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Installation Guide
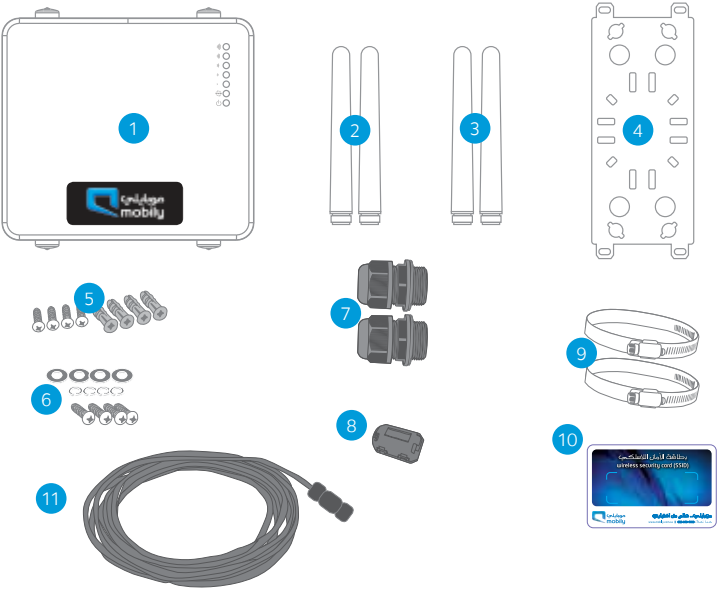
NTC-30 Series - Outdoor Industrial Router

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mobily

Contents

Package Contents

| ITEM	INTERFACE
1	Router
2	WiFi Antennas
3	3G Antennas
4	Mounting Bracket
5	Set of wall mounting screws
6	Set of mounting screws
7	Cable Glands
8	Ferrite Core
9	Hose clamp for pole mounting
10	Wireless Security Card
11	Power DC cable 10m (open ended)

Setting up your Router

SIM Card Installation

1. Remove the protective cap labelled SIM/Reset with a flathead screwdriver.

NOTE: If you don't have a flathead screwdriver or you're having problems, a small coin will do the trick.
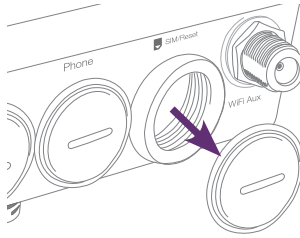
2. Place an activated SIM card into SIM card reader with the metallic part of the SIM card facing up.
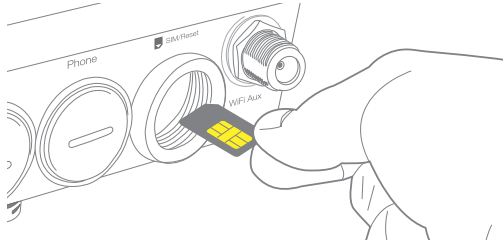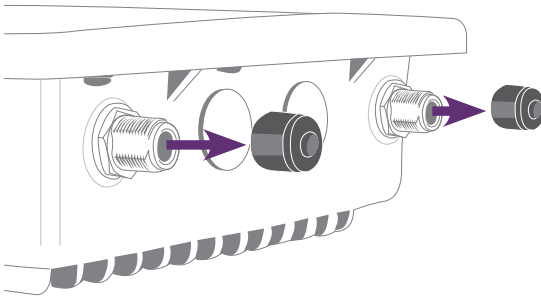
3. Push the SIM card in until the spring latches the SIM card in place. You should hear a click. If you need to remove the SIM card push inward again and the SIM will pop out.

4. Place the protective cap back on securely to ensure it is protected from water and dust (ensure IP-67 rating).
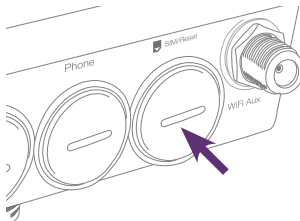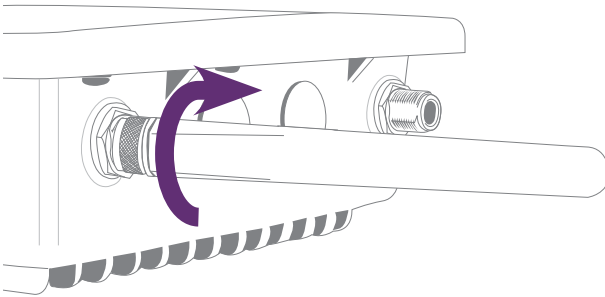
Installing the Antenna

1. Remove the black protective caps from the WiFi and 3G connectors.

2. Each of the antennas are labelled 3G and WiFi for easy installation. Connect the corresponding antenna to the antenna connectors by holding onto the metal part of the antenna and rotating it clockwise.

