GXX-4GMx Series 4G Router
User Manual
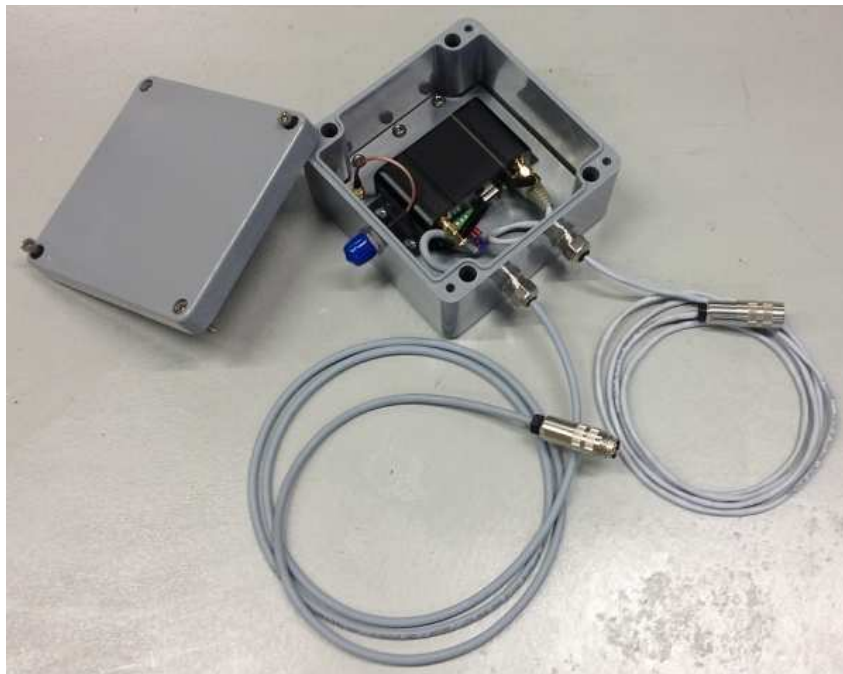
Document Revision

Version	Date	Modification	Author
1	17.12.2014	First issue	JON
2	06.01.2015	Review	TAB
3	07.01.2015	Updates and corrections	JON
4	07.01.2015	Review	TAB
5	08.01.2022	Updates and corrections	BES

Table of Contents

Table of Figures

1. Overview

The 4G router series GXX-4GM consists of GXX-4GM and GXX-4GMPC subtypes for use with GMSplus and a computer respectively. The GXX-4GM for use with GMSplus is conveniently installed in an IP66 protected housing and provides in addition to the internal antennas an option for installing an external antenna. GXX-4GM is supplied with all cables needed for installation with a GMSplus. GXX-4GMPC on the other hand is delivered without any housing, but with necessary cables and connectivity.

Figure 1. GXX-4GM

Figure 2. GXX-4GMPC

2. Installation of the SIM Card

☞ *Before proceeding, please make sure that:*
- *SIM card is not locked by a PIN code.*
- *the modem is NOT powered.*

2.1. GXX-4GM

To access the SIM card slot on the GXX-4GM, remove the cover of the protective ABS housing of the router and loosen the four screws holding the black modem (see red circles in Figure 3) and carefully lift and tilt the modem until you see the SIM card slots.

There are two SIM Card slots, the upper one is SIM1. The SIM Card should be inserted like Figure 4. Push in the SIM card completely to its full stop.

☞ *Due to the small slot in the housing, a tool like a screwdriver might be required to fully push the SIM card in.*
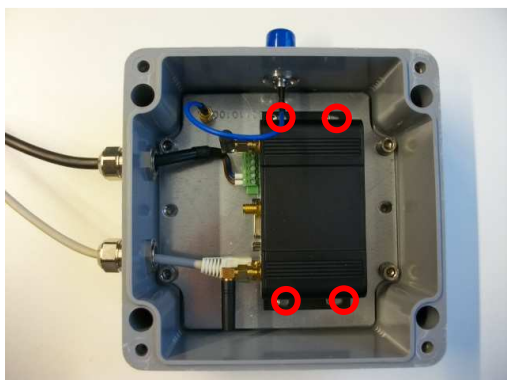

Figure 3. Loosen the screws of the modem.

Figure 4. Use the upper slot.

2.2. GXX-4GMPC

The SIM card slot is easily accessible on the GXX-4GMPC.

