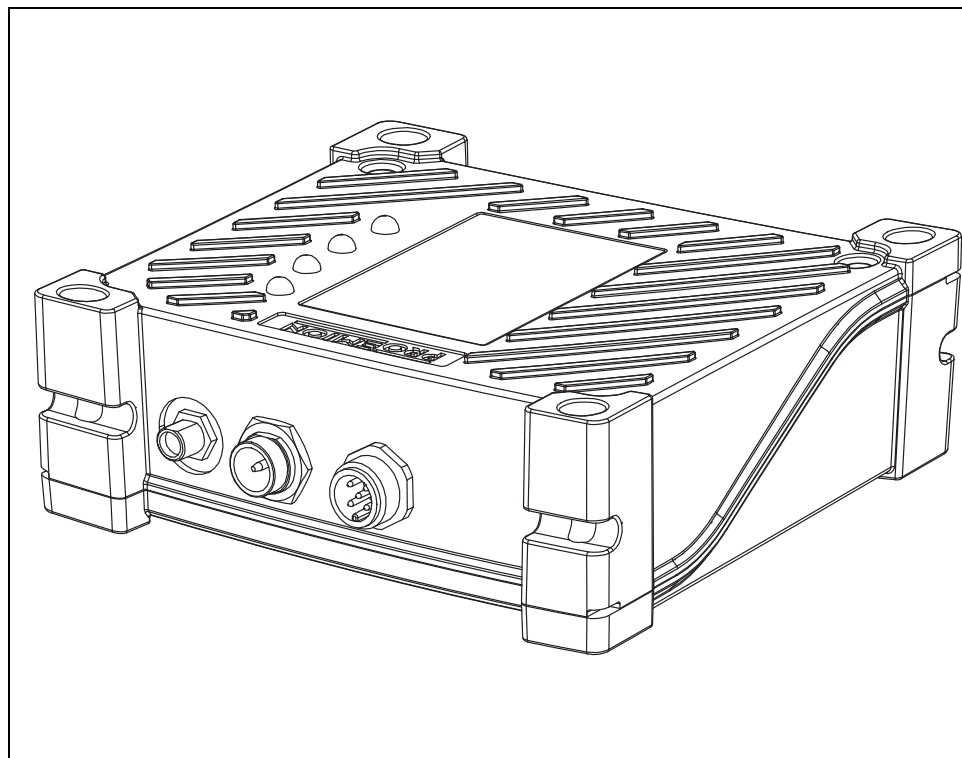


IQAN-G3

Instruction book

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1	Introduction	1
	Safety symbols	1
2	Precautions	2
	Special considerations	2
	Health Care	2
	Air traffic	2
	Explosives	2
	Electronic equipment	3
	Operation	3
	Antenna	3
	IMPORTANT!	3
	Loss/theft of the SIM card or the radio modem	3
	Power Supply	3
	Disposal	3
	Start-up, maintenance, and diagnostics	3
3	Quick start guide	5
	What do I need to do to get started with remote diagnostics?	5
	Hardware	5
	Software setup/configuration steps	5
4	Markings/Approvals	9
	Compliance with FCC	10
5	Product description	11
	General	11
	System overview	11
	Communication	12
	CAN	12
	GSM/UMTS	12
	GNSS	12
	System Diagnostics	12
	SIM Card	12
	Antenna	13
6	Mounting	14
	Mounting the IQAN-G3	14
7	Installation	15
	Connector, C1	15
	Connector pin assignments	15
	Mobile radio antenna (Combi antenna)	15
	Antenna connector	15
	Installing your own SIM card	15
	Opening the enclosure	16
	Inserting the SIM card	16
	Supply voltage	17
	Connecting of Supply Voltage	17
	Polarity reversal	17
	Communication	18
	CAN connection	18
	Web portal for activation and modem management	18
	Create a new customer account	18
	Activate the modem	19
	Web portal support	20

8	Start-up	21
	Start-up procedures	21
	Starting the control system	21
	Prepare for system start	21
	Start the system	21
	Appendix A	22
	IQAN-G3 Technical Overview	22
	Absolute Maximum Ratings	22
	Environmental ratings	22
	Recommended Operating Conditions	23
	System	23
	Appendix B	24
	LED messages and actions	24
	LED indicators showing different IQAN-G3 modes	24
	Appendix C	25
	Dimensioning of the IQAN-G3 module	25

1 Introduction

These instructions are to be used as a reference tool for the vehicle manufacturer's design, production, and service personnel.

The user of these instructions should have basic knowledge in the handling of electronic equipment.

Safety symbols

Sections regarding safety, marked with a symbol in the left margin, must be read and understood by everyone using the system, carrying out service work or making changes to hardware and software.

The different safety levels used in this manual are defined below.



WARNING

Sections labeled *WARNING* with a caution symbol in the left margin, indicate that a hazardous situation exists. If precautions are not taken, this could result in death, injury, or property damage.



NOTICE

Sections labeled *NOTICE* with a notice symbol in the left margin, indicate there is important information about the product. Ignoring this could result in less than optimal performance, or damage to the product.

2 Precautions

Work on the hydraulics control electronics may only be carried out by trained personnel who are well-acquainted with the control system, the machine and its safety regulations.



WARNING

Make sure that you have sufficient knowledge before designing, modifying or servicing the control system.

Read the relevant sections of this document before conducting any work on the control system.



WARNING

This product is not field repairable.



NOTICE

As much as possible of the welding work on the chassis should be done before the installation of the system. If welding has to be done afterwards, the electrical connections on the system must be disconnected from other equipment. The negative cable must always be disconnected from the battery before disconnecting the positive cable. The ground wire of the welder shall be positioned as close as possible to the place of the welding. The cables on the welding unit shall never be placed near the electrical wires of the control system.