NOTE: There will be a small gap when you tighten the antenna, when you meet sufficient resistance the antenna is connected. Take care not to overtighten the antenna or use the plastic part of the antenna to tighten as this could damage the antenna.

Powering your Router

The Outdoor Router can be powered via DC power supply or Power over Ethernet (PoE). The DC power supply has been included in theis box. The PoE kit is an accessory for powering with the optional PoE kit, please see the appendix at the back of this QSG.
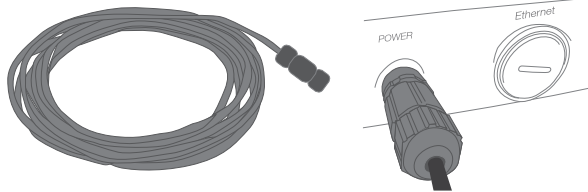
DC power option

Your router is provided with a waterproof DC jack allowing it to be powered by a 9~28V DC power supply.

1. On the bottom interface panel of the router, locate the DC power port and unscrew the protective cap to expose the connection pins.
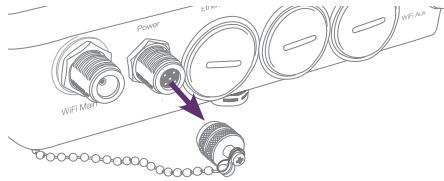
2. Connect the DC power jack as shown below to the DC power port of the Router and turn the metal securing ring clockwise while pushing the conector in to secure the DC jack in position.


3. At the other end of the cable, wire the red (positive +) and black (grounding) wires to your 9~28V DC power supply source.
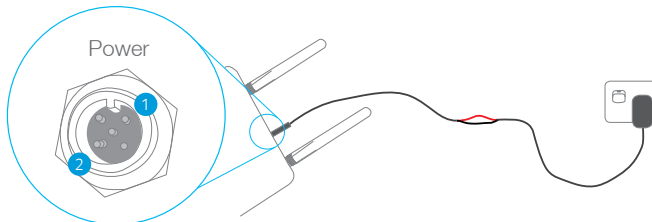

PIN	SIGNAL	DESCRIPTION
1	V+	Voltage+
2	GND	Ground

Picking the best spot for installation

1. At this point your Outdoor Industrial Router is ready to be installed on the outside of your property, however before doing so, you will need to find the best location.

2. To get the strongest signal your Outdoor Industrial Router should ideally be placed towards your nearest 3G tower.
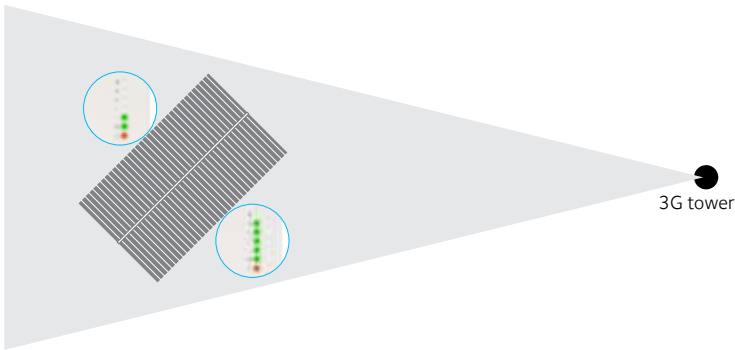
3G tower

3. If you are unsure where your nearest 3G tower is, find the area of your property where the most signal indicators light up, this is where you have the best signal strength and should install your Outdoor Industrial Router.
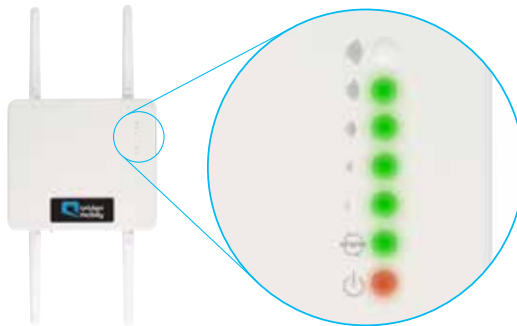
Installing Your Router Outside

Your Outdoor Industrial Router can be mounted directly onto a wall or pole. For wall mounting instructions see page 16, for pole mounting instructions see page 18.

Connecting Via Ethernet

NOTE: The Outdoor Ethernet cable is not included in the package contents, however can be bought as an accessory
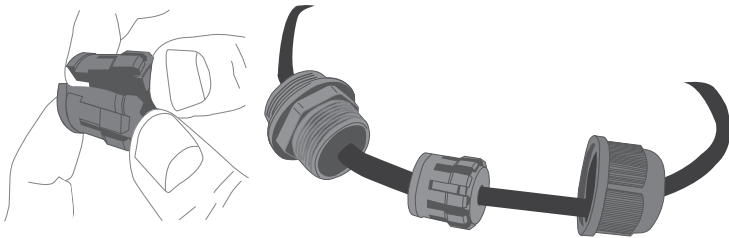
Before connecting the Ethernet cable (not supplied) you must first connect the Ferrite Core and cable gland.

