GreaseBoss Fixed Plant Gateway GBLG20F • v1.0.0 • 21af192 Generated 2026-05-17 09:20

GREASEBOSS FIXED PLANT GATEWAY USER MANUAL

This manual is for end users, operators and maintainers of the GreaseBoss Fixed Plant Gateway deployed on site.

The GreaseBoss Fixed Plant Gateway is a multifunctional device designed to facilitate seamless communication between GreaseBoss Endpoints, Head Units, and GreaseBoss Cloud. This secure and highly configurable gateway ensures robust data transmission and connectivity, even in challenging industrial environments. With an external antenna to enhance cellular network access and customisable configurations for each site, the Gateway is essential for efficient lubrication management.



SAFETY

Read this manual before installing, operating, servicing or removing the device.

- Isolate site power (AC mains or DC supply) before disconnecting or reconnecting the gateway power cable.
- The gateway is rated for 9–50 VDC at the router input; do not connect it to mains voltage directly or to any DC source outside this range. Voltages below 9 VDC or above 50 VDC can damage the device. When using the supplied AC adaptor, plug it into an appropriate 120 / 240 VAC mains outlet only.
- The gateway is a sealed pole-mount unit with no user-serviceable parts. Do not open the housing, it will void the IP67 rating and regulatory approvals.
- Do not modify, replace or remove the integrated antennas. The LTE / Wi-Fi / BLE antennas are integral to the housing and tampering will degrade coverage and may void regulatory approvals.
- When working at heights to install or inspect the gateway on a pole or mast, follow the site's working-at-heights procedures.

Intended use: acting as the cellular / Wi-Fi / OT-network backhaul for nearby GreaseBoss Endpoint and Head Unit devices in fixed plant installations (workshops, processing plants, fixed lubrication points), within the environmental and ingress limits in the *Tech Specs*.

PRODUCT OVERVIEW

The Fixed Plant Gateway is a ruggedised, weatherproof gateway built around a Teltonika RUTX11 router housed inside a QuSpot outdoor enclosure with integrated multi-protocol antennas. It collects data from nearby GreaseBoss Endpoint and Head Unit devices over Bluetooth Low Energy and forwards it to GreaseBoss Cloud via one of three backhaul options:

- **4G/LTE** with a SIM (single or dual). GreaseBoss may provide a Global SIM, or a user may supply their own. Private and Public LTE is supported.
- **Wi-Fi** to an existing site access point.
- **OT network plug-in** to the customer's wired network (no SIM).