There are two SIM Card slots, the upper one is SIM1. Push in the SIM card completely to its full stop.

👉 *Due to the small slot in the housing, a tool like a screwdriver might be required to fully push the SIM card in.*

3. Router Configuration

Remove the cover of the protective ABS housing of the router and unplug the Ethernet cable. Plug in a standard Ethernet cable and connect the other end to the computer.

Power the router by connecting the power cable to the SERIAL connector of the GMSplus.

👉 *The GMSplus must already be configured to power the modem, as described in the GMSplus manual*

Before connecting the router to the GMSplus, we recommend checking that it is possible to surf on the internet. with the already connected computer. The GXX-4GM series router acts as a DHCP server and therefore no fixed IP must be set in the computer. As soon as the connection is established (🖥), open a web browser and visit a couple of websites which are known to be online, using the web browser on the computer.

If the websites are not accessible, you may need to set APN settings manually (check with your GSM service provider for the correct settings). Open a web browser and enter the IP **192.168.168.1** which is the default IP address of the GXX-4GM series.

Log in with the username "**admin**" and password "**123456**".

The APN settings can be entered under "**Carrier**" -> "**Settings**"

Figure 5. Browser based configuration of GXX-4GM series router

4. Hardware Configuration

4.1. Internal / External Antenna

The GXX-4GM router can be used with the internal antenna (default) or with an external cable/antenna in case the cellular reception on the measurement site is weak. To use the external antenna connector, first unscrew the SMA antenna which is labelled "ANTENNA" on the modem. The SMA connector for the external antenna connector can now be unscrewed from its place holder and connected to the modem. The SMA antenna can be mounted on the SMA place holder not to lose it.
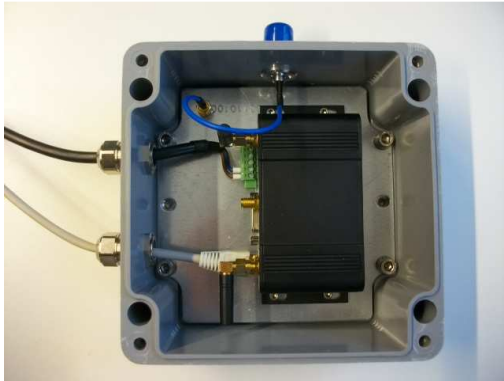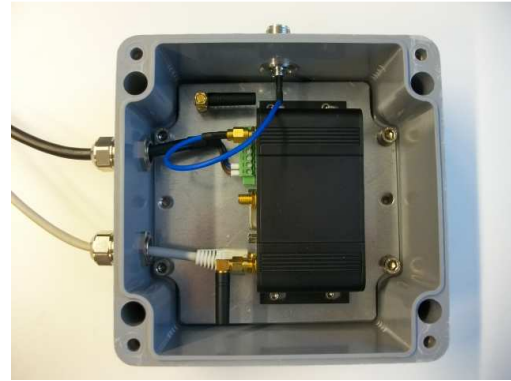

Figure 6. Internal antenna in use.   Figure 7. External antenna configured.

4.2. Preparation of the GMSplus

When used with the GXX-4GM series, the GMSplus requires no special hardware / jumper settings, but only a certain configuration of operational settings.

Configure the GMSplus according to the GMSplus manual making sure that the Ethernet gateway will be the GXX-4GM series and that the powering for the modem is done via GMSplus.

