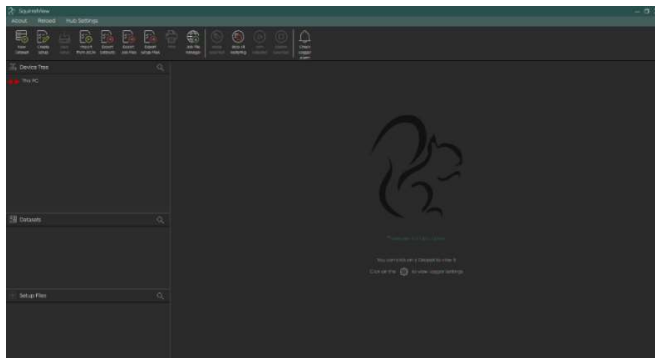
Please follow the steps below

1. Follow this link or copy the URL into your browser SquirrelView Software - Grant Instruments or scan the QR code.
2. From the webpage Software Download area, download the SquirrelViewinstaller.zip file and open the folder to view the contents
3. Save a copy of the Licence certBasic.pem file in your PC Download folder.
4. If you have purchased the SQS200 or SQS300 professional software upgrade, register online to receive the upgraded licence. This is available on the same SquirrelView Software web page or directly from this link Request Professional software - Grant Instruments or this QR code
5. The Licence file will be sent to your registered email address. Save a copy of the Licence certPro.pem file in your PC Download folder.
6. Run SquirrelView_Installer.exe program to start the installation

7. Follow the on-screen installation wizard. Click on Finish to complete the installation
8. Start SquirrelView
9. When prompted, click on the **Import Key** button.
    Select the certBasic.pem or certPro.pem (if available) file from the Download folder and click **Open**.
    To upgrade from the Basic to Professional Licence at a later stage, click on the **About** button in SquirrelView followed by the **Import New Licence** button.

SquirrelView is now ready to use

5   Power your sq hub Communications Gateway

Plug the MPU 12V mains adapter into an accessible mains outlet.
Only use the mains adapter supplied by Grant Instruments for the external power source.
Insert the Jack plug into the sq16 External Power Input.
The sq hub will power on immediately. There is power on sequence. The sq hub is ready to used when the LED Indicator is no longer Amber.

To power off your sqhub at any time, switch off the mains at the outlet or remove the Jack Plug.
The sq hub has a power off sequence. Do not plug the Jack Plug back in whilst the LED indicator is Red.

Your sq hub can provide power for up to two sq16 or sq16 plus loggers. Additional loggers can be powered using a mains powered USB2 Hub (not supplied)
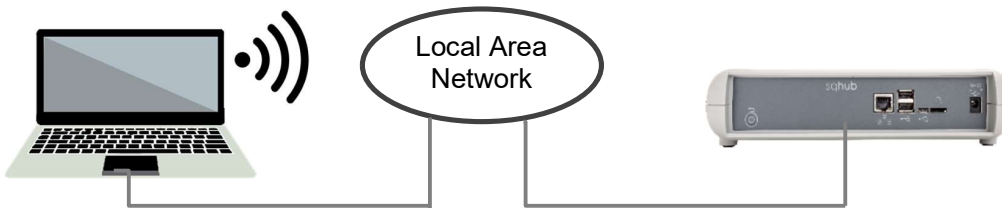
6   Connect SquirrelView Desktop Software to your sq hub

Ensure SquirrelView Desktop Software is installed and started and your sqhub is powered on.
Connect the sqhub to the same Ethernet Local Area Network as the PC using a network cable or W-Fi.

Using a network cable:
Connect an Ethernet cable directly between the sqhub Ethernet port and an available port on your local area network. In SquirrelView the sqhub will be automatically discovered in the Device tree and is identified by the unit Serial Number e.g. KW228007

Using Wi-Fi:
Ensure the sqhub is in Network Access mode, the indicator LED will double flash Green.
If not, press and hold the reset button (LED immediately goes blue), wait for LED to go green then release.

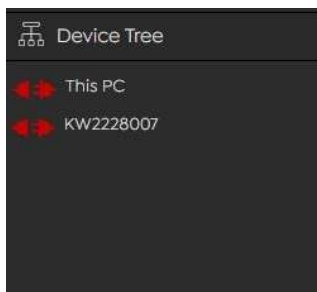On your PC, bring up a list of available Wi-Fi networks.
The sqhub will be available as a network shown as sqhub followed by the serial number
e.g. sqhub-KW2220007

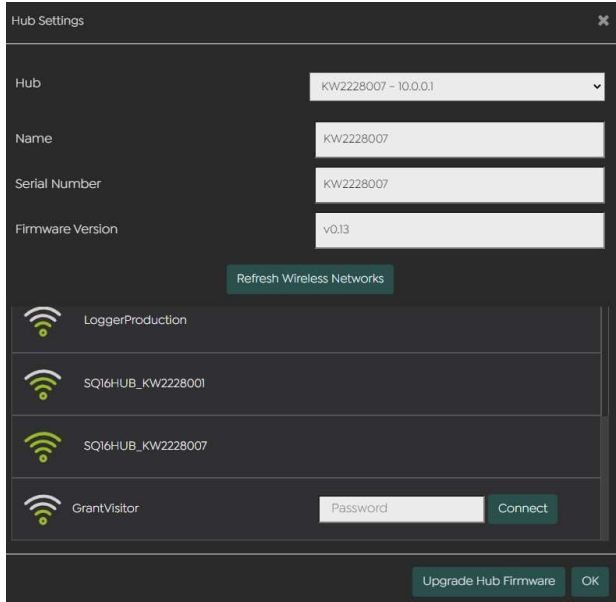Disconnect the PC Wi-Fi from your Local Area network and connect directly to the sqhub.

