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Caption

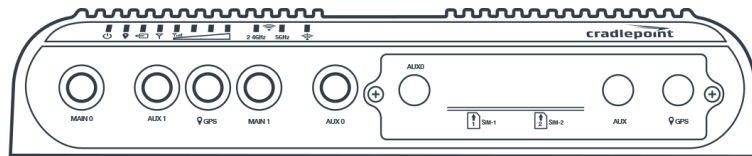
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IBR1700 Mobile Router Quick Start Guide

🕒 Oct 18, 2022 · Knowledge

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IBR1700 Mobile Router Quick Start Guide



Introduction

This guide provides instructions for the basic set up of your COR IBR1700 mobile router as well as discusses what's inside the box and optional accessories to enhance the router's functionality. For instructions on installing the router in your vehicle, refer to the [Vehicle Installation Guide for COR Series Mobile Routers](https://customer.cradlepoint.com/s/article/Vehicle-Installation-Guide-for-COR-Series-Mobile-Routers) (<https://customer.cradlepoint.com/s/article/Vehicle-Installation-Guide-for-COR-Series-Mobile-Routers>).

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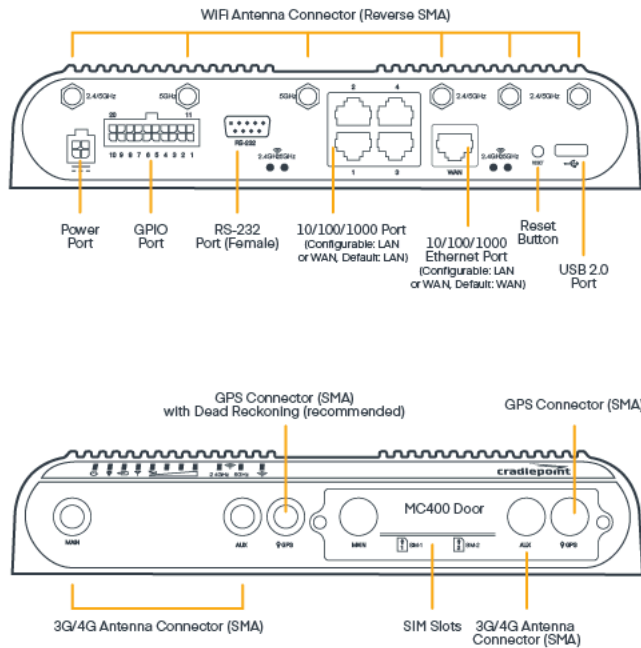
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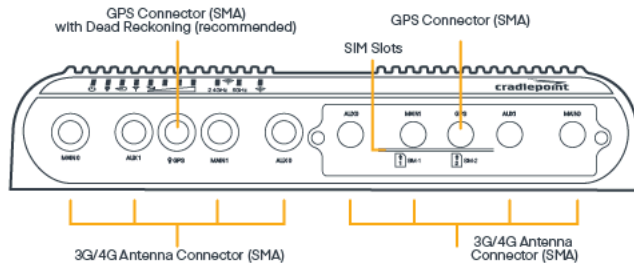
What's in the Box

- IBR1700 high-performance, hardened metal router with embedded, business-class 3G/4G modem; includes integrated mounting plate
- DC GPIO/power cable
- Safety, Regulatory, and Warranty guide

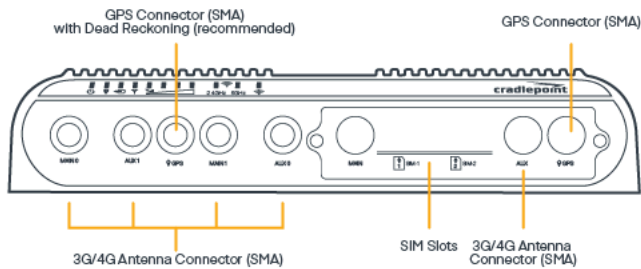
Hardware



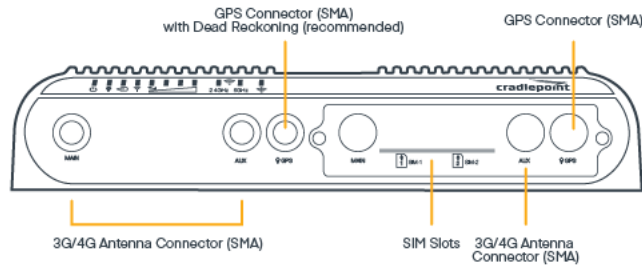
IBR1700-1200M with MC400-1200M modem door