5. Electrical Connection

5.1. GXX-4GM

The GXX-4GM is supplied with all cables needed for use with GMSplus. Connect the two cables to the Ethernet connector and the Serial connector of the GMSplus. The router will be both powered and have communications with the GMSplus. Optionally an external antenna can be installed – see section 4.1.
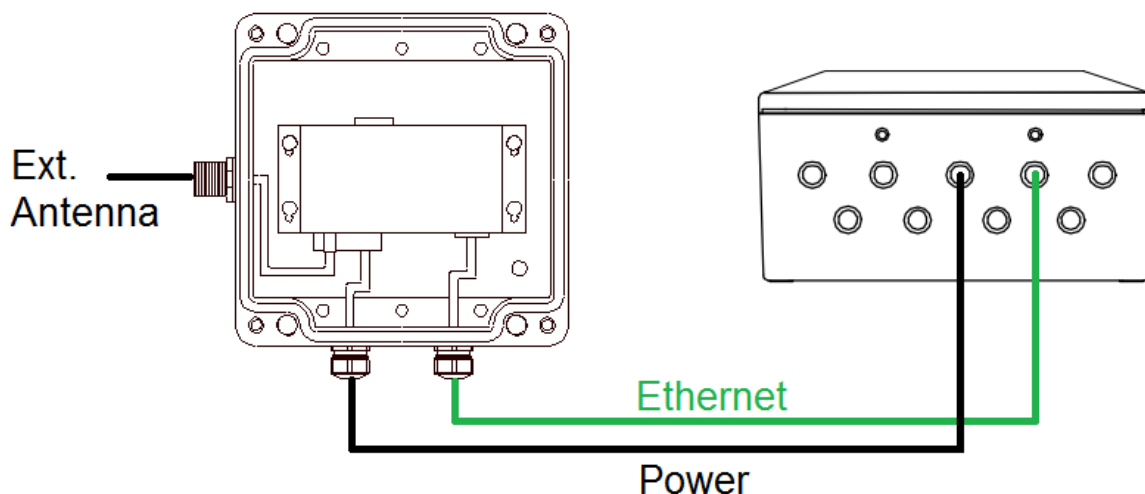

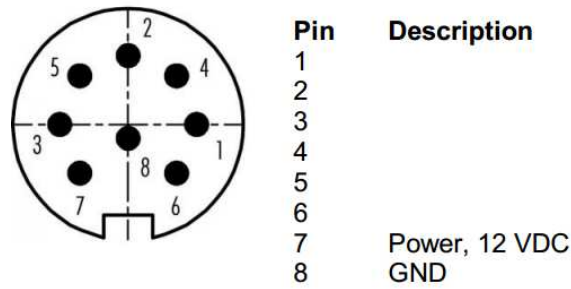Figure 8. Connection diagram of GXX-4GME to GMSplus

Pin	Description
1	
2	
3	
4	
5	
6	
7	Power, 12 VDC
8	GND

Figure 9. Pin-out for GXX-4GM power cable

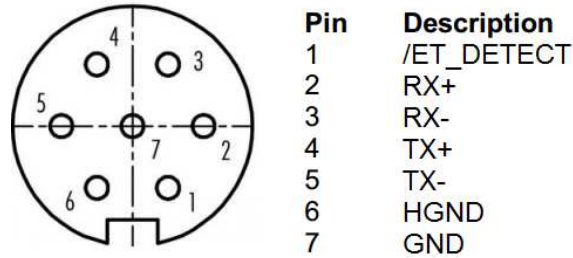| Pin	Description
1	/ET_DETECT
2	RX+
3	RX-
4	TX+
5	TX-
6	HGND
7	GND

Figure 10. Pin-out for GXX-4GM Ethernet cable

5.2. GXX-4GMPC

The GXX-4GMPC router is delivered such that it can be connected directly to a computer using either an Ethernet cable or the supplied USB cable. The router must be powered separately with 7-30 VDC.
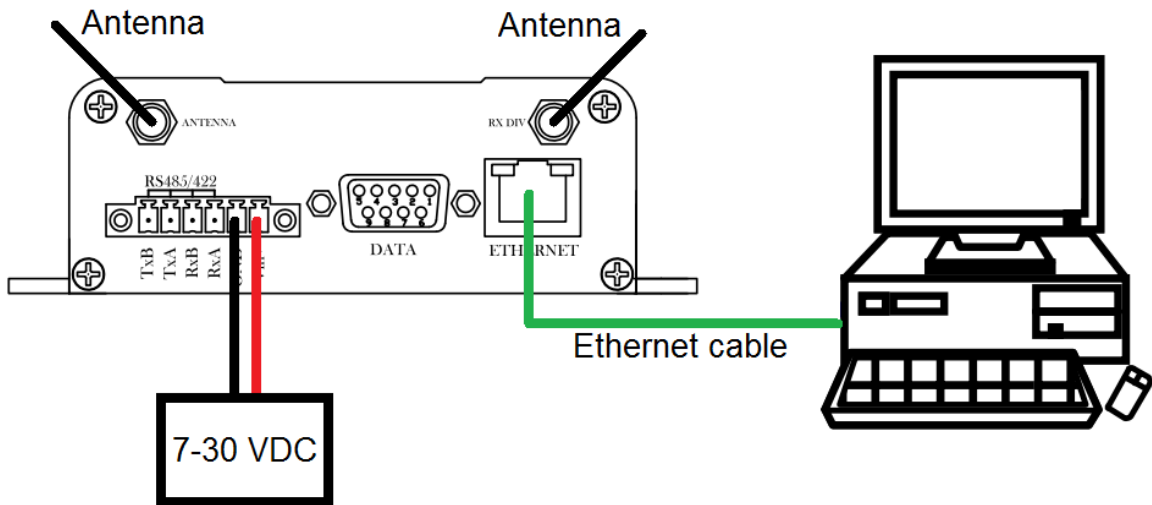