Special considerations

Health Care

When in a hospital or other health care facility, observe the restrictions on the use of mobiles. Switch the IQAN-G3 off, if instructed to do so by the guidelines posted in sensitive areas. Medical equipment may be sensitive to RF energy.

The operation of cardiac pacemakers, other implanted medical equipment and hearing aids can be affected by interference from IQAN-G3's antennas placed close to the device. If in doubt about potential danger, contact the physician or the manufacturer of the device to verify that the equipment is properly shielded. Pacemaker patients are advised to keep the IQAN-G3 and its antennas away from the pacemaker while it is on.

Air traffic

Switch off the IQAN-G3 before boarding an aircraft. Make sure it cannot be switched on inadvertently. The operation of wireless appliances in an aircraft is forbidden to prevent interference with communications systems. Failure to observe these instructions may lead to the suspension or denial of cellular services to the offender, legal action, or both.

Explosives

Do not operate the IQAN-G3 in the presence of flammable gases or fumes. Switch off the IQAN-G3 when you are near petrol stations, fuel depots, chemical plants or where blasting operations are in progress. Operation of any electrical equipment in potentially explosive atmospheres can constitute a safety hazard.

Electronic equipment

IQAN-G3 receives and transmits radio frequency energy while switched on. Remember that interference can occur if it is used close to TV sets, radios, computers or inadequately shielded equipment.

Follow any special regulations and always switch off the IQAN-G3 wherever forbidden, or when you suspect that it may cause interference or danger.

Operation

The device must not be operated in machines and applications where life depends on the proper operation of this piece of equipment.

Antenna



NOTICE

Operation without antenna can destroy the radio modem!

The antenna used for the IQAN-G3 must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

IMPORTANT!

IQAN-G3 devices operate using radio signals and cellular networks. Because of this, connection cannot be guaranteed at all times under all conditions. Therefore, you should never rely solely upon any wireless device for essential communications.

Remember, in order to transmit or receive any type of data, the IQAN-G3 must be switched on and in a service area with adequate cellular signal strength.

With the IQAN-G3, an emergency call is not possible.

Loss/theft of the SIM card or the radio modem

To prevent misuse immediately inform your network operator in case of loss or theft of the SIM card or the radio modem.

Power Supply

Be sure to have a power supply that is capable of peak currents of up to 500 mAmps at 6 V DC. Otherwise the IQAN-G3 will not register with a network provider.

For a list of current consumptions at different supply voltages, see Appendix A, on page 22.

Disposal

Observe your local/national regulations when disposing the device and its package.

Start-up, maintenance, and diagnostics

For all personnel carrying out installation, commissioning, maintenance or troubleshooting.



WARNING

Work on the hydraulics control electronics may only be carried out by trained personnel who are well-acquainted with the control system, the machine and its safety regulations.

Before you start,

Read section "Start-up", on page 21.

Additional information for service

Mounting and maintenance instruction book.

Additional information for diagnosing the system

For information, see Appendix B, on page 24, in this document.



NOTICE

It is required to download the operating system 4.0 or later to enable full functionality of the modem in IQANdesign platform systems.



NOTICE

The IQAN-G3 functionality requires the following:

- SIM card from your preferred Network operator or activation of pre mounted SIM card.
- A subscription to a server solution that is offered by a Parker supplier. Contact your local Parker Sales office for additional information.

3 Quick start guide

What do I need to do to get started with remote diagnostics?

Hardware

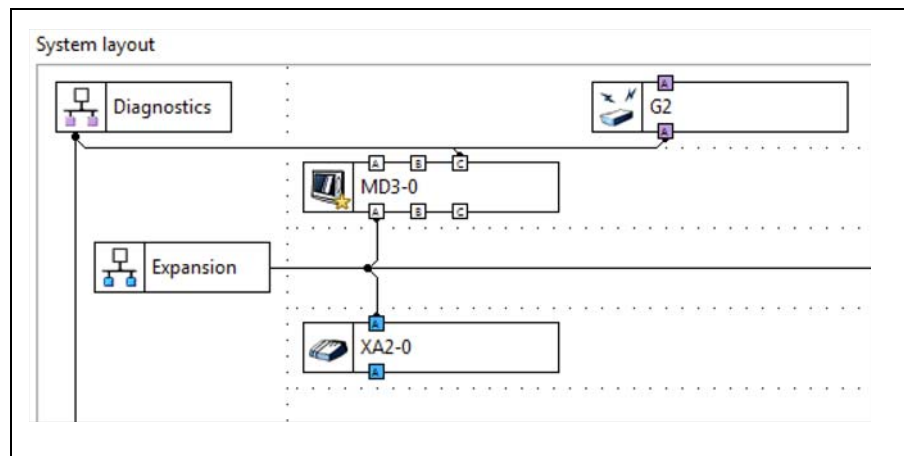
- IQAN-G3 modem hardware from Parker.
- Use the built in SIM card or SIM-card from your preferred supplier.
- CAN card for PC if own sim card is used.

Software setup/configuration steps

- Add IQAN-G2 to the application file. IQAN-G2/G3 modules have the same functionality.
- Configure the modem in IQANrun if own SIM card is used.
- Account on the Proemion server needs to be registered.
- Activate the modem on the server.
- Built in SIM card needs to be activated on Proemion web portal if used.

1. Add the G3 modem in your IQANdesign application by using the IQAN-G2 module.

IQAN-G3 communicates by using the CAN bus. In IQANdesign, all masters and the modem need to be connected to the diagnostic bus.



Add IQAN-G3 modem in IQANdesign.

