QUARK-ELEC

SET-UP GUIDE

QK-A035

NMEA 0183 4X4 MULTIPLEXER

WITH SEATALK™ CONVERTER
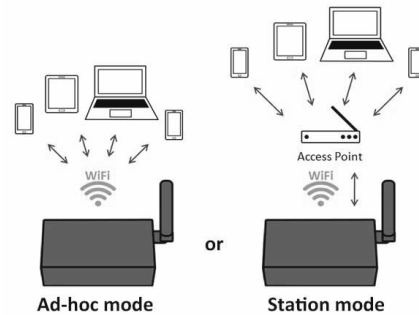
AND INTEGRATED VDR

5. Two WiFi modes:

Ad-hoc mode:

On your device (phone, laptop etc.):
15 seconds after powering up your A035, scan for WiFi networks and select the SSID similar to 'QK-A035xxxx'. Connect to 'QK-A035xxxx' with the default password: '88888888'.

Chart software: in your chart software, set the protocol to '**TCP**', IP address to '**192.168.1.100**' and port number to '**2000**'.

Station mode: please use the configuration software to change WiFi connection type to station mode.

Ad-hoc mode   Station mode

USING THE CONFIGURATION SOFTWARE (WINDOWS):

WiFi connection mode can be changed from Ad-hoc (default) to station or standby mode.

Station mode can be configured by inputting your router/access point's details into the configuration software. (Once configured, the correct settings must be entered into your chart software.)

Filtering: using the black list function

If required, selected NMEA sentences can be filtered out from the chosen inputs, using the 'black list' field. Remove the '$' or '!' from the 5 digit NMEA talker and sentence identifier and insert them separated by commas. E.g. to block '!AIVDM' and '$GPAAM' enter 'AIVDM,GPAAM' .
Up to 8 sentence types can be filtered from each input port. For blacklisting Seatalk[1] data, block the corresponding NMEA message (see the manual for a full list of converted messages).

Routing the Seatalk and NMEA sentences.

As a default, all input data (excluding any filtered data) is routed to all outputs (NMEAx4, WiFi and USB). Data can be routed to limit the data flow to only certain output/s by un-ticking the corresponding boxes in the configuration software.

NMEA Baud rates: Default Baud rates are set to:

- NMEA IN 1,2,4: 4800bps
- NMEA IN 3: 38400bps
- NMEA OUT 1,2: 4800bps
- NMEA OUT 3,4: 38400bps
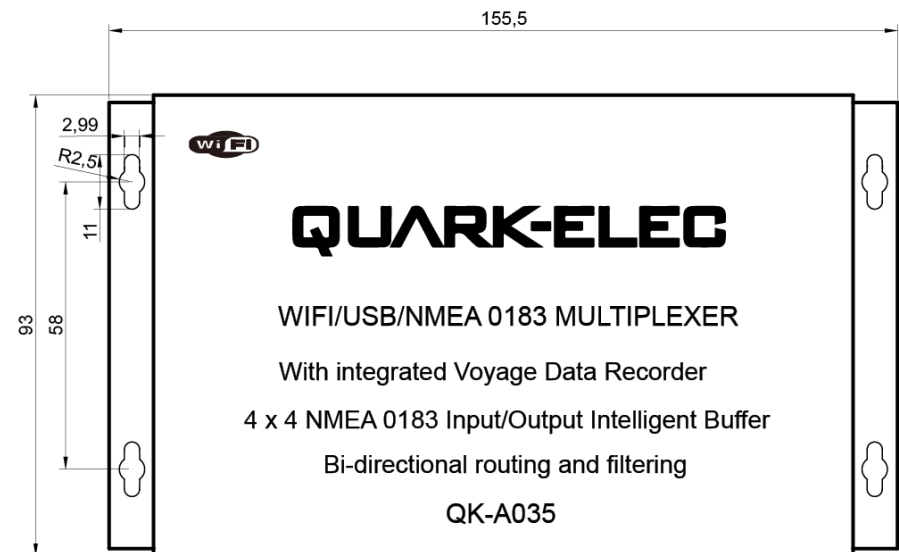
These can be changed as required.

USB input: The USB connection is 2 way as standard, no additional configuration required. Manual NMEA input via USB is also possible through the configuration software. A good understanding of NMEA sentence structure is required for this additional function.

WIFI/USB/NMEA 0183 MULTIPLEXER

With integrated Voyage Data Recorder

4 x 4 NMEA 0183 Input/Output Intelligent Buffer

Bi-directional routing and filtering

QK-A035

Please recycle your packaging

All products are CE, RoHS certified
More information at www.quark-elec.com

⚠️ **This is an overview only.** Please familiarize yourself with the manual and the manuals of any connecting devices before installation. It is always recommended that electronic equipment be installed by an experienced installer.