Connecting the Cable Gland

1. Take a cable gland, unscrew the thread lock sealing nut, and remove the inner seal as shown below.
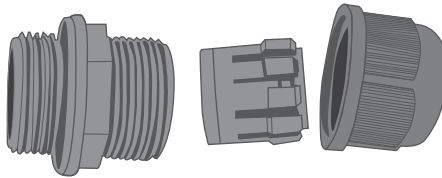
2. Thread the Ethernet cable through the thread lock sealing nut. Open the claw and the seal to place the cable through it and then pass cable through the body of the cable gland. Align the gland segments in the orientation as shown below. Plug the seal through the body and tighten the nut.
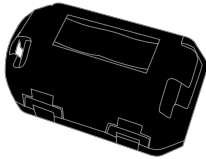
3. Plug the Ethernet cable into the RJ-45 connector and tighten the cable gland to ensure the seal is adequate. Use a shifter or spanner to ensure IP67 rating.
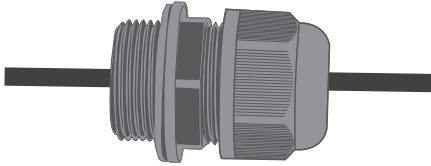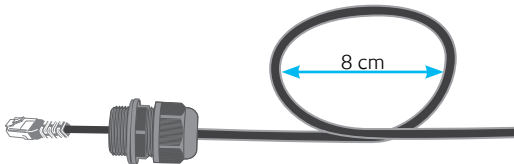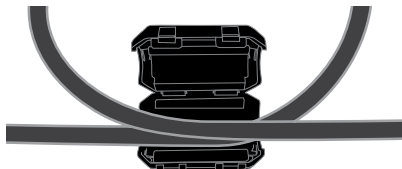

Connecting the Ferrite Core

1. After connecting the Cable Gland you now have to connect the Ferrite Core.

2. Locate the end of the black Ethernet cable with the cable gland and make a loop in the cable, approximately 8 cm in diameter.

8 cm

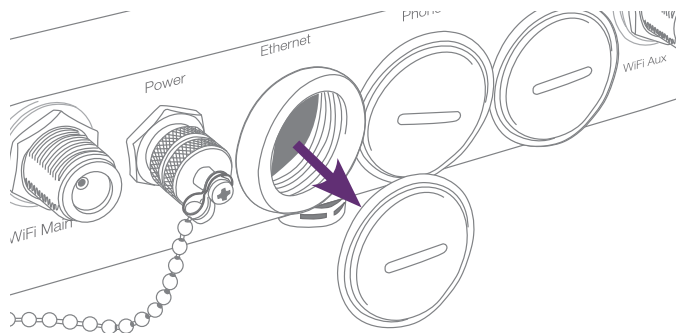3. Open the Ferrite Core and place the part of the cable that overlaps into the centre.

4. Close the Ferrite Core and ensure that the clips click together to hold the Ferrite Core closed.
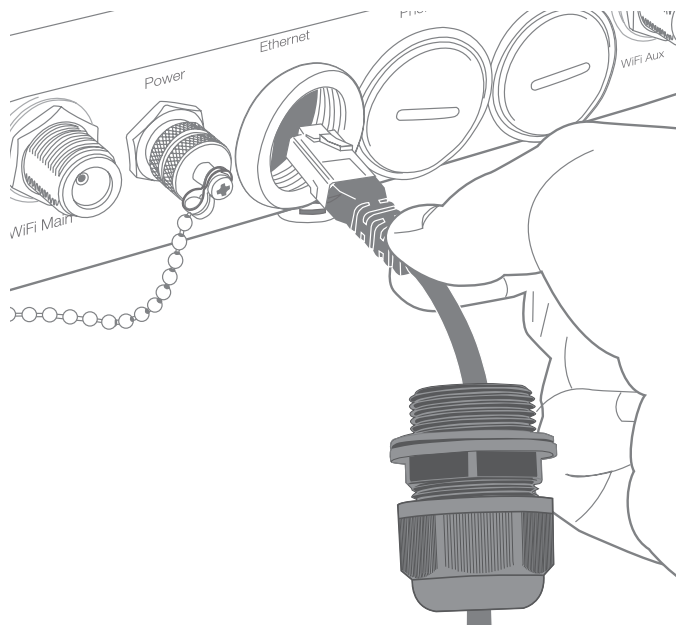
Connecting the Ethernet Cable (Sold as an accessory)