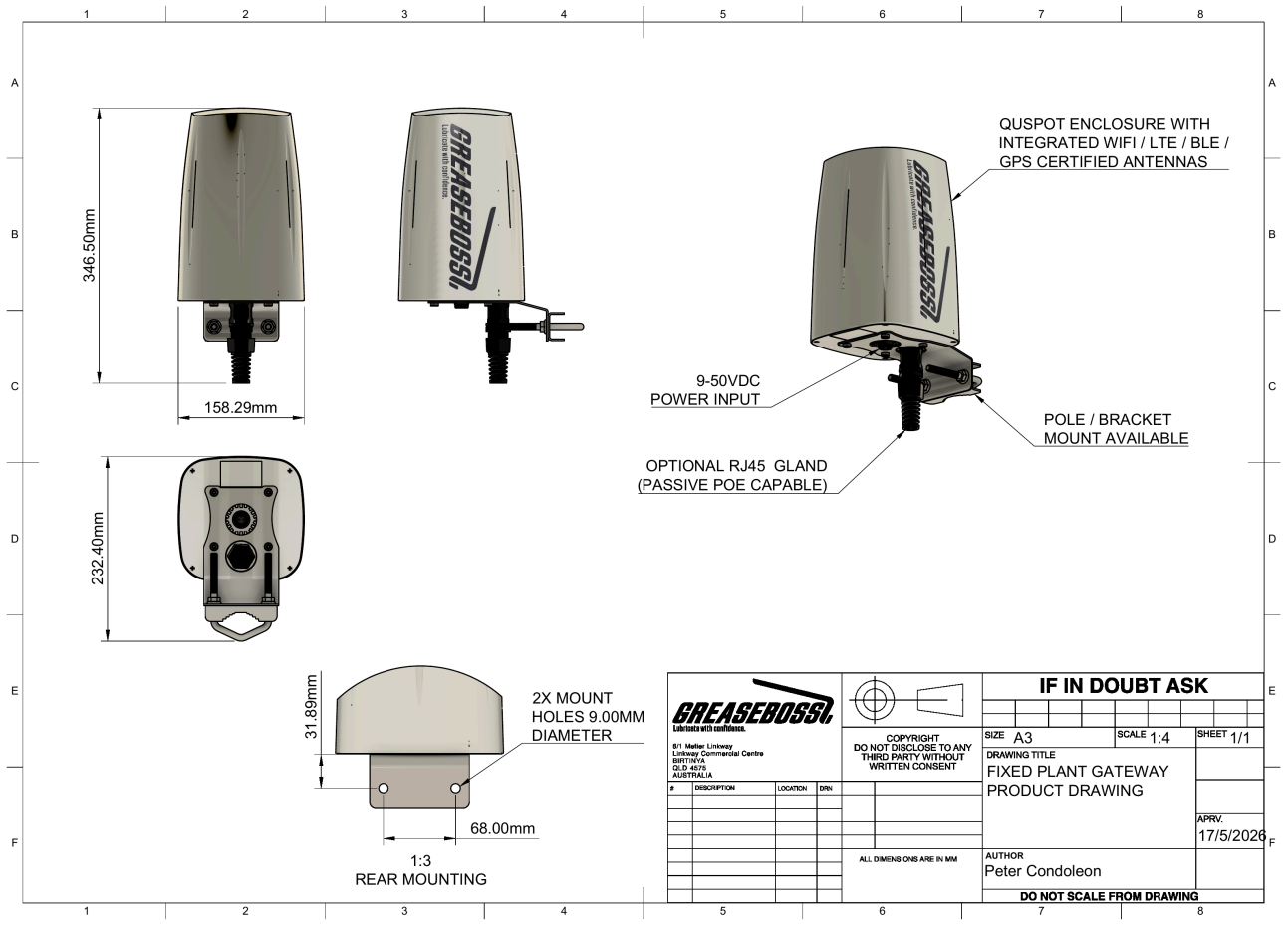
The housing exposes a RJ45 port via a sealed cable gland on the underside of the unit, which carries both data and power (Passive PoE). Alternatively, if RJ45 is not used a 2-pin circular connector is available to feed 9-50VDC to the device via a regional AC adaptor.



The cable gland, mounting plate and pole-mount clamp on the underside of the unit are shown below.



External features and mounting geometry are shown in the product drawing below.



SPECIFICATIONS

See *Tech Specs* for full mechanical, electrical and environmental data. Highlights:

- Teltonika RUTX11 router in a QuSpot AX11S outdoor enclosure (ABS, aluminium, PTFE)
- 1× RJ45 Ethernet port (Passive PoE capable)
- 4G LTE (dual-SIM), Wi-Fi 2.4 / 5 GHz, Bluetooth Low Energy — all via integrated antennas in the housing
- Power: 9-50 VDC, 14 W max; 120 / 240 VAC mains adaptor supplied
- Operating temperature –40 °C to +75 °C

- IP67
- Pole mount, Bracket Mount

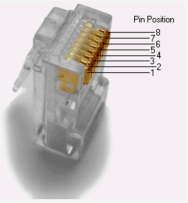
POWERING OPTIONS

The Teltonika RUTX11 gateway device can be powered in two ways. The Fixed Plant Gateway is shipped with a supplied regional AC mains adaptor to DC circular connector that plugs to the bottom of the device. The RJ45 Passive PoE port is also available for use with a compatible PoE injector.

MODE	VOLTAGE	PORT / PINS	NOTES
DC circular connector (2-pin)	9-50 VDC	2-pin DC socket on the router (factory-wired inside the QuSpot housing)	Primary mode. Takes priority if both sources are connected.
Passive PoE via RJ45 Port	9-50 VDC	DC+ on pins 4 & 5, DC- on pins 7 & 8	Used by a user-supplied PoE injector.

