Optimus
From Commtel

HUB KIT
INSTALL GUIDE

This guide provides the essential information for installing your Optimus Hub Kit.

To help you and your customer get the best out of the system, you can find more information: Click here.

HUB

Pre-installation Notes:

- A site signal network test is to be undertaken before installation. We always recommend doing a signal test with a 4G analyser to ensure that the SIM card being used has a stable 4G connection.

- Ensure the unit is turned off before inserting/ removing the SIM and plugging in/unplugging the antenna.

- We strongly recommend the PIN Defaults are changed at the point of installation.

- Auxiliary inputs are designed for volt-free exit release buttons only. Connecting a powered device or anything other than a volt-free contact may cause damage to the system.

- The 4G antenna is an external item that should be installed in the most suitable position to obtain maximum signal strength and be more than 200mm from a human body. This positioning should also allow for the avoidance of any likely vandalism.

Configuration Options

The optimal Hub Kit setup will vary depending on the specific location and usage requirements. Options include the choice of either a 4G or analogue Hub. Support for up to 4 Satellites without a screen or support for up to 3 Satellites with a screen.

*Cabling is required between the Hub and Satellites.

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Installation Instructions

Mount the back boxes to the wall, pillar, or post, ensuring that:

- Any swarf or debris is removed from inside the back box – the speaker has a magnet and may attract metal filings.

- The unit is sealed to prevent water ingress – use electronic grade silicone sealant to seal around all rear entry holes.

- Antenna and power leads are secured using the black plastic gland supplied (M20 x 1.5mm, standard electrical thread).

- Antenna and power leads have a loop before entering the back of the unit to prevent water ingress along the cable.

Mount the Hub Box:

The Hub housing is not weatherproof and must be installed in a dry, protected location such as a gate control box or an electrical cupboard.

- Insert the SIM card into the SIM card slot.

- Connect the antenna to the MMCX connection (push on/pull off).

Relay Connections:

- Connect the Power Relay and Opto Relays to your entry equipment. Relay ratings are printed on the PCB.

- Relays can be wired either:
  - From the Hub to the entry equipment, or
  - From the Satellite to the entry equipment (depending on the Satellite model).
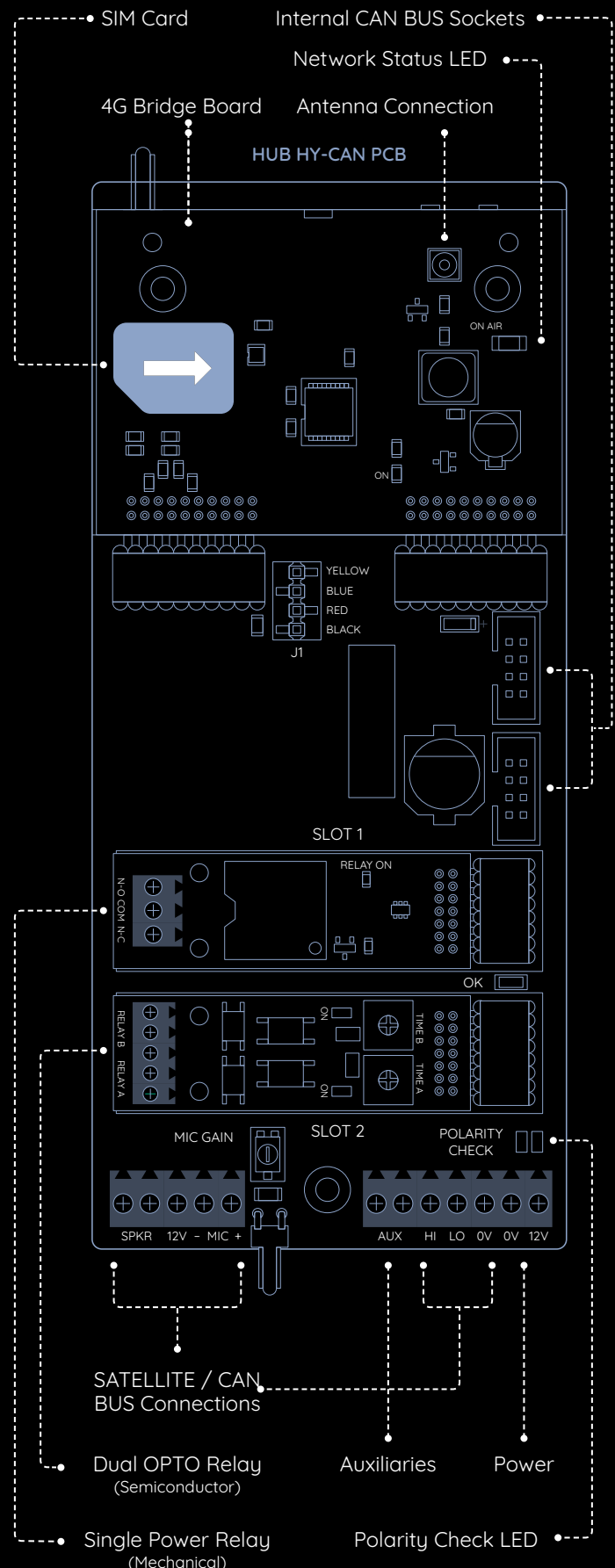
The HUB HY-CAN PCB comes with a 4G Bridge Board, Dual OPTO Relay (SLOT 1) and Single Power Relay (SLOT 2) as standard.