1. Remove the protective cap labelled Ethernet with a flathead screwdriver or a small coin.
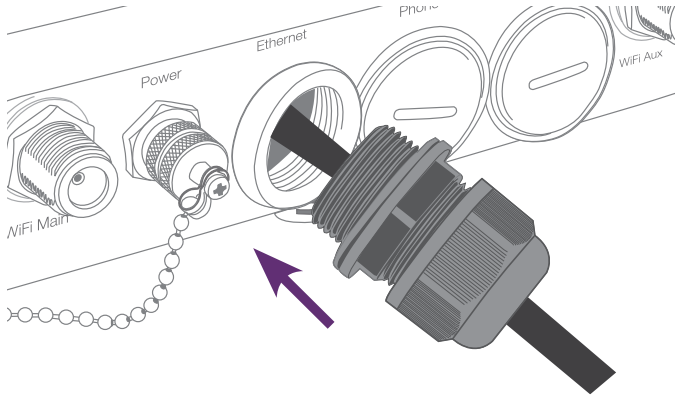

2. Connect the Ethernet cable to the Outdoor Industrial Router's Ethernet port. The end with the black cable gland is the end for use with the Outdoor Industrial Router.
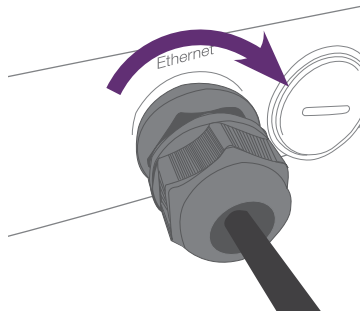
3. Slide the cable gland towards the Ethernet port. You may need to loosen the bottom part of the cable gland so you can move it.

4. Tighten the water-proof thread lock sealing nut to ensure the seal is adequate.

NOTE: If you loosened the bottom part of the cable gland you must retighten to ensure your router is waterpoof. Use a shifter or spanner to ensure the water-proof Ethernet plug is sufficiently secure.

Connecting the Phone Cable

The steps for connecting your phone cable are the same as the above steps for your Ethernet cable, please ensure you use a cable gland as directed to ensure your device is waterproof.

Configure the Router

Step 1: Access Router's Homepage

Your outdoor router's homepage can be accessed by using the web address via default IP address http://192.168.1.1 or alternatively via URL http://my.router.

This URL opens the management console, where you can

- View the status of your router.
- Make changes to the routers configurations.

There are two system management accounts for maintaining the system:

Admin manager account		Root manager account	
Username	admin	Username	root
Password	admin	Password	admin

The admin manager account allows user to manage all settings of the router except functions such as Firmware Upgrade, Device Configuration Backup and Restore, Mobile Broadband Settings and Reset to Factory Default Settings, which are privileged only to the root manager account.

To access the homepage:

1. Open your web browser and enter the IP address http://192.168.1.1 or http://my.router.
2. Click Login and type the username/password for the Admin manager account or Root manager account.
3. Then click on Submit.

NOTE: First time users should use Root Manager account to configure Mobile Broadband settings.

Step 2: Unlock the SIM

If the SIM card is locked you will need to unlock it with the appropriate PIN code.

You can find out if the SIM is locked by viewing the SIM Status at the bottom of the Status page.

If the SIM Status is SIM PIN Required or SIM Locked then follow the following steps to unlock the SIM card:

1. From the menu, select Internet Settings -> Mobile Broadband -> SIM Security.

This will open up the page displaying SIM Security Settings as shown below:

2. Enter the PIN code in the PIN field and then enter it again in the Confirm PIN.

It is highly recommended that you select Remember PIN so that you will not have to enter the PIN code each time the SIM is inserted. Alternatively you can also disable SIM PIN protection by selecting Disable PIN from the PIN Protection drop down menu.

3. Click Save.

4. Wait for a few seconds and verify that the SIM Status reads SIM OK.

Step 3: Connect to Internet

Your router should automatically connect to the Internet if the SIM status reads SIM OK. If it does not, follow the steps listed below to setup the Mobile Broadband connection.

By default, the router is set to automatically configure the mobile broadband connection. It tries to detect the correct APN and connection details in order to connect to your mobile broadband service.

If the auto-configuration is unsuccessful, you will need to enter the connection details as follows:

1. From the menu, select Internet Settings -> Mobile Broadband -> Connection.

2. Unselect the 'Automatically configure my mobile broadband' box and click 'Save'.

3. Select a profile name from the pull down menu to save the profile settings. You can configure and save the mobile broadband settings the router will use to connect to a particular network.

4. Enter the connection details (APN Name) provided by your mobile broadband service provider. You may need to enter Username and Password provided by your mobile broadband service provider.

5. Ensure the Mobile Broadband Connection radio button is on Enable.

6. Click Save.

Verify Connection Status

Click on the Status link to return to the status page.

The WWAN Status should be Up. The IP Address field shows the current IP address that the network has allocated for the router.