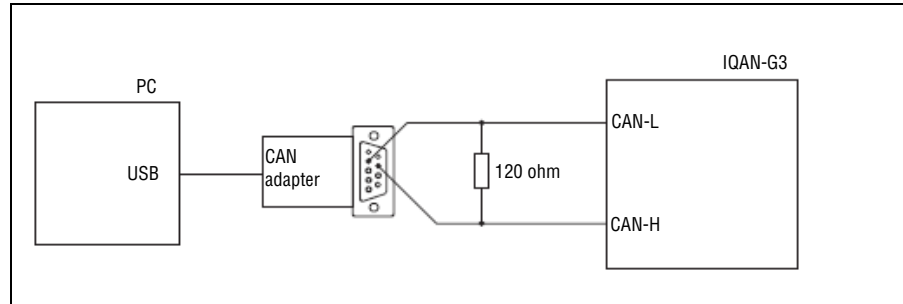
2. Configure the modem.



NOTICE

Configuration of the modem is only necessary if the built in SIM card is not used.

- Connect your PC CAN card directly to the IQAN-G3 CAN bus (diagnostic bus).



Connect to the IQAN-G3 modem for configuring.

- Configure the modem using IQANrun.
 - a Click Tools > Configure CAN modem.
 - b Select to not use the built in SIM card.
 - c Enter the settings from your GPRS internet service provider *including the SMSC*.



NOTICE

The SMSC must be entered, or the modem will not boot properly.

- d Enter SIM PIN code (if your SIM card is PIN code protected).
- e After configuration is done, the modem is ready to be installed in the machine.

CAN modem configuration

Modem settings
Here you can configure the parameters needed for the modem to connect to Internet. Also make sure to enter the correct PIN code for the SIM card you are using.

Internet service provider settings

Internet Access Point Name (APN)	Primary DNS
User name	Secondary DNS
Password	☐ Enable roaming data connection

SIM settings

☐ Use built-in SIM card

SIM PIN code	SMS service center (SMSC)

Modem info

Network provider	Signal strength	Network status
-	-	☐ Unknown
Server connection status		
☐ Not connected to internet	Test Server Connection	

Modem activation data

IMEI number	Activation serial number
- Copy	- Copy

Enter settings from your GPRS internet service provider (above values are example only).

**NOTICE**

If necessary, the correct PIN code must be set in the unit (using IQANrun) *before* mounting the SIM card, otherwise the SIM card could be locked.

If this happens a PUK (PIN Unlock Key) code is required to unlock the SIM card.

3. Create Proemion Account (first time only)

Before activating your first modem you need to create a Proemion account at <https://parker.proemion.com>.

Create a new account (one time) with user name and password.

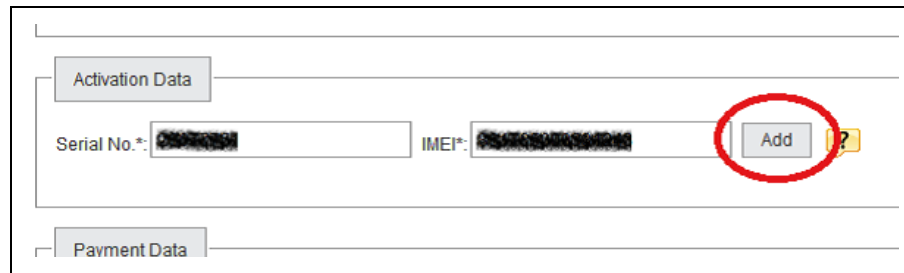
4. Activate the modem

Before you can start to use the modem you need to activate the modem on your Proemion account. You also need to have the IMEI and Serial number on the modem available to complete the registration.



IMEI number and serial number on the IQAN-G3 unit.

- Login to <https://parker.proemion.com> using your Proemion username/password.
- Select Service > Activation form to activate your modem.
- Fill out the form with billing address, modem activation data and payment details.
Hint: modem activation data can be copied from IQANrun modem configuration.



Don't forget to click the "Add" button after entering modem data.



NOTICE

Modem activation will take maximum of 24 hours (office time).

Forms submitted on Friday may result in modem activation occurring on Monday.

4 Markings/Approvals



Declaration of Conformity

We: Parker Hannifin Manufacturing Sweden AB
Electronic Controls Division
Located at: Mölnlycke Fabriker 14
S-435 35 Mölnlycke, SWEDEN
Tel. +46 31 750 44 00

Declare that the products identified herein comply with the essential requirements of the following EU directives:

2004/108/EC **EU EMC Directive**
2011/65/EU **EU RoHS II Directive**

Harmonized standards:

ISO 14982:2009 Agricultural and forestry machines - Electromagnetic compatibility -
Test methods and acceptance criteria
EN 13309:2010 Construction machinery - Electromagnetic compatibility of machines
with internal electrical power supply
EN 50581:2012 Technical documentation for the assessment of electrical and
electronic products with respect to the restriction of hazardous
substances

Trade Name: Electrohydraulic Control Systems
Products: **IQAN-G3**

Signature of responsible party: 

Printed name of responsible party: Håkan Jisland
Position of responsible party: Operations Manager

Executed on November 30th 2015, at Mölnlycke, Sweden



NOTICE

The IQAN-G3 is designed to CE/FCC compliance.
CE covers the EEA (European Economic Area) Switzerland
FCC covers the USA.
Contact the manufacturer for use in other countries.

Compliance with FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Contains transmitter FCC ID: XPYLISAU200

- FCC Part 15/47 CFR Ch I (2014-07-24) Conducted Emission Limits
 - FCC Part 15/47 CFR Ch I (2014-07-24) Radiated Emission Limits
- regarding Part 15 of the FCC-rules (Class B digital devices)

Contact the manufacturer if there is anything you are not sure about or if you have any questions regarding the product and its handling or maintenance.