BEFORE LEAVING HOME:

A 10-30V power supply is required.

The included SD card comes formatted as FAT32. Before using any other SD cards, please ensure they are FAT32 formatted.
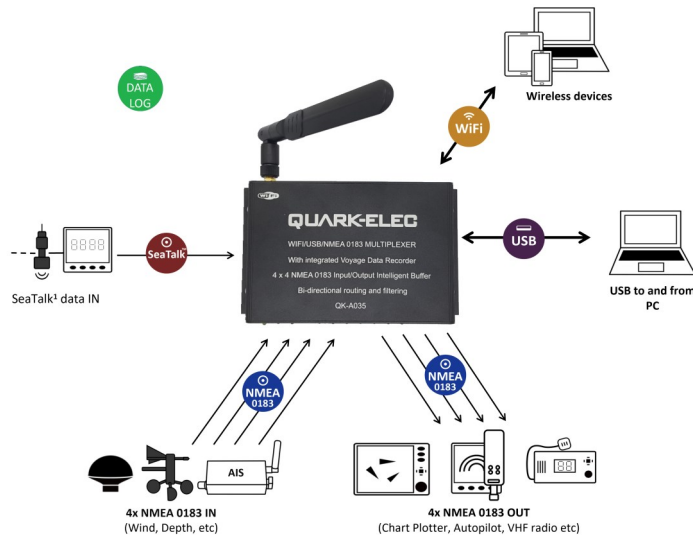
Using the configuration software is optional and it is only needed to enable specific features.

To use any of the following features, initial setup will be required using the configuration software (Windows computer required to run the application):

- Changing WiFi mode from Ad-hoc to Station or Standby mode
- Changing Baud rates from their default settings
- Data filtering and routing
- NMEA 0183 input monitoring via USB

Please see back of setup guide for more information. Device driver installation may be required for older Windows PCs.

The configuration software, driver and the user manual are included on the FREE CD or can be downloaded from www.quark-elec.com. **Consider whether there is a CD reader/internet access on site, if not, pre-configure your device or pre-install the configuration software and driver if required.**

DATA LOG

Wireless devices

WiFi

QUARK-ELEC
WiFi/USB/NMEA 0183 MULTIPLEXER
With integrated Voyage Data Recorder
4 x 4 NMEA 0183 Input/Output Intelligent Buffer
Bi-directional routing and filtering
QK-A035

SeaTalk

USB

SeaTalk¹ data IN

USB to and from PC

NMEA 0183

NMEA 0183

AIS

4x NMEA 0183 IN
(Wind, Depth, etc)

4x NMEA 0183 OUT
(Chart Plotter, Autopilot, VHF radio etc)

INSTALLATION

1. Mounting: Consider the location…

- Dry, sturdy location, at least 0.5m distance from other WiFi equipment.
- Ensure you have the right length of cable needed. If drilling holes for your cabling, seal around any holes after installation to prevent water ingress and damage to your vessel or equipment.
- If USB is not being used, use the USB dust cover provided. This will keep dust out of the unit.
- The SD card dust cover should be applied at all times even when no SD card is being used.

2. Connect Power

⚠️ The A035 requires a 10-30V power supply. This can be a battery or other suitable power source. **Check that your A035 is connected correctly to its power supply: '+' to 10-30V, and '–' to GND.**

3. Disconnect all your devices from their power supply before connecting/disconnecting any devices to/from any inputs or outputs.

NMEA 0183: The A035 uses the differential end RS422 interface. Connect the '+' and '-' terminals of the NMEA input/output on the A035 to the '+' and '-' terminals of the output/input on the other device. If there are communication issues between your devices, you may find swapping data wires, might resolve the problem:

The A035 also supports single end for RS232 interface devices. NMEA 0183 inputs/outputs have to be connected in the following way:

	A035 terminals	RS232 device terminals
Output	NMEA Output+	GND *
	NMEA Output-	NMEA Input
Input	NMEA Input+	GND *
	NMEA Input-	NMEA Output

Swap NMEA + and NMEA - wires if the communication does not work.

If this connection mode does not resolve the communication problem, a Quark-elec Protocol Bridge (QK-AS03) will be required.

SeaTalk: Please ensure '+', 'Data' and '-' terminals are correctly connected to the SeaTalk bus. Swapping any of these wires could permanently damage your A035.

4. Re-connect power and check the LED status lights

- **IN/OUT and WiFi LEDs** will flash for every valid message received or sent.
- **Overflow LEDs** will flash for any internal buffer overflow. This indicates there was an excess of data sent to an output and some sentences were lost. The A035's filtering and routing options can minimise this by removing any unneeded or duplicate data.
- **Power LED** is lit red while the A035 is connected to a power supply.