If a Landline Bridge Board is ordered, it will occupy the same space on the PCB as the 4G Bridge Board and will require an analogue phone line connection as opposed to a SIM Card.

Alternative Relays are:

- Lock Relay (Semiconductor Switching Device)

- Dual Power Relay (Mechanical)

If alternative relays are ordered they will already be inserted in the slots on the HUB HY-CAN PCB.

SIM Card

Internal CAN BUS Sockets

Network Status LED

4G Bridge Board

Antenna Connection

HUB HY-CAN PCB

ON AIR

ON

YELLOW
BLUE
RED
BLACK

J1

SLOT 1

RELAY ON

OK

RELAY B

RELAY A

TIME B

TIME A

ON

ON

MIC GAIN

SLOT 2

POLARITY CHECK

SPKR   12V – MIC +

AUX   HI   LO   0V   0V   12V

SATELLITE / CAN BUS Connections

Dual OPTO Relay
(Semiconductor)

Auxiliaries

Power

Single Power Relay
(Mechanical)

Polarity Check LED

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Installation Instructions
## (Continued)

Satellite Connections:

- Using an 8-core cable, connect 0V, 12V, HI, LO, MIC, and Speaker terminals from the Hub to each Satellite.

- Satellites can be wired in series or individually.

- Maximum distance from the Hub to the furthest Satellite: 300m.

- For units with screens, we recommend installing additional PSUs every 100m.

Connect Power:

- Connect power to the unit. The unit should begin its boot-up sequence.

Connecting a Telpad

If you are connecting a Telpad to this system, it must be wired into the CAN BUS connections of the I/O board or HY-CAN board, using a 4 core cable, connecting to the following terminals: 0V, 12V, HI & LO

ECO-SAT I/O Board

Relay x1
HUB Connections
CAN BUS
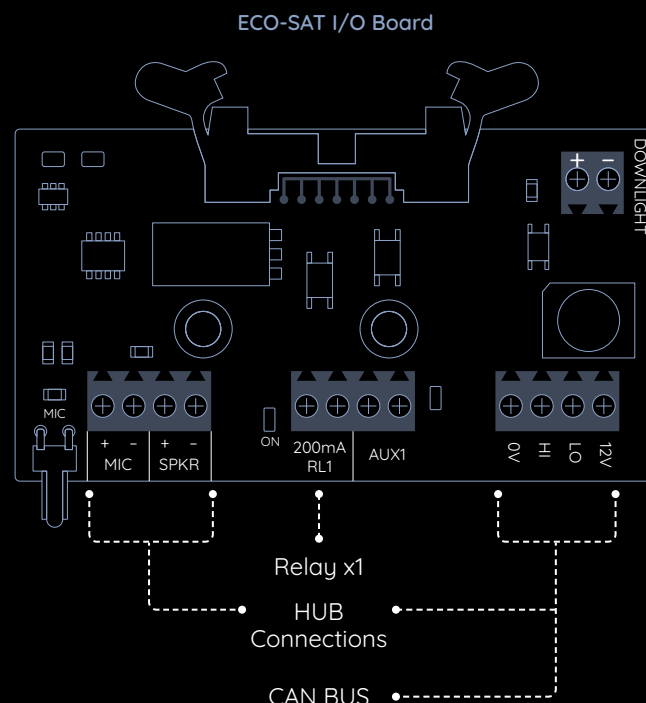
LED Status Indicators

LED Name	Board	LED Action	Indicates
Network Status LED	4G Bridge Board	Off (No Light)	No Power
		On (Solid Blue)	Trying to connect
		Blinking Blue	Connected
'OK' LED	Main PCB - Landline Configuration	Flashing Green	Normal operation
	Main PCB	Flashing Green	Signals RSSI: 1 flash = 1 bar. Also shows correct antenna connection, correct SIM card installation, and signal strength (RSSI). Flashes with a yellow tint when receiving a text message.
	Main PCB	Flashing with 1 second pulses	Not connected to the network.
	Bridge Board	On (Solid Green)	Normal operation
Polarity Check LED	Main PCB	Solid Green	Polarity OK
		Solid Red	12V & 0V crossed over

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App Initialisation and Configuration

The Commtel Optimus systems use dedicated apps for both programming and end-user control, designed to give you intuitive management and configuration.

Commtel CONFIG App
(The Programming App)

- The Commtel CONFIG app provides easy remote programming to fully control and configure your system.

- To start programming the system, you will need the intercom's serial number, SIM telephone number, and an assigned name.

- For user instructions within the app, click the help icon in the top right of the screen.

Commtel CONTROL App
(End User App)

- Your customers can control the entry equipment via the Commtel CONTROL app, which works using SMS commands.

- You will need to program your customers' mobile number into the unit as an authorised dial to open number for the Commtel Control App to work.

- For user instructions within the app, click the help icon in the top right of the settings screen.

- Please ensure customers pay particular attention to the contents of the safety message, which can be accessed in the bottom left corner on the app's front page.

Commtel CONFIG App

Simplify setup and management: remotely program all Commtel intercoms with the CONFIG app.

Commtel CONTROL App

Allows end-users to control their Command Hub system using the CONTROL app.

We're Here to Support You

If you require further guidance, please don't hesitate to reach out to our trusted technical support team. We're committed to ensuring a smooth setup process.

You can reach us by calling +44(0)1306 710120 – Option 1, or email: support@commtel.io

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