The term "manufacturer" refers to Parker Hannifin Corporation.



NOTICE

Loss of FCC certificate is possible

Only use antennas with a maximum gain of 4,25 dBi (850 MHz), 7,3 dBi (1700 MHz) and 2,74 dBi (1900 MHz).

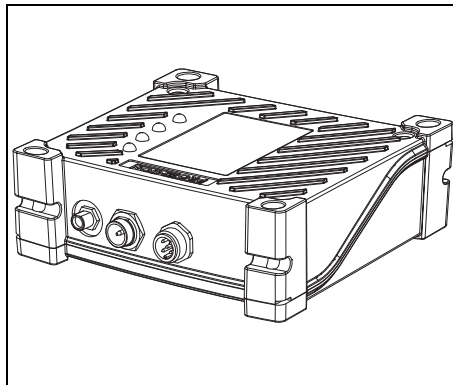
5 Product description

General

The IQAN-G3 is fully compatible with the IQAN-G2.

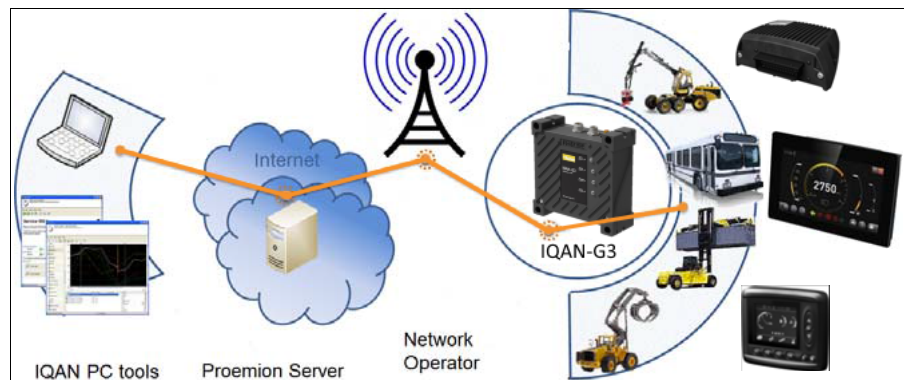
The IQAN-G3 is a modem unit that works with the MD4, MD3, MC3 and MC2 master modules in IQANdesign platform control systems.

The IQAN-G3 is designed to transmit remote diagnostic data information about devices that are connected to a CAN network using GSM telecommunication services and IQAN PC software tools.



The IQAN-G3 module.

System overview



The IQAN-G3 in a typical system.

The gateway module, IQAN-G3, is the remote diagnostic unit in an IQAN system. All IQAN-G3 devices are equipped with a 3G engine and a GPS receiver.



NOTICE

In order to operate the modem and use the services, a connection to an Internet server is required.

Before operation, the modem needs to be registered at <https://parker.proemion.com> and service needs to be set-up as a separate agreement between the customer and Proemion. Internet server connection is not covered by this product or document. See section "Web portal for activation and modem management", on page 18.

The functionality or services that comes with the IQAN-G3 for remote diagnostics are used together with IQAN PC tools. These services allow direct access to a mobile machine.

Communication

The communication interfaces are used for uploading/downloading applications or diagnostics and typically communicate with an IQAN master module.

CAN

The IQAN-G3 has 1 CAN interface. It is located in the M12-5 pin connector C,1 and is used to interface with IQAN master modules (e.g. IQAN-MD4).

GSM/UMTS

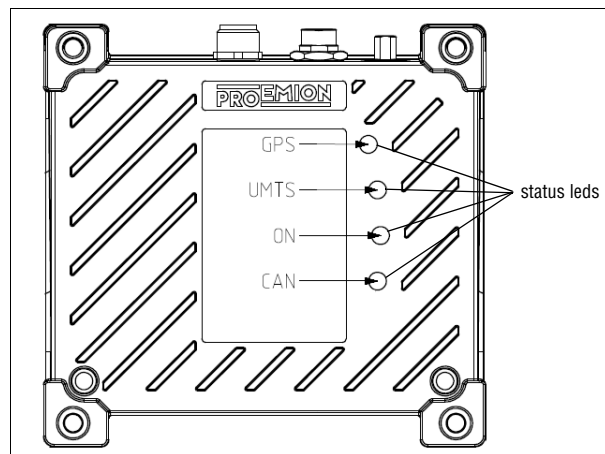
The IQAN-G3 has an embedded GSM/GPRS/Edge (Class 12) modem supporting GSM 850/900/1800/1900 bands and UMTS/HSPA 6-band supporting 800/850/900/1700/1900/2100 MHz bands.

GNSS

The IQAN-G3 has GNSS functions (Global Navigation Satellite System). It supports the satellite navigation systems GPS, GLONASS, and BeiDou (Max 2 systems in parallel).

System Diagnostics

The IQAN-G3 has 4 bicolor LED lights on front panel indicating system status and modem status.



Location of status LEDs.

For more information about the status and error messages, see Appendix B, on page 24.

SIM Card

The IQAN-G3 comes with a built in SIM card, no configuration of the modem is necessary when using this SIM card.

It is possible to install another SIM card to establish a link to your preferred GSM network provider. In order to use GPRS/3G internationally, use a SIM card that has this type of service enabled.

Antenna

In order to enable proper communication, external antennas have to be connected to the IQAN-G3.

There are different GSM antennas available for IQAN-G3. For prototyping and functional testing, we recommend Parker part no. 20085105.



WARNING

The antenna should not be mounted in the close environment of fuel tanks, vessels with explosives and insufficiently shielded electronic devices.

It is also not allowed to mount it inside enclosed metal constructions such as driver cabins because of the Faraday cage effect.