Connecting Wirelessly

بطاقة الأمان اللاسلكي
wireless security card (SSID)

إسم الشبكة اللاسلكية **wireless network name (SSID)**

المفتاح السري اللاسلكي **wireless security key (WPA)**

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خدمة العملاء:056-010-1100 | www.mobily.com.sa

1. Using your wireless device e.g. notebook, tablet or smart phone, scan for your Outdoor Wireless network as displayed on your wireless security card.

2. Enter your password (or Wireless Security Key) displayed on your security card .

3. Wait approximately 30 seconds for the connection to be established.

Wall Mounting Your Outdoor Industrial Router

Locate your mounting bracket, mounting bracket screws, wall mount screws, and grey wall plugs.
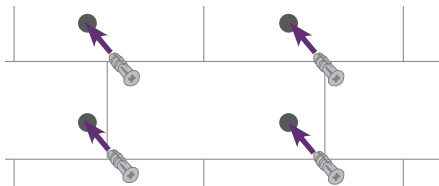
1. Before you start make sure all cables have been disconnected from your Outdoor Industrial Router and that your antennas have been attached and your SIM card is inserted.

2. Align the mounting bracket horizontally to the desired position on the wall.

3. Make sure you have at least 60 cm clear space around the centre of the mounting bracket
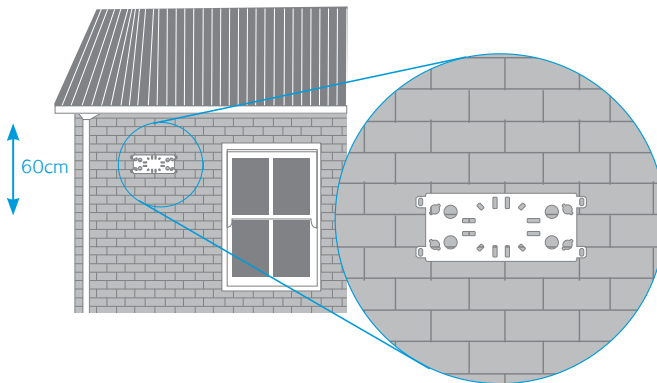
4. Use a pencil or piece of chalk to mark the holes on the wall

5. Remove the mounting bracket from the wall

6. Using your drill and a 6 mm drill bit to drill the holes in the wall where you marked previously.

NOTE: Before drilling into your walls ensure you are not drilling into an area with electrical wiring, a circuit or wire tracer can help you find these. If you are unsure consult a professional installer.
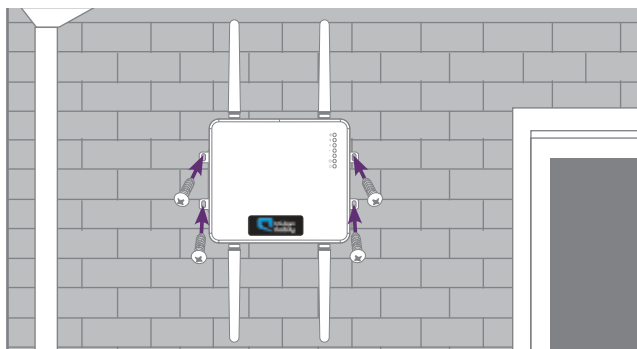
7. Insert the 4 grey wall plugs into the wall.

8. Mount the mounting bracket horizontally to the back of the Outdoor Industrial Router with the mounting bracket screws.
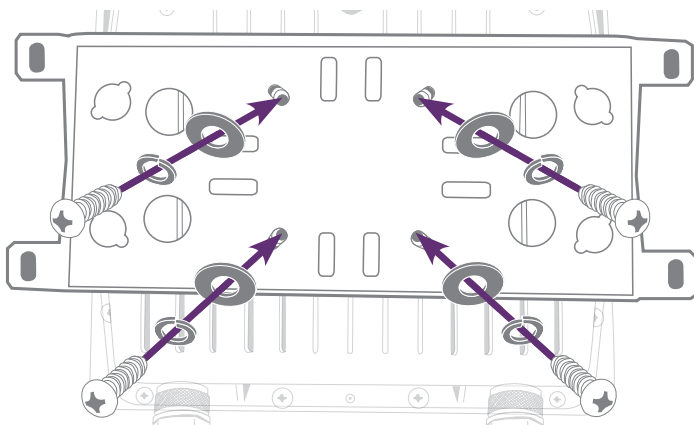
9. Secure the mounting bracket to the wall by inserting the wall mount screws into the grey wall plugs

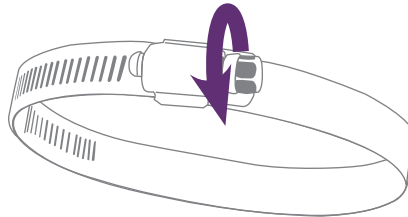10. You can now reconnect the cables to your Outdoor Industrial Router.