IBR1700-1200M with MC400-600M modem door



IBR1700-600M with MC400-600M modem door



Accessories

The IBR1700 series mobile routers are designed for installation in vehicles and therefore require additional accessories for optimal performance.

- For antennas, refer to the Cradlepoint Approved Antennas information on the [Cradlepoint Antennas](https://cradlepoint.com/products/antennas/) (https://cradlepoint.com/products/antennas/) webpage.
- For accessories, refer to the Cradlepoint [Accessories webpage](https://cradlepoint.com/products/accessories/) (https://cradlepoint.com/products/accessories/).

Required

Antennas and associated cables will need to be purchased separately. Refer to the webpage for more information.

Optional

Refer to the [Accessories](https://cradlepoint.com/products/accessories/) (https://cradlepoint.com/products/accessories/) page on the Cradlepoint website to learn more about optional accessories for enhancing the IBR1700 series router. These optional accessories include:

- 2x10 GPIO cable
- Secondary MC400 LTE modem
- Barrel to 4-pin power adapter

- Extended temperature AC power supply

Before You Begin

Read through the following before you set up your Cradlepoint COR IBR1700 router(s).

Location Considerations

The IBR1700 series routers are built for installation in vehicles of all varieties. Refer to the [Vehicle Installation Guide for COR Series Mobile Routers](https://customer.cradlepoint.com/s/article/Vehicle-Installation-Guide-for-COR-Series-Mobile-Routers) (<https://customer.cradlepoint.com/s/article/Vehicle-Installation-Guide-for-COR-Series-Mobile-Routers>) for more information.

SIM Card for Wireless Connectivity

A wireless broadband data plan must be added to your Cradlepoint IBR1700 for wireless broadband connectivity. Wireless broadband data plans are available from wireless carriers such as Verizon, AT&T, Sprint, EE, and Vodafone. The SIM must be provisioned by the carrier. Contact your carrier for details about selecting a data plan and about the process for provisioning your SIM. To configure the router for failover and failback functionality, refer to the article, [Effectively Utilizing 2-SIM Modems](https://customer.cradlepoint.com/s/article/NCOS-Effectively-utilizing-2-SIM-modems) (<https://customer.cradlepoint.com/s/article/NCOS-Effectively-utilizing-2-SIM-modems>).

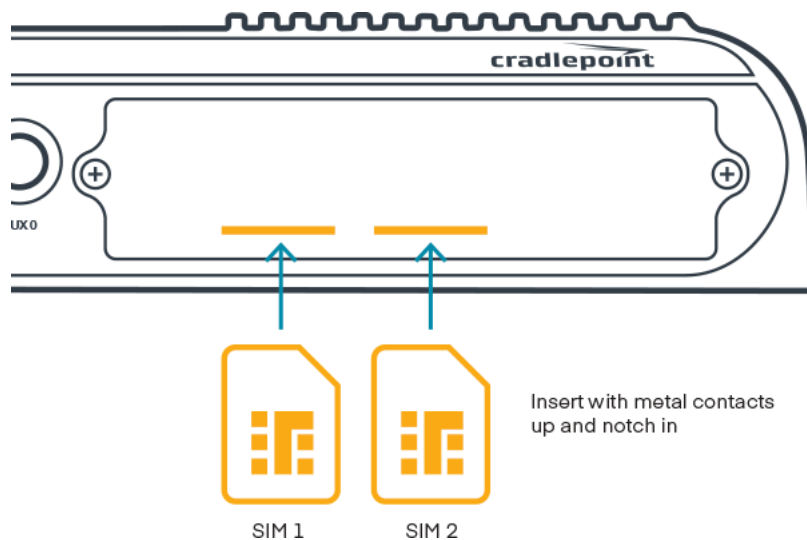
Best Practice: Choosing SIMs for Adverse Environments

As a best practice, Cradlepoint recommends the use of ruggedized SIMs in environmentally adverse deployments in which the router will experience excessive shock and vibration. Different SIM card providers have varying degrees of consistency in meeting industry specifications. The use of ruggedized SIMs helps mitigate against future SIM issues caused by such environments.