Figure 11. Connection diagram of GXX-4GM to a PC

6. Mounting

6.1. GXX-4GM

The GXX-4GM router for GMSplus can be mounted on horizontal or vertical surfaces using 4 bolts according to the below drawing
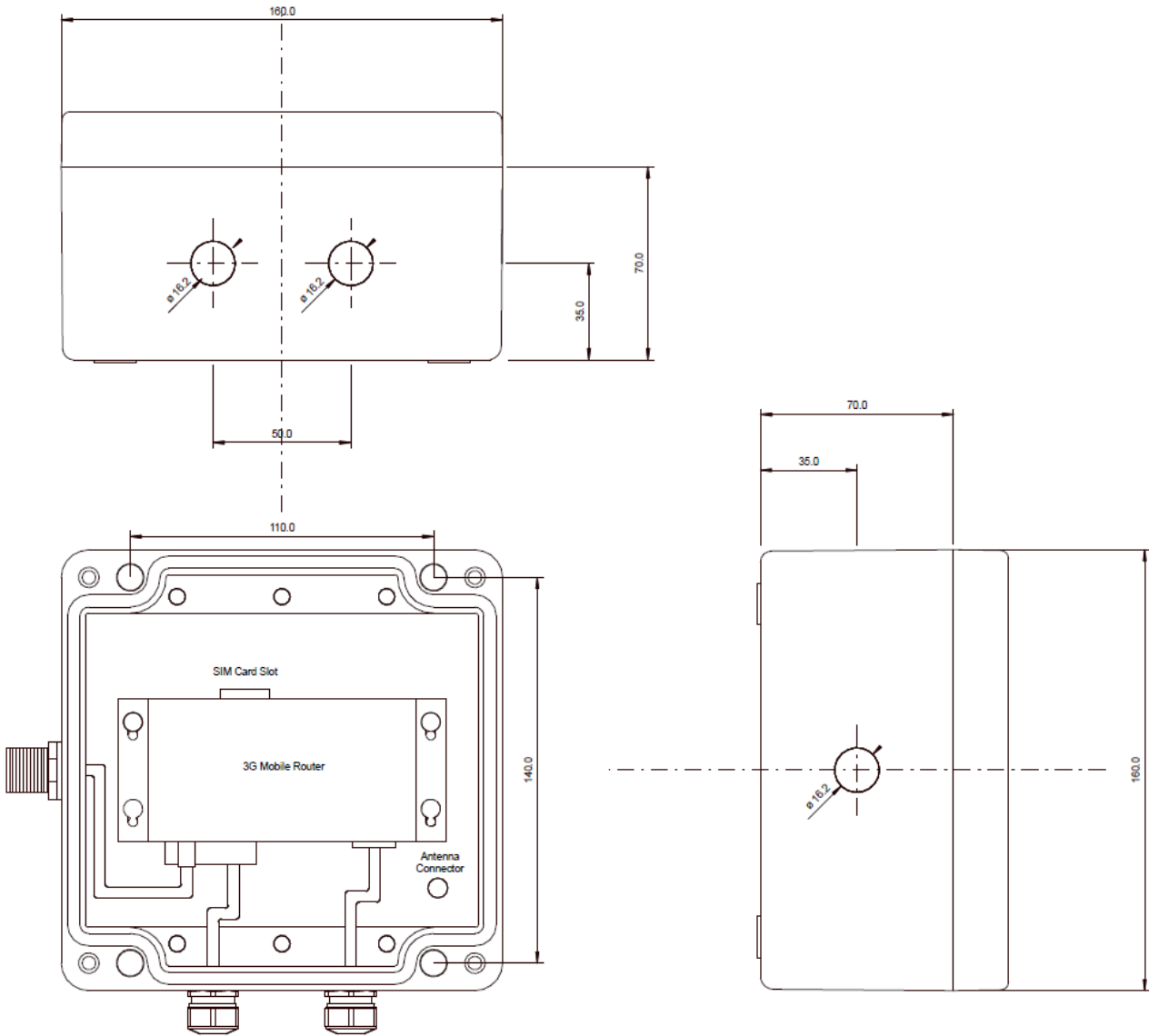