Do not shorten or lengthen the cable of the antenna.



NOTICE

Do not operate the unit GSM without antenna!

To avoid damage to the IQAN-G3, connect/disconnect the GSM antenna only if the power supply to the device is switched off.

6 Mounting

Mounting the IQAN-G3

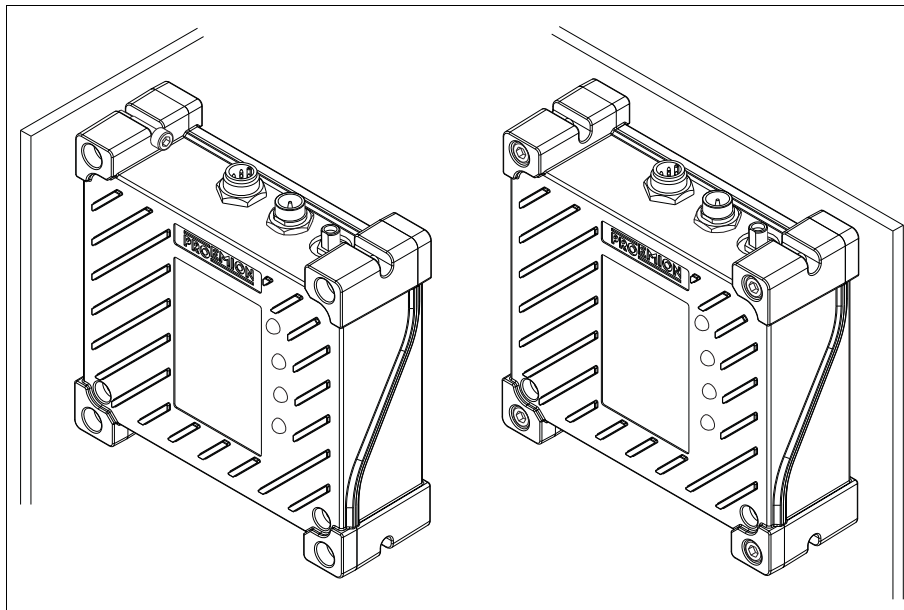
The IQAN-G3 does not have to be mounted in any specific orientation. 2 fastening methods, end mounting with 2 bolts, or flat mounting with 4 screws is acceptable.



NOTICE

The IQAN-G3 module should be mounted according to the following instructions:

- Locate the module eliminating the risk for the cabling to be folded, crushed or damaged in any way. Ensure the cabling cannot pull, twist or induce sideload on the connectors.
- Locate the module so that physical impact is avoided.
- Locate the module so that air can circulate to eliminate excess heat. Ensure that no external heat, e.g. from the engine or heater, is transferred to the module.
- Locate the module to protect it from pressure washing and water directly spraying on the connector or similar.
- Locate the module so the LEDs are visible.



Approved fastening methods of the IQAN-G3.



NOTICE

The IQAN-G3 module must not be placed in any marine related or similar continuously damp environment without external protection.

7 Installation

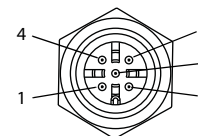
Connector, C1

Cable kit

Parker no. 20077744

Type

M12-5, 2 m lgth, flying leads



Connector pin assignments

Logical Symbol	Pin No.	(I)input or (O)utput	Function description and/or Signal name(s)
+BAT	2	-	Power supply, positive.
-BAT	1	-	Power supply, negative ground
CAN-H	4	-	CAN high
CAN-L	5	-	CAN low

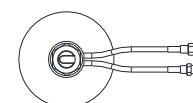
Mobile radio antenna (Combi antenna)

Antenna kit

Parker no. 20085105

Type

GSM/GPS low profile magnetic



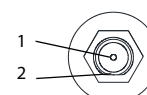
Antenna connector

Antenna

Parker no.

Cable 1 (Mobile) FME

1 Signal
2 Ground



Cable 2 (GNSS) SMA

1 Signal
2 Ground



Installing your own SIM card



NOTICE

The correct PIN code must be set in the IQAN-G3 (using IQANrun) before mounting the SIM card. Otherwise, the SIM card could be locked. A *PIN Unlock Key*, PUK code is required for unlock.

IQANrun configuration not required when using embedded SIM.



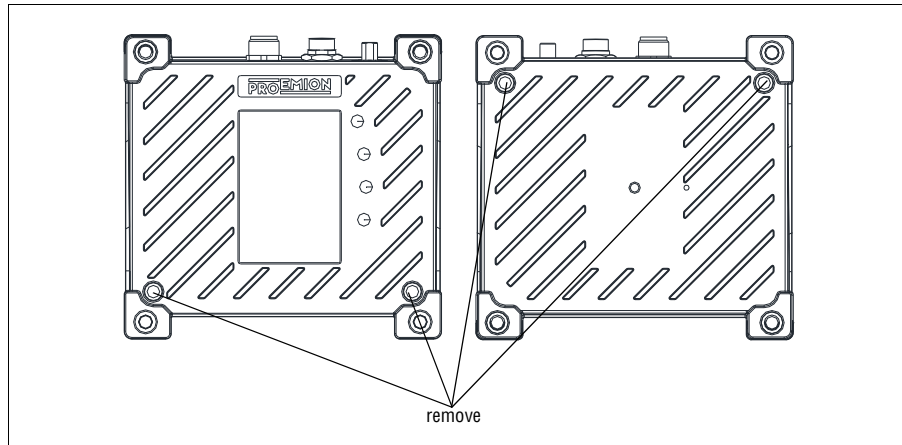
CAUTION

ESD precautions should be taken during disassembly. It is highly recommended to wear an ESD wristband when installing the GSM SIM card

Use ESD precautions and equipment when opening the enclosure to install the GSM SIM card. In the IQAN-G3, the card holder is placed inside the housing. The housing has to be opened to access it. The card holder is mounted to the PCB.