The sqhub Wi-Fi network security password is 'granthub'

In SquirrelView, your new sqhub will appear in the Device Tree. Note that any existing sqhubs on a Wi-Fi network will disconnect whilst this setup is in progress.

Your sqhub can be identified the Device tree by its Serial number.
In this example KW228007
Click on the Plug icon of the sqhub to connect.

On the SquirrelView mainscreen, click on **Hub Settings**.

Your new sqhub will be available in the drop down list.

Select your chosen Wi-Fi Network from the list of available networks

Add the Wi-Fi password for this network and click connect

Your new sqhub will then disappear from the Device tree

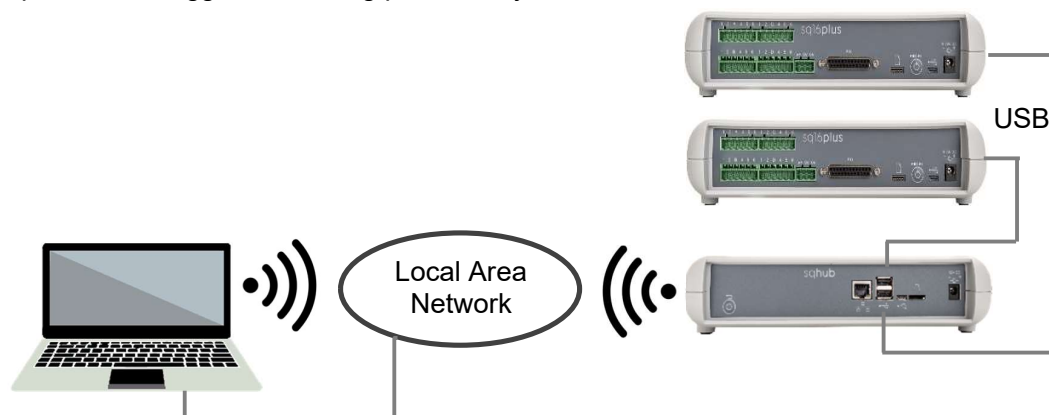Reconnect your PC to your chosen Wi-Fi network

Your sqhub will now be available again in the SquirrelView Desktop Software Device tree.
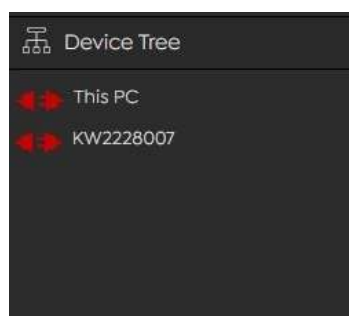
7   Connect sq 16 & sq16 plus loggers to your sq hub

Up to two sq16 loggers can be connected directly to the Logger USB ports on the sqhub.

More loggers can be connected to the sqhub utilising an external standard USB2.0 hub. A powered hub is required if the loggers are being powered by USB

Your sqhub will now be available in the SquirrelView Desktop Software Device tree.

Start SquirrelView Desktop.

Your sqhub can be identified the Device tree by its Serial number.
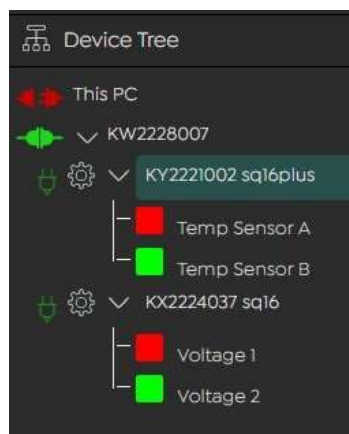In this example KW228007
Click on the Plug icon of the sqhub 🔌 to connect and view the loggers attached to the sqhub.

The Plug icon will change to Connected 🔌 and the loggers will appear in the Device Tree with the logger serial number followed by the logger model type sq16 or sq16plus.In this example KY2221002 sq16plus.

The loggers can then be selected and configured in the same way as loggers connected directly to a PC

Click on the Logger Settings icon ⚙ to configure your logger with sensor inputs and other logging configuration details.

Once configured, click on the logger's name in the Device Tree to select and enable logging and metering of sensor data.

For further information and product details please refer to "34707 Logger Operating Manual" available to download from our website at:

https://grantinstruments.com/data-acquisition/squirrel-loggers/sq-series-overview

Also available on individual Squirrel product web pages

8   Technical Specification

The product is a low-power data communications gateway designed for indoor use by, or supervised by, a professional user.

1. Communications	
Local Area Network	Gigabit Ethernet 802.3z RJ45 port Wi-Fi 802.11b 2.4 GHz OpenThread mesh network 802.15 (Optional)
Wide Area Network	LoraWan (Optional) 4G/LTE (Optional)
Link to sq16 Data Loggers	2 x USB2 Type B ports
Local hub comms	Micro USB2 port
2. Power	
MPU12V Mains power adapter (100-240V AC input) 12V DC output.	12V DC external power input jack socket
3. Physical properties	
Dimensions:	W235 x D175 x H55 mm
Weight:	1.2kgs
Operating (ambient) temperature limits:	-30°C to +60°C
Storage (ambient) temperature limits:	-30°C to +65°C
Altitude above sea level:	Up to 2,000m (6,500ft)
Maximum relative humidity:	80% RH up to 31°C

9   Contact Us

If you have any feedback on Grant's products or services, we would like to hear from you.

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