Figure 12. Drawing for mounting of GXX-4GM (units: mm)

6.2. GXX-4GMPC

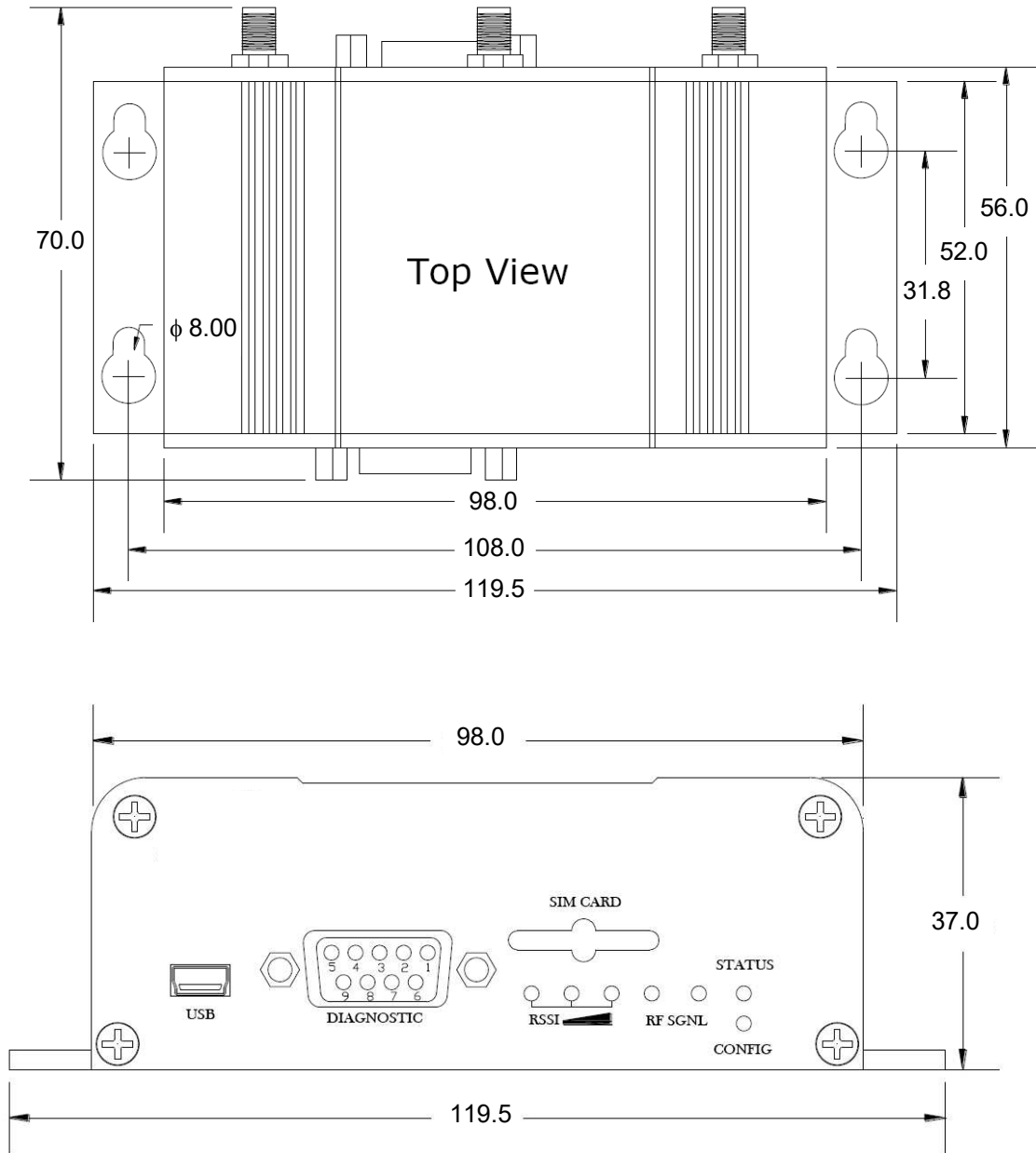The bare modem can be mounted on horizontal or vertical surfaces using 4 bolts according to the below drawing.

Figure 13. Drawing for mounting of GXX-4GMPC (units: mm)