Pole Mounting Your Outdoor Industrial Router

Make sure you have your included mounting bracket, mounting bracket screws and hose clamps.

1. Before you start make sure all cables have been disconnected from your Outdoor Industrial Router and that your antenna have been attached and your SIM card is inserted.

2. Mount the mounting bracket vertically to the back of the Outdoor Industrial Router with the mounting bracket screws.
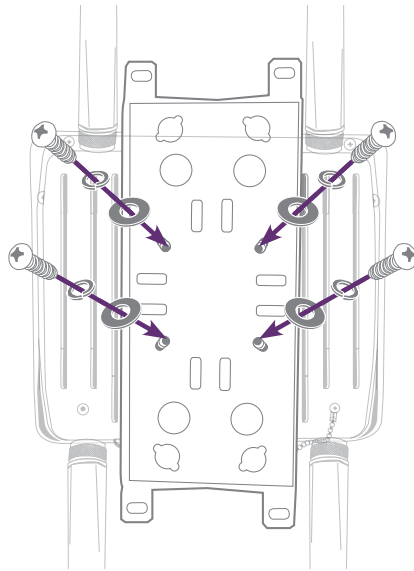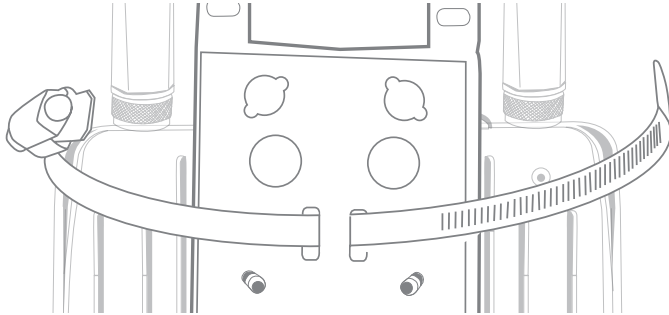

3. Open the hose clamps by turning the locking mechanism counter-clockwise.
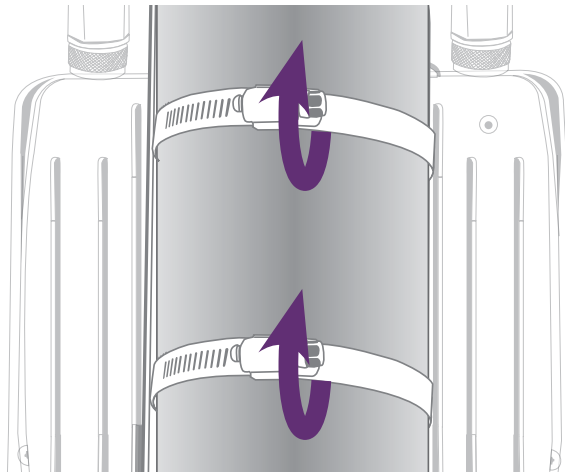

NOTE: You can loosen it by hand or use a flathead screwdriver.

4. Straighten out the end of the hose clamps and slide them through the rectangular holes in the mounting bracket.
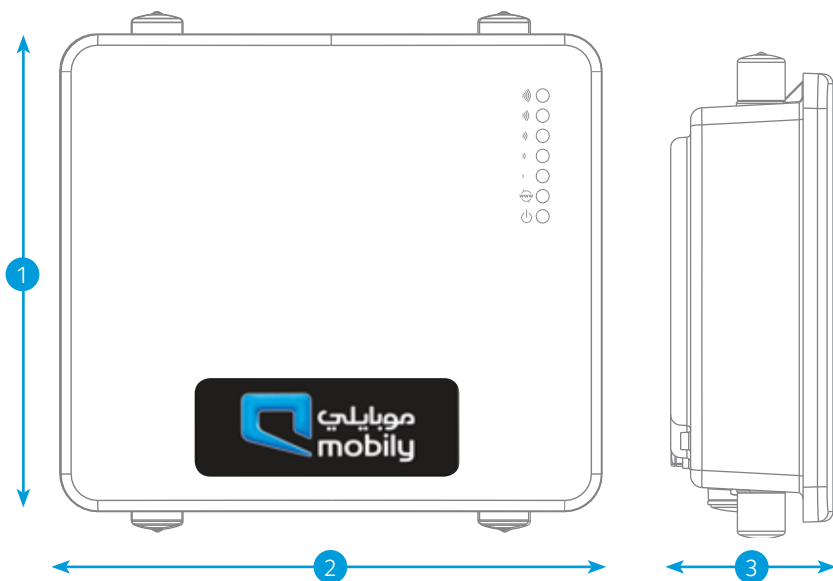