For Passive PoE, the pin assignment follows the “mode B / DC on spares” convention — DC+ on pins 4 & 5 (blue / white-blue), DC- on pins 7 & 8 (white-brown / brown). T568A and T568B wiring orders both work:

RJ45 pinout:

Pin	10/100 mode B, DC on spares		T568A Color	T568B Color	Pins on plug face (socket is reversed)
1		TX+	white/green stripe	white/orange stripe	
2		TX-	green solid	orange solid	
3		RX+	white/orange stripe	white/green stripe	
4	DC+	9-50 VDC	blue solid	blue solid	
5	DC+	9-50 VDC	white/blue stripe	white/blue stripe	
6		RX-	orange solid	green solid	
7	DC-		white/brown stripe	white/brown stripe	
8	DC-		brown solid	brown solid	

If both power sources are present simultaneously, the DC circular connector takes priority. When the device switches between sources it may briefly lose power and reboot.

WARNING — NOT 802.3AF / 802.3AT COMPLIANT

The RUTX11 is **not** compliant with the IEEE 802.3af-2003 (PoE) or 802.3at (PoE+) standards. Connecting the gateway to an 802.3af / 802.3at PoE switch or injector will damage the device. Use only a Passive PoE injector in the 9–50 VDC range.

WARNING — HIGH-VOLTAGE SUPPLY PEAKS

Some unregulated or low-quality DC supplies produce voltage spikes well above their rated output, especially on connect / disconnect. Use a high-quality regulated DC source. If feeding the unit from a >15 VDC supply, fit additional surge / transient protection upstream to suppress peaks.

WARNING — AVOID GROUND LOOPS

Do not bond the supply DC– to chassis or earth when another path (e.g. an antenna shield, a separately-earthed cable shield, or the pole structure itself) is also bonded to earth. The parallel earth path forces unintended current through the device PCB ground and may damage it. Reference the supply 0 V at a single point.

INDICATORS

The QuSpot housing is sealed and the RUTX11's port-side LEDs are not visible once installed. Instead, monitor the gateway's status via:

- **GreaseBoss Cloud Health Tab:** shows online / offline state, LTE signal strength (RSSI / RSRP), Wi-Fi link status and recent sync activity for each gateway.
- **Search for Gateway WiFi Hotspot:** use any wifi-enabled device, such as a smartphone or laptop, to search for the gateway's WiFi hotspot. The default SSID is will be the gateway's serial number (e.g. GBLG200000). Note this option is not available for sites where WiFi use is restricted and therefore disabled on the device.

If a gateway reports offline in GreaseBoss Cloud, see *Troubleshooting* before any physical intervention.

NORMAL OPERATION

Once installed and powered, the gateway runs unattended. It continuously monitors and accepts Bluetooth Low Energy connections from nearby GreaseBoss devices, queues their sync data, and forwards it to GreaseBoss Cloud over the configured backhaul. No operator interaction is required during routine use.

Do not power-cycle the gateway as a first-line troubleshooting step in the field. Contact GreaseBoss Support first, since a reboot can mask the underlying issue and delay diagnosis.

MAINTENANCE

ACTIVITY	INTERVAL	NOTES
Visual inspection	Per site service interval	Confirm the housing, mount and cabling are intact, mounting is secure, and the cable gland is tight. Check there is no cracking or UV damage on the QuSpot enclosure.
GreaseBoss Cloud health review	Weekly	Check the Health Tab for offline gateway status, weak RSSI from connected Devices, and LTE signal trend.
LTE signal check	If signal degrades	Confirm the unit has clear line of sight to the nearest cell tower; relocate or raise the pole if blocked by new structures or vegetation.
Firmware update	As advised by GreaseBoss	Performed remotely by GreaseBoss; no on-site action required.

If the gateway reports offline in GreaseBoss Cloud, see *Troubleshooting* before any physical intervention.

SUPPORT

Contact GreaseBoss Support with the following information ready:

- Asset name and Endpoint serial number (printed on the device label).
- Description of the issue and when it started.

- Screenshot of GreaseCloud showing Asset Health, Timeline and Diagnostics for the Endpoint.
- Photographs of the Endpoint and surrounding installation where physically accessible.
- Recent LED behaviour and any actions already attempted.

Email: support@greaseboss.com.au **Phone:** +61 7 3186 0203 **Web:** www.greaseboss.io

DECOMMISSIONING AND DISPOSAL

Isolate site power before disconnecting the gateway. Undo the cable gland and withdraw the RJ45 cable, fit the supplied dust caps to the connector and ethernet socket, and remove the gateway from its pole mount. Return the unit to GreaseBoss for refurbishment, failure mode analysis or controlled disposal.