Opening the enclosure

To open the IQAN-G3 enclosure, remove the 4 screws holding the enclosure halves together (2 on label surface, 2 on the opposite side). Carefully pull the enclosure apart.



Opening the enclosure.



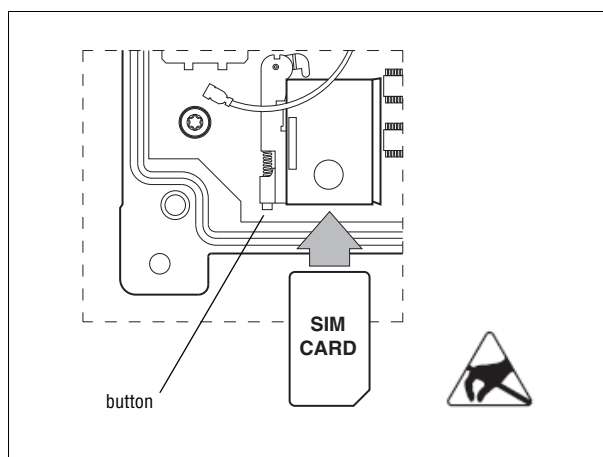
CAUTION

Possibility of electrostatic discharge when installing SIM card.

Use ESD precautions and equipment when installing the GSM SIM card.

Inserting the SIM card

Eject the SIM card socket by pressing the button next to the SIM card socket holder. Place the SIM card into the socket. Slide the SIM card socket into the SIM card holder making sure of the correct orientation (contact area down). Carefully push the two enclosure halves back together and install the 4 screws.



Inserting the SIM card.

Supply voltage

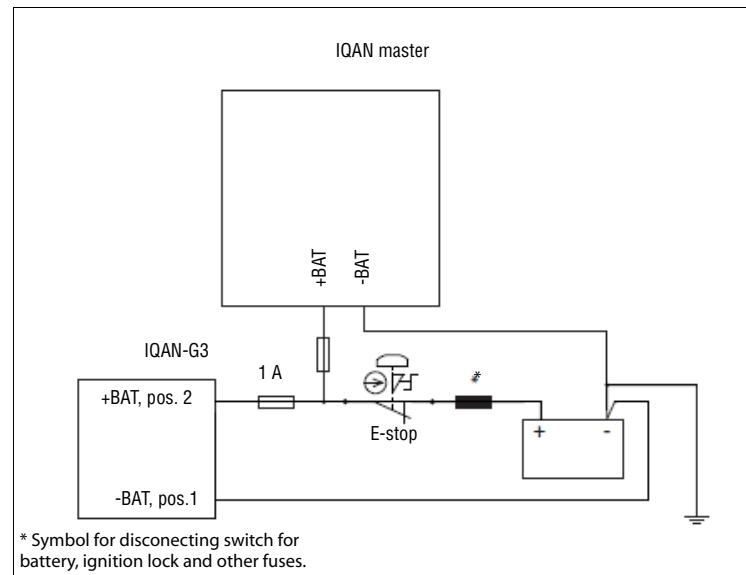


WARNING

Before any installation of the IQAN system can take place, make sure the ignition lock is turned off and the battery is disconnected.

Connecting of Supply Voltage

The supply voltage, should be within the operating range, see Appendix A, on page 22. Connect the supply voltage to +BAT, position 2 and -BAT, position 1. Protect the module by using a fuse. Requisite fuse level should be 1 A, fast (F).



Connecting the voltage supply.



NOTICE

Connect the modem to the same power and ground as the IQAN master.

The power supply must be common to both the modem and the master unit to ensure trouble free communication. Most importantly, the ground connection (-BAT), must be the same.



NOTICE

Do not use the chassis as the negative terminal.

Polarity reversal

The IQAN-G3 module is protected against power supply polarity reversal, provided an external fuse, max 1 A (Fast) is being used.

If this fuse is not used, polarity reversal can damage the unit.



WARNING

Do not connect the housing to Ground externally. This will suspend the reverse voltage protection of the power supply. Applying a reverse voltage in this case will destroy the supply circuits.

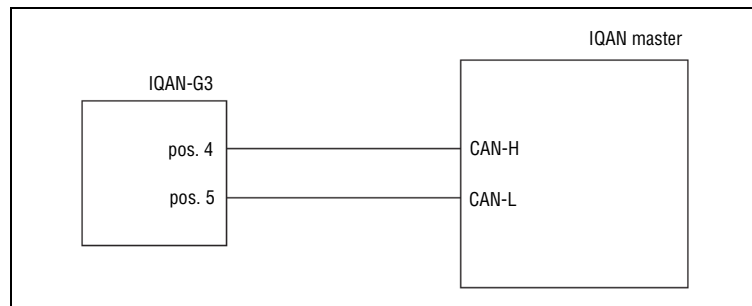
Communication

CAN connection

The IQAN-G3 has a *CAN interface* in connector C1 to communicate with IQAN master modules to provide them with remote diagnostic capabilities.

The signals on the CAN connection terminals CAN-Low and CAN-High must match the signals on the CAN terminals of the connected devices.

IQAN master



Connecting IQAN master to IQAN-G3.

Web portal for activation and modem management



NOTICE

The IQAN-G3 modem must be configured using IQANrun to enable internet access.

Create a new customer account

For first time modem registration, go to the following URL:

- <https://parker.proemion.com>

Follow the instructions to register a new account.

Web portal log-in page.

Create user account dialog box.