Setup

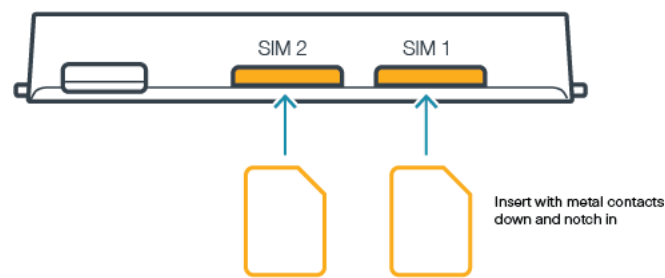
Read through the following to set up your IBR1700 series mobile router.

STEP 1: Insert an activated 2FF-sized SIM into the router.



- Unscrew and remove the MC400 modular modem door from the router.
- Insert the card into the SIM1 slot, metal contacts up and notch in. It will click into place. Depress again to remove.
- Insert the secondary SIM card into the SIM2 slot if desired.

STEP 2: If using a MC400 modular modem, insert activated 2FF-sized SIM card(s) into the modem.



- Insert the card into the SIM1 slot, metal contacts down and notch in.
- Insert the secondary SIM into the SIM2 slot, if desired.
- Slide the MC400 modular modem into the IBR1700, Cradlepoint logo side up, USB plug first.
- Replace the modem door and secure with the screws.
- Remove the plastic port covers from the modem door before returning the cover to the router.

Note: The MODEM COVER must be replaced, or the modem will not power on.

STEP 3: Set up the Antenna and WiFi Configuration.

- The IBR1700 includes three (3) independent WiFi radios, allowing for a much more customizable and robust experience when using WiFi. For more information on configuring and using the IBR1700's WiFi, please view this article: [NCOS: 6.5 IBR1700 WiFi Radio Setup \(https://customer.cradlepoint.com/s/article/NCOS-6-5-IBR1700-WiFi-Radio-Setup?r=110&ui-knowledge-components-aura-actions.KnowledgeArticleVersionCreateDraftFromOnlineAction.createDraftFromOnlineArticle=1\)](https://customer.cradlepoint.com/s/article/NCOS-6-5-IBR1700-WiFi-Radio-Setup?r=110&ui-knowledge-components-aura-actions.KnowledgeArticleVersionCreateDraftFromOnlineAction.createDraftFromOnlineArticle=1).
- There are many antennas options for the IBR1700. Refer to the [Vehicle Installation Guide for COR Series Mobile Routers \(https://customer.cradlepoint.com/s/article/Vehicle-Installation-Guide-for-COR-Series-Mobile-Routers\)](https://customer.cradlepoint.com/s/article/Vehicle-Installation-Guide-for-COR-Series-Mobile-Routers)for information about selecting an antenna option that works best for you.

STEP 4: Connect the power source.

- The 4-pin power/GPIO cable connects directly to the router and is intended for connecting to a DC power source.

Note: If installation requires building your own cable, you must use a Molex Micro-fit 3.0 Dual Row, 4-circuit connector.

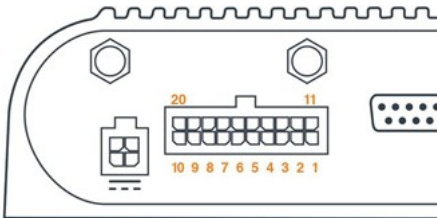
- Refer to the following for pin configuration to ensure the cables are connected appropriately:

| PIN | Wire Color | Definition | Details |
|-----|------------|------------|--------------------------------------|
| | 1 | Black | Ground |
| | 2 | Red | Power |
| | 3 | Orange | Input |
| | 4 | Blue | Output |
| | | | Ground to the vehicle chassis |
| | | | VDC battery constant |
| | | | VOC ignition sensing accessory input |
| | | | General purpose I/O (GPIO) |

- (Optional) Connect to the 2x10 GPIO Port

Note: If installation requires building your own cable, you must use a Molex Micro-fit 3.0 Dual Row, 20- circuit connector.

