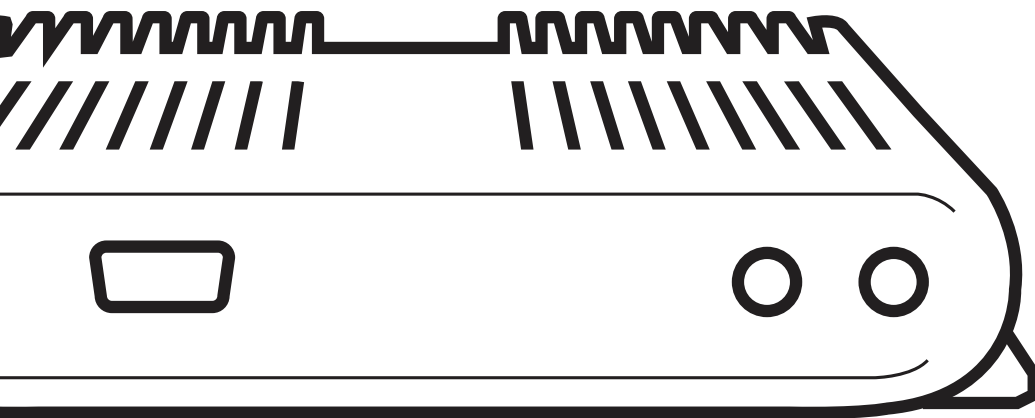


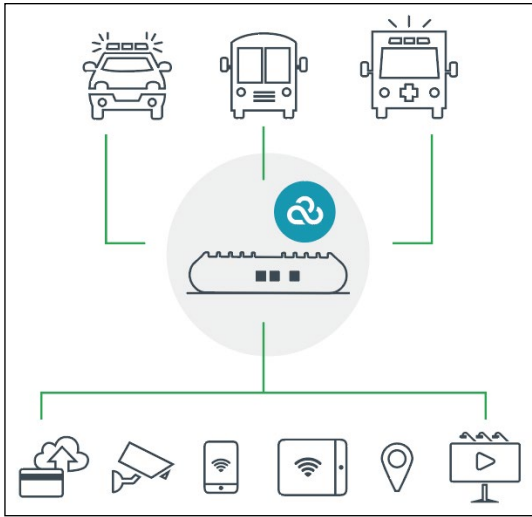


Mobile Routers

COR IBR9x0, IBR11x0, IBR1700
Vehicle Installation Guide



Introduction



The Cradlepoint COR Series mobile routers are compact, ruggedized, 3G/4G/LTE networking solutions designed for mission-critical connectivity in the most challenging environments.

Ideal for in-vehicle networks including police cars, ambulances, and mass transit, this cloud-managed solution provides organizations the ability to scale deployments quickly and manage their vehicle networks easily in real-time.

With an extensive list of safety and hardening certifications, the COR Series mobile routers are engineered to protect against extreme temperatures, humidity, shocks, vibrations, dust, water splash, reverse polarity, and transient voltage.

You can also add dual-modem capability to your IBR900/950 or IBR1100/1150 with the optional COR Extensibility Dock or Dual-Modem Dock. The IBR1700 has an additional built-in MC400 modem slot and therefore does not require a dock for dual-modem support. For more information, visit cradlepoint.com.



IBR900



IBR1100



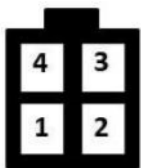
IBR1700

Power & GPIO

The Cradlepoint COR Series mobile routers include a two meter, 22 AWG direct wire power and GPIO cable (includes ESD-protected general input and output pins):



This diagram shows the connector pinout. This is the view into the router (or the rear view of the cable connector):



Pin	Definition	Details	Wire Color
1	Ground	-	Black
2	Power	9–36 V DC	Red
3	Input	3 V input high threshold (36 V tolerant)	Orange
4	Output	capable of sinking 250 mA	Blue

The wire colors shown are for the power/GPIO cable that is included with the COR Series mobile routers or available as an **accessory**. Other wiring setups may have different colors.