After registration, you will be able to log in to the web portal.

Activate the modem

To be able to operate the IQAN-G3, you will need to activate the modem on the web portal. To register (activate) the modem, use the activation form.

Access the Activation form.

For registration you will need to have the modem:

- Serial number
- IMEI number

This will be found on the IQAN-G3 and IMEI labels on the unit.



NOTICE

When activating the modem, it can take up to 24 hours before the modem is registered and ready to use.



NOTICE

An account registration fee will be charged against your account when you register the first modem.

Web portal support

For support and additional answers to questions about the web portal, please contact:

PROEMION GMBH

Donaustr. 14
36043 Fulda, Germany
Contact Germany
Phone: +49 661 9490-600
Fax: +49 661 9490-666
E-mail: info@proemion.com

PROEMION CORP.

711 E. Monument Ave, Ste 310
Dayton OH 45402-1490, USA
Contact USA
Toll-Free: 877 RMCAN-US
Phone: +1 937 558 2211
E-mail: info@proemion.com

Online support

<http://support.proemion.com/>

8 Start-up

Start-up procedures

This chapter contains instructions for action to be taken in connection with the initial start.



WARNING

Risk of injury!

If the control system is not fitted properly, the machine could move uncontrollably. The machine's engine shall not be started before the control system is completely fitted and its signals are verified.

Starting the control system

Start the control system as follows:

- Prior to start, all modules and cables are to be fitted correctly.
- Check fuses, i.e. make sure that the supply voltage to the modules is equipped with the correct fuse.
- Make sure that connections for supply voltage and return lines are correct in the cable's conductor joint.
- Make sure an emergency stop is installed.
The emergency stop should disconnect the supply voltage to all modules. Alternatively, the emergency stop may also shut off the diesel engine or a dump valve, and with that, depressurize the hydraulic system.

Prepare for system start



WARNING

Make sure no one is in dangerous proximity to the vehicle to avoid injuries when it starts.

Prepare for the initial system start as follows:

- The engine for the hydraulic system's pump shall be in off position.
- Make sure that all connectors are properly connected.
- Turn on the control system.
- Make sure that voltage is being supplied to all modules; the power/status diode shall be illuminated on all modules. Also, make sure that the master is in contact with all modules by reading the master's display.
- Make sure the emergency stop is functioning properly.

Start the system

Start the system as follows:

- Start the engine for the hydraulic system's pump, assuming that the above mentioned inspections have been carried out and shown correct values.
- Calibrate and adjust input and output signals according to the instructions related to the master menu system and check each and every output function carefully.

Appendix A

IQAN-G3 Technical Overview

Absolute Maximum Ratings^a

Parameter	Limit values			Unit	Remark
	min.	typ.	max.		
Ambient temperature, T _{AOP}	- 30		+75	°C	
Storage temperature, T _{AST}	- 40		+85	°C	
Voltage supply on +BAT	6		36	V	Reverse polarity protected with 1A fuse.
Voltage on any pin with respect to -BAT			32	V	Antenna signals excluded

a. The "Absolute Maximum Ratings" table lists the maximum limits to which the device can be subjected without damage. **This doesn't imply that the device will function at these extreme conditions**, only that, when these conditions are removed and the device operated within the "Recommended Operating Conditions", it will still be functional and its useful life won't have been shortened.

Environmental ratings

Parameter	Remark
EMC CISPR25:2002, Radiated emission ISO 7637-2:2004, Conducted emission ISO 11452-4:2005, Conducted susceptibility ISO 11452-2:2004, Radiated susceptibility ISO 7637-2:2004, Conducted transients susceptibility	30 - 1000MHz 75/-100 V @ 12 V, 150/-450 V @ 24 V 20 - 80 MHz, 1 kHz, 80% AM, 60 mA 80 - 2000 MHz, 1 kHz, 80% AM, 30 V/m Pulse 1, 2b, Level II and Pulses 2a, 3a, 3b Level 3 ISO 16750-2:2010 Pulse 4 Us=6V and 10 pulses, Pulse 5a Us=151V and 10 pulses 8KV (contact), 15KV (air) 15KV (contact), 25KV (air)
ESD ISO 10605:2008, ESD, Operation ISO 10605:2008, ESD, Handling	8KV (contact), 15KV (air) 15KV (contact), 25KV (air)
Mechanical environment EN60068-2-6, Test Fc, Random vibration EN 60068-2-27:2008 Ea, Shock EN 60068-2-29:1987 Eb, Bump	(sinusoidal 10...500Hz/ f<22Hz: 5mm / f>22Hz: 5g / 3axis XYZ / 3h per axis) 30 g, 11 ms, 3 * 6 dir 15 g, 11 ms, 500 * 6 dir
Climate environment IP65 Enclosure, water & dust protection EN 60068-2-52:1996 Kb Salt mist EN 60068-2-30 Db: 2006-06 Damp heat cyclic EN 60068-2-14 Na: 2010-04 Heat, storage EN 60068-2-14 Na: 2010-04 Cold EN 60068-2-14 Nb: 2010-04 Change of temperature	(96h, 4 cycles, Level 3) (only housing) (55°C, 95% r.H., 2 cycles) (3h at -40, 3h at +85°C, 10 cycles) (3h at -40, 3h at +85°C, 10 cycles) (3h at -30, 3h at +75°C, 10 cycles) (3h at -30, 3h at +75°C, 10 cycles)

Recommended Operating Conditions^a

Parameter	Limit values			Unit	Remark
	min.	typ.	max.		
Recommended operating temperature, T_{ROC}	-30		+75	°C	
Voltage supply, V_{BAT}	6		36	V	

a. Recommended operating conditions are given for maximum and minimum conditions where normal performance is still available from the device. Once the normal operating conditions are exceeded, the performance of the device may suffer.