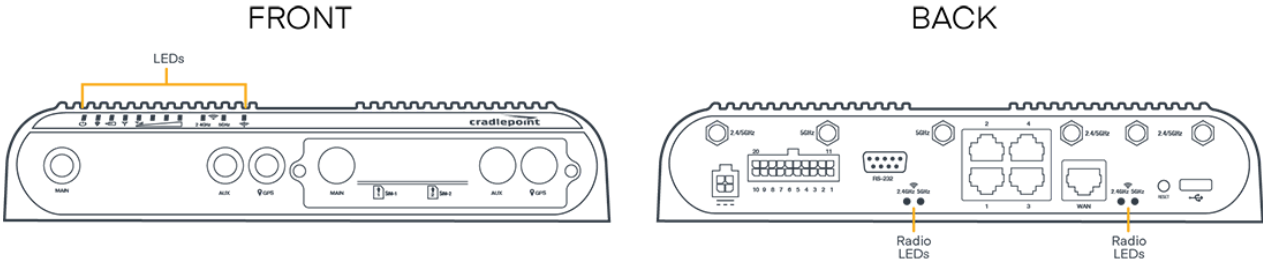
| Diagram | Pin | Details |
|---------|-----|---------|
| | | |



| | | |
|---|-------|---------------------------------------|
|  | 1 | Router power (input ONLY - 36 W min.) |
| | 2 | Router power (input ONLY - 36 W min.) |
| | 3 | ADC Channel 1 |
| | 4 | ADC Channel 2 |
| | 5 | GPI (ignition sense) |
| | 6 | GPIO1 |
| | 7 | GPIO2 |
| | 8 | GPIO3 |
| | 9 | GPIO4 |
| | 10 | Low current 5 V output (50 mA max.) |
| | 11-20 | Ground |






STEP 5: Activate the device through NetCloud Manager.

Refer to the [Connecting to NetCloud](#) section of this document.

Understanding LEDs



| INDICATOR | BEHAVIOR |
|---|--|
|  | <p>POWER: The Cradlepoint IBR1700 must be powered using an approved 9–36 V DC power source.</p> <ul style="list-style-type: none">Green = Powered ONYellow = Attention is requiredNo Light = Not receiving power. Check the power source connection |
|  | <p>GPS: Indicates the status of GPS connection.</p> <ul style="list-style-type: none">Blue = GPS lockedBlinking Blue = Obtaining lockNo Light = Off/no lock |

| INDICATOR | BEHAVIOR |
|---|---|
|  | <p>MC400 MODEM: Indicates information about the optional MC400 modem.</p> <ul style="list-style-type: none"> • Green = Modem has established an active connection • Blinking Green = Modem is connecting • Amber = Modem is not active • Blinking Amber = Data connection error. No modem connection possible • Blinking Red = Modem is in the process of resetting • No Light = Modem not connected |
|  | <p>INTEGRATED MODEM Indicates information about the integrated modem.</p> <ul style="list-style-type: none"> • Green = Modem has established an active connection • Blinking Green = Modem is connecting • Amber = Modem is not active • Blinking Amber = Data connection error. No modem connection possible • Blinking Red = Modem is in the process of resetting • Blinking Red with Signal Strength LEDs = SIM door is not installed, modem is off • No Light = Modem not connected |
|  | <p>SIGNAL STRENGTH Blue LED bars indicate the active modem's signal strength.</p> <ul style="list-style-type: none"> • 4 Solid Bars = Strongest signal • 1 Blinking Bar = Weakest signal (a blinking bar indicates half of a bar) • 4 Blinking Bars = SIM door is open and the modem is powered off |
|  | <p>WiFi STATUS: Indicates information about WiFi channels.</p> <ul style="list-style-type: none"> • 2.4 GHz Green = Activity on 2.4 GHz WiFi band • 5 GHz Blue = Activity on 5 GHz WiFi band |
|  | <p>WiFi AS WAN: Indicates WiFi as WAN status.</p> <ul style="list-style-type: none"> • White = WiFi as WAN active |
| Other | <p>ADDITIONAL LED INDICATIONS</p> <ul style="list-style-type: none"> • Several different LEDs blink when the factory reset button is detected • Two of the modem LEDs blink red in unison for 10 seconds when there is an error during NCOS upgrade • When an external USB modem is plugged in, only the Signal Strength LEDs will light up |