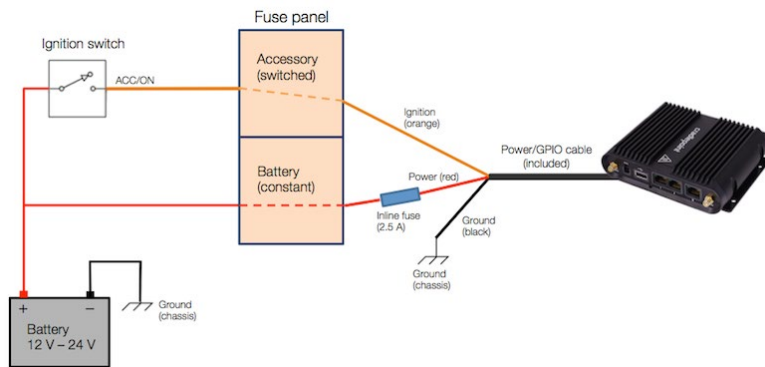
If you need a power/GPIO cable that is longer than two meters, we recommend the following wire gauges (**AWG**):

- + 22 gauge wire for up to 4 meters (~13 ft)
- + 20 gauge wire for up to 6 meters (~20 ft)
- + 18 gauge wire for up to 12 meters (~40 ft)

For additional power source options, see the **adapters and cables accessories page**.

Installation

The red wire (power) should connect to the positive (red) terminal of the battery, and the black wire (ground) should connect to the chassis. To enable ignition sensing functionality, connect the orange wire (input) to the ignition, or accessory, switch. The power and ignition wires can be attached directly or through the fuse panel.



The red power wire requires an inline fuse at 2.0 or 2.5 A. Either use an extra slot in the fuse panel for this fuse, or splice an inline fuse directly into the wiring. Here is an example of how to attach an inline fuse: <http://youtu.be/RDOZT-dTITo>.



Wire connections vary depending on the installation. Make sure your connectors are rated for the gauge of your wires (e.g., the included power/GPIO cable is 22 AWG). See the sample crimp connectors at right, and see this video example for how to attach a quick splice connector: <http://youtu.be/zxt3LVpvcw>.

Ignition Sensing

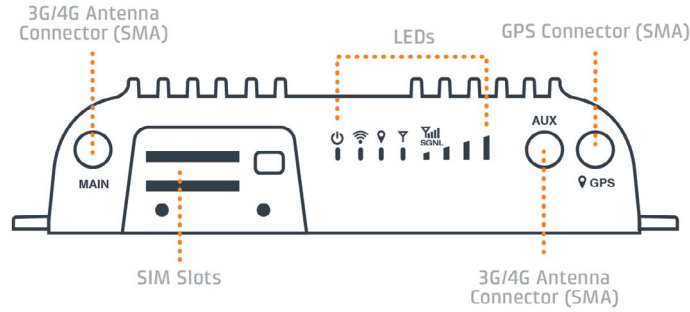
Ignition sensing allows you to set the router to power on when the ignition key is turned to ACC/ON, and then power off after the ignition key is turned off with a designated time delay. For example, set your router to remain on for an hour after the vehicle is turned off and then shut off. When the vehicle is turned on again, the router will also turn back on.

Edit these settings on the GPIO Connector administration page. Go to the configuration pages for your device or group in **NetCloud Manager (NCM)** or log into the local device administration pages and go to System > GPIOs. Refer to your product's User Manual for GPIO configuration instructions.

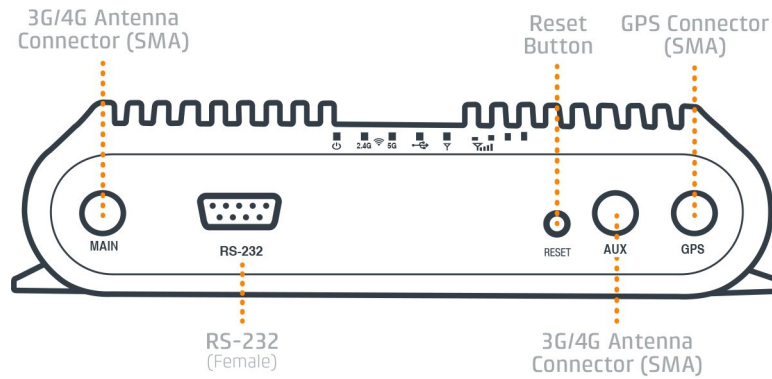
Antennas

Antennas are not included in the product package because of the diverse needs of customers. The COR Series mobile routers have two connectors for 3G/4G modem antennas (SMA) and one connector for GPS (SMA):