5. Wrap the metal strap around the pole.

6. Use a flathead screwdriver to tighten the locking mechanism by turning it clockwise.

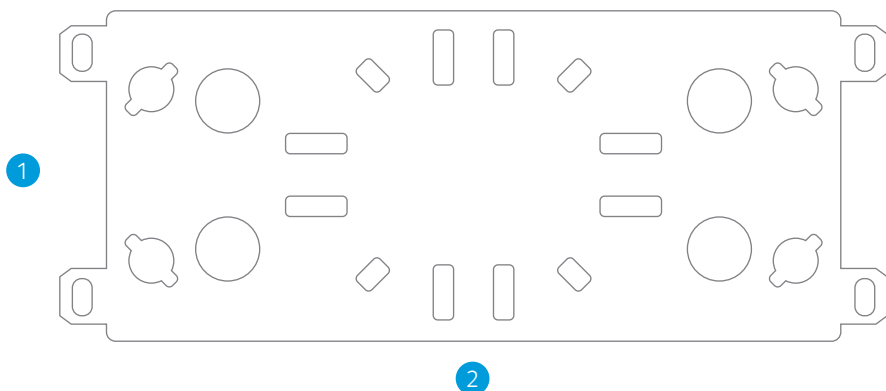
7. You can now reconnect the cables to your Outdoor Industrial Router

Get to know your Outdoor Industrial Router better

OUTDOOR INDUSTRIAL ROUTER		
1	Height	240 mm
2	Length	255 mm
3	Depth	80 mm
4	Weight	1750 g (without mounting bracket and antennas

MOUNTING BRACKET		
1	Height	290 mm
2	Length	110 mm
	Depth	12 mm
	Weight	410 g

3G AND WiFi		
1	Height	20 mm
2	Length	20 mm
3	Depth	180 mm
	Weight	60 g

What it all means

The Outdoor Industrial Router has 7 LEDs to display the current system and connection status.
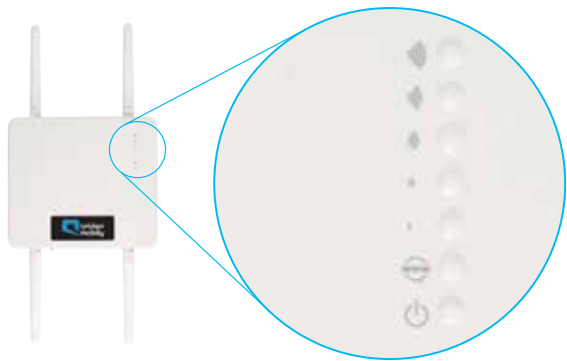
LED INDICATOR	ICON	COLOUR	DEFINITION
High Signal	)))	Green	High 3G signal strength available (–47 dBm to –77 dBm).
Medium to High Signal	)))	Green	Medium to High 3G signal strength available (–78 dBm to –85 dBm).
Medium Signal	))	Green	Medium 3G signal strength available (–86 dBm to –92 dBm).
Low to Medium Signal	)	Green	Low to Medium 3G signal strength available (–91 dBm to –101 dBm).
Low Signal	'	Green	Low 3G signal strength available (–102 dBm to –109 dBm).
Internet	www	Green	The router is currently connected to the Internet.
Power	⏻	Orange	The unit is powered on.

The 5 signal LEDs also indicate if the device is MEP locked, SIM is not inserted, and if the SIM is PIN or PUK locked by flashing in certain patterns.

| LED PATTERN	
SIM Not Inserted	All signal LEDs flash ON and OFF every 2 seconds
MEP Lock	The signal LEDs flash in a pattern with one, three and 5 LEDs flashing in a sequence.
PIN Lock	The signal LEDs flash in a sequential order starting with the Low signal LED to the High signal LED.
PUK Lock	The signal LEDs flash in a sequential order starting with the High signal LED to the Low signal LED.

Powering your Router

Power Over Ethernet option

Please Note: If you choose to use PoE to power your router, we recommend you purchase an outdoor rated RJ45 Ethernet cable