Connecting to NetCloud

Activate your device through NetCloud Manager (NCM). Your device is packaged with NetCloud services, and activation requires that you log into your NetCloud account. Refer to the following for more information:

[Getting Started with NetCloud Manager \(https://customer.cradlepoint.com/s/article/Getting-Started-with-NetCloud-Manager?ui-force-components-controllers-recordGlobalValueProvider.RecordGvp.getRecord=1&r=82&ui-knowledge-components-aura-actions.KnowledgeArticleVersionCreateDraftFromOnlineAction.createDraftFromOnlineArticle=1\)](https://customer.cradlepoint.com/s/article/Getting-Started-with-NetCloud-Manager?ui-force-components-controllers-recordGlobalValueProvider.RecordGvp.getRecord=1&r=82&ui-knowledge-components-aura-actions.KnowledgeArticleVersionCreateDraftFromOnlineAction.createDraftFromOnlineArticle=1)

Troubleshooting

If the device takes longer than 5 minutes to connect to the Internet, you may need to log into the local UI of the device to make configuration changes or start the troubleshooting process. You must be physically co-located with the device in order to do this. Refer to the following document for more information:

[No Internet or Connection Issues \(https://customer.cradlepoint.com/s/article/NCOS-No-Internet-or-Connection-Issues?r=47&ui-knowledge-components-aura-actions.KnowledgeArticleVersionCreateDraftFromOnlineAction.createDraftFromOnlineArticle=1\)](https://customer.cradlepoint.com/s/article/NCOS-No-Internet-or-Connection-Issues?r=47&ui-knowledge-components-aura-actions.KnowledgeArticleVersionCreateDraftFromOnlineAction.createDraftFromOnlineArticle=1)

Once the device connects to the Internet, it should then connect to your NetCloud Manager account and start its configuration download.

Resources

[IBR1700 Series Ruggedized Router Webpage \(https://cradlepoint.com/product/endpoints/ibr1700/%20\)](https://cradlepoint.com/product/endpoints/ibr1700/%20)

[IBR1700 Series Ruggedized Router Data Sheet \(https://cradlepoint.com/datasheet/ibr1700-series-ruggedized-router/\)](https://cradlepoint.com/datasheet/ibr1700-series-ruggedized-router/)

[Getting Started with Ignition Sensing \(https://customer.cradlepoint.com/s/article/Getting-Started-With-Ignition-Sensing\)](https://customer.cradlepoint.com/s/article/Getting-Started-With-Ignition-Sensing)

Help and Support

[Cradlepoint Connect Customer Community \(https://customer.cradlepoint.com/s/\)](https://customer.cradlepoint.com/s/)

[Cradlepoint Support Services \(https://cradlepoint.com/support/\)](https://cradlepoint.com/support/)

[Contact Us \(https://cradlepoint.com/about-us/contact-us/\)](https://cradlepoint.com/about-us/contact-us/)

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[GDPR Privacy Policy \(https://cradlepoint.com/about-us/gdpr-privacy-policy/\)](https://cradlepoint.com/about-us/gdpr-privacy-policy/)

COR IBR1700 Mobile Router Models

This guide applies to the following COR IBR1700 Mobile router models.

CRADLEPOINT IBR1700-1200M-B S5A844A

CRADLEPOINT IBR1700-600M S5A741A

Title

IBR1700 Mobile Router Quick Start Guide

URL Name

IBR1700-Getting-Started

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