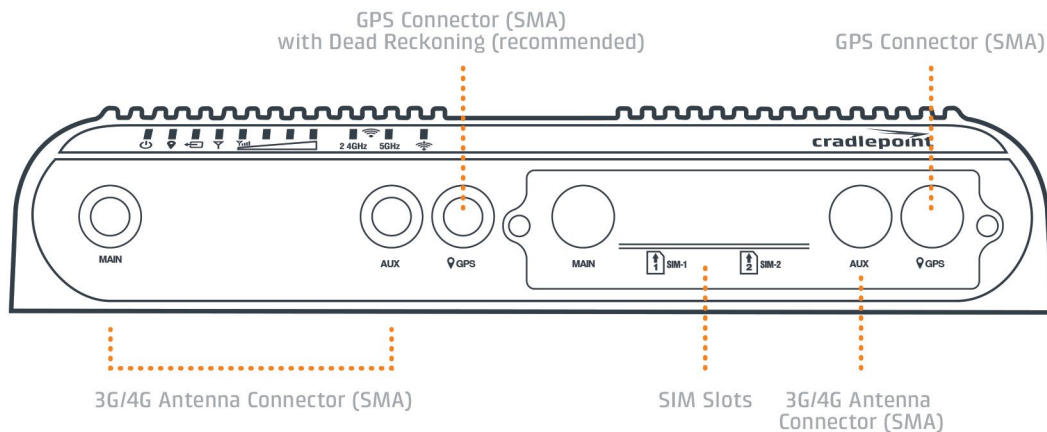
IBR900



IBR1100



IBR1700

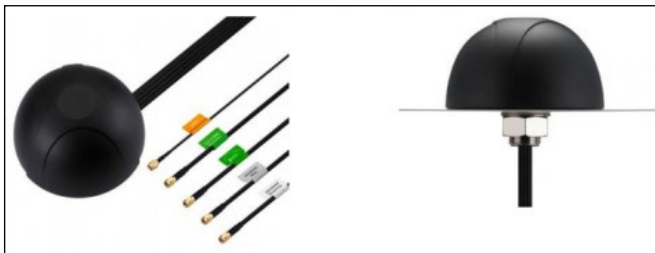


Additionally, the COR IBR900 and IBR1100 has two connectors for dual-band dual-concurrent 2.4/5 GHz WiFi (RSMA). The IBR1700 has six RSMA connectors supporting a mix of dual-band and simultaneous tri-band WiFi.

See the Cradlepoint [antenna accessories page](#) for recommended options for antennas. Also see the Antenna Ordering and Installation Guide, available as a PDF from the antenna and router product pages.

Vehicle Antenna Options

Antenna Type	Mounting	Recommended Antenna	Part #
Modem, WiFi & GPS	Screw	5-in-1 Screw-mount antenna (includes 3M cables) <ul style="list-style-type: none"> • two 3G/4G modem • two 2.4/5 GHz WiFi • one GPS-GLONASS 	170654-000
Modem & GPS	Screw	3-in-1 Screw-mount antenna (includes 3M cables) <ul style="list-style-type: none"> • two 3G/4G modem • one GPS-GLONASS 	170653-000
GPS	Magnet	GPS-GLONASS magnetic-mount antenna (includes 3M cable)	170652-000
GPS	Screw	GPS-GLONASS Screw-mount antenna (includes 3M cable)	170651-000



Part # 170654-000



Part # 170653-000

Mounting

The mobile routers include four integrated mounting holes for secure mounting. We recommend the following mounting screws:

- + For sheet metal installation, use #8 self-drilling screws.



- + For tapped holes, use M4 machine screws.



To mount the COR IBR900/950 with the optional COR Extensibility Dock or the IBR1100/1150 with the optional Dual-Modem Dock, refer to the Quick Start Guides: [COR Extensibility Dock](#) & [Dual-Modem Dock](#).