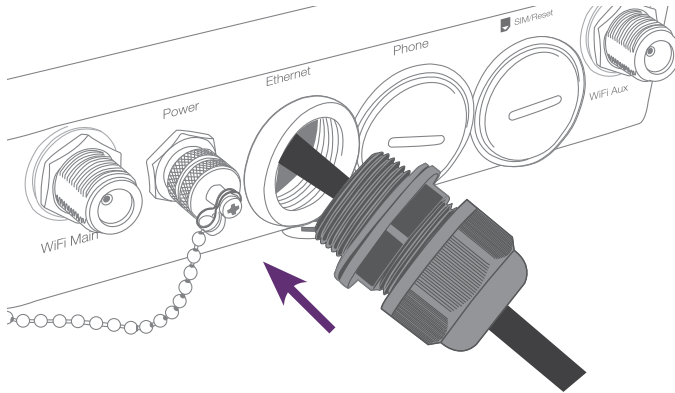Remove the protective cap labelled Ethernet with a flathead screwdriver or coin.
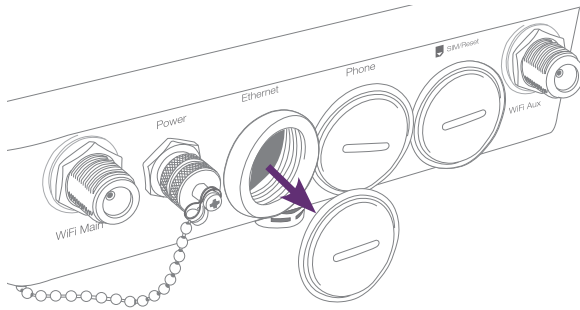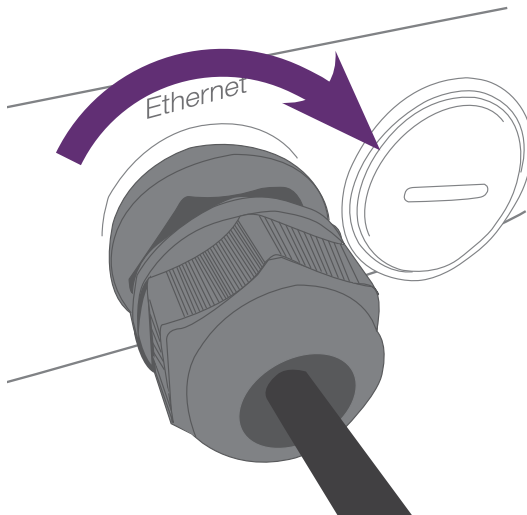
Connect the RJ45 Ethernet cable to the Ethernet port
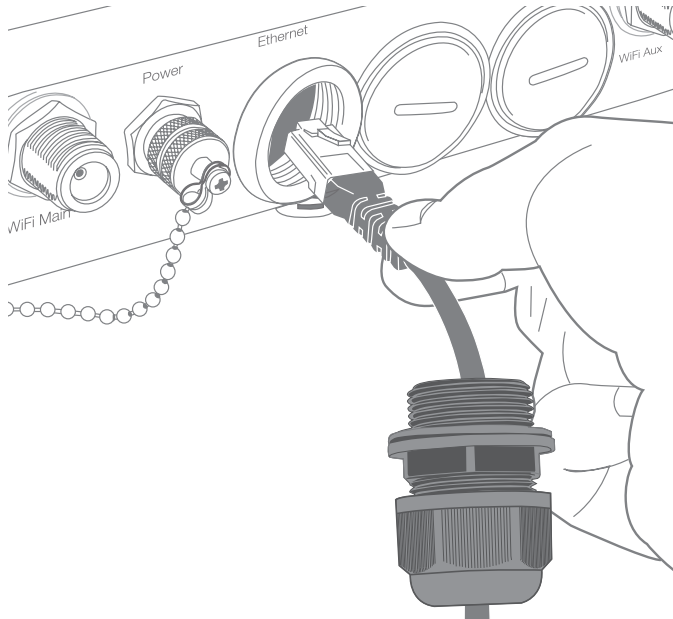
Outdoor Industrial Router

Slide the cable gland towards the Ethernet port. You may need to loosen the bottom part of the cable gland so you can move it.

Tighten the water-proof Ethernet plug to ensure the seal is adequate.

Please Note: If you loosened the bottom part of the cable gland you must retighten to ensure your Router is waterpoof. Use a shifter or spanner to ensure the water-proof Ethernet plug is sufficiently secure.

Connect the other end of the cable to the PWR + DATA OUT Port on the Power over Ethernet adaptor.
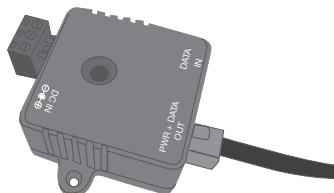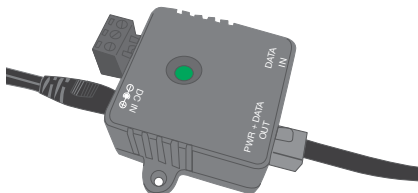
Connect the power adaptor to the DC IN Power port on the Power over Ethernet Adaptor.
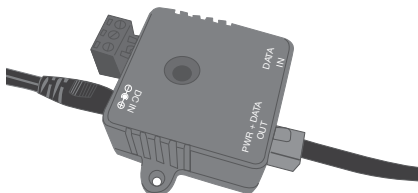
Connect the power cable to the power adaptor and plug the end of the power cord to a power outlet.

The Green LED on the Power over Ethernet Adaptor should now be on.

At this stage the LEDs on the front of your Router will be flashing. After 30 seconds the Power LED on your Router should also light up.

If you're receiving a 3G signal and are connecting to the network the Internet icon and signal strength LEDs will also light up.

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