Also, the operating temperature for the manufacturer's SIM card may differ from the IQAN-G3 ratings. Consult the service provider to determine the temperature rating for the SIM card.

System

$T_A = +25\text{ °C}$ (unless otherwise specified)

Parameter	Limit values			Unit	Remark
	min.	typ.	max.		
Weight		535		grams	
Current consumption, while GSM transmission in progress			150	mA	@24 Vdc

Mobile radio network

Parameter	Remark
GSM/GPRS/Edge class 12	850/900/1800/1900 MHz
UMTS/HSPA 6-Band	800/850/900/1700/1900/2100 MHz

CAN

Parameter	Remark
Number of CAN buses	1
CAN specification	2.0A and 2.0B
CAN bus speed (max)	1 Mbit/s
CAN protocol	IQAN diagnostic protocol
Protection	SCB, SCG

GNSS

Parameter	Remark
Accuracy	2.5 m horizontal (GPS/GLONASS)
Update rate	1 Hz
GNSS systems	NAVSTAR GPS, GLONASS and BeiDou (Max. 2 system in parallel)

Appendix B

LED messages and actions

If an error is detected, a message will be presented on the LEDs.



WARNING

An error message could indicate that a hazardous situation exists. If precautions are not taken, this could result in death, serious injury or major property damage.

LED indicators showing different IQAN-G3 modes

LED /color	Condition	Description
GPS /green	Off	GPS is not active.
	On	Valid GPS data is available.
	Blink 	No GPS reception.
GPS /red ^a	Off	GPS antenna is ready.
	On	Malfunction of GPS antenna.
GSM /green	On	Connected, TCP/IP active
	Blink 	Connecting to a server
	Blink 	Initializing GSM engine
	Blink 	Resetting GSM engine
	Blink 	GSM idle, ready to connect
GSM /red ^b	On	Fatal error
	Blink (irregular)	TCP/IP data receiving/sending
ON /green	Off	No power, or outside limits
	On	Power
ON /red	On	Power outside limits
CAN /green	On	Not connected/no data on CAN bus
CAN /red ^c	On	CAN error
	Off	No CAN data sending/receiving.
	Blink (irregular)	CAN data receiving/sending

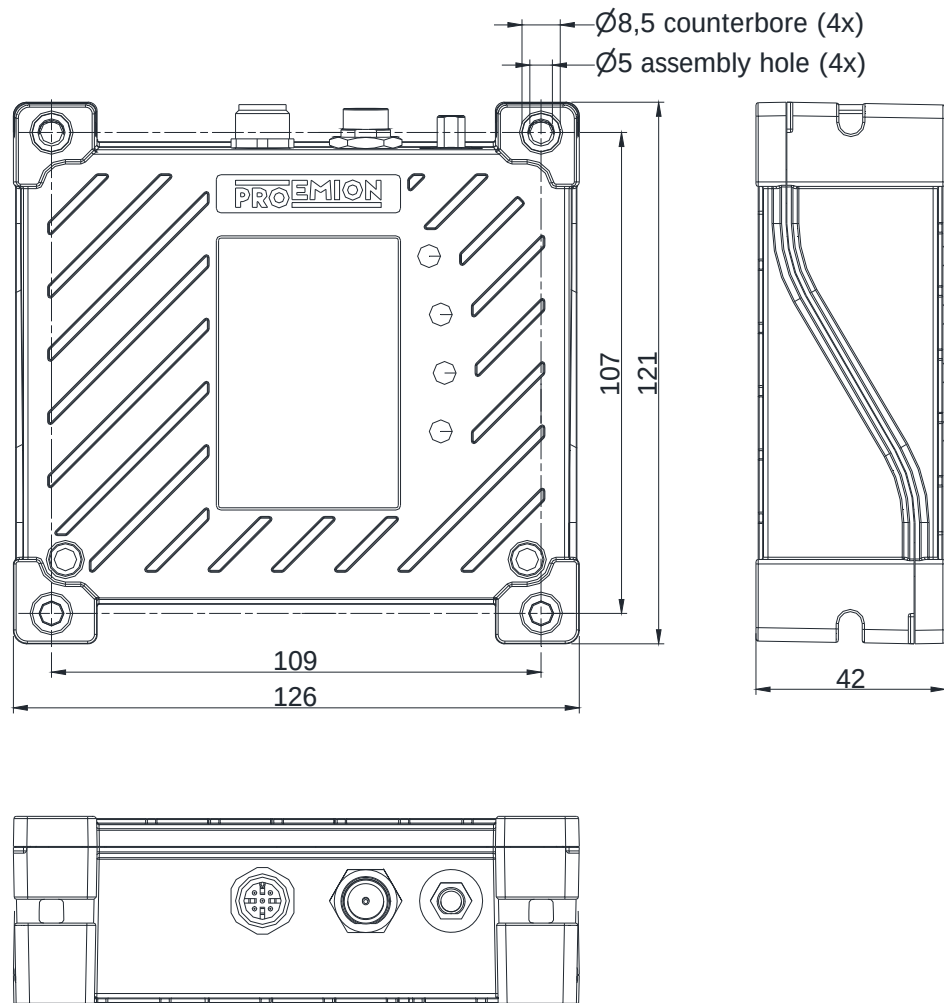
a.) may appear to be orange or yellow in modes when the green LED is still lit.

b.) may appear to be orange or yellow in modes when the green LED is still lit.

c.) may appear to be orange or yellow in modes when the green LED is still lit.

Appendix C

Dimensioning of the IQAN-G3 module



Unit = mm

For latest information visit our website www.iqan.com

Information in this instructionbook is subject to change without notice

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