
ERICSSON ENTERPRISE WIRELESS
DOCUMENTATION PORTAL

R920 Series Ruggedized Router Quick Start Guide

12/01/2025

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1. Quick Start Guide
2. R920 Series Ruggedized Router Models
3. External device components
4. Before You Begin
 - 4.1. Location Considerations
 - 4.2. SIM Card for Wireless Connectivity
 - 4.3. Router Communication and Data Usage
 - 4.4. Required Tools for Setup
5. Quick Start Setup
6. Understanding LEDs
7. Troubleshooting
8. Help and Support
9. Terms of Service
10. Product Disclaimer and Limitation of Liability
 - 10.1. Disclaimer
 - 10.2. Installer Responsibility
 - 10.3. Limitation of Liability
 - 10.4. Professional Installer Network

1 | Quick Start Guide

This document provides a brief overview of the R920 Series Ruggedized Router, discusses what's inside the box, and provides basic setup and install instructions for the router.

If you find information in this guide that is incorrect, misleading, or incomplete, we would appreciate your comments and suggestions.

NOTE: The Verify app includes many of the same instructions with an alternate order. This document supports the Verify app instructions. Use the Navigation section below to locate the topics most applicable to troubleshooting your setup issues. For additional setup support, contact a professional installer or see the [Contact Us](#) page.

Intended Audience

This article is intended for professional networking hardware installers. It provides basic knowledge and should be used only as a reference guide for installing the R920 Series Ruggedized Router. Due to the unique nature of each installation, potential for RF exposure, and enhanced separation requirements, customers must have a professional install their hardware. This document is a reference guide and is intended only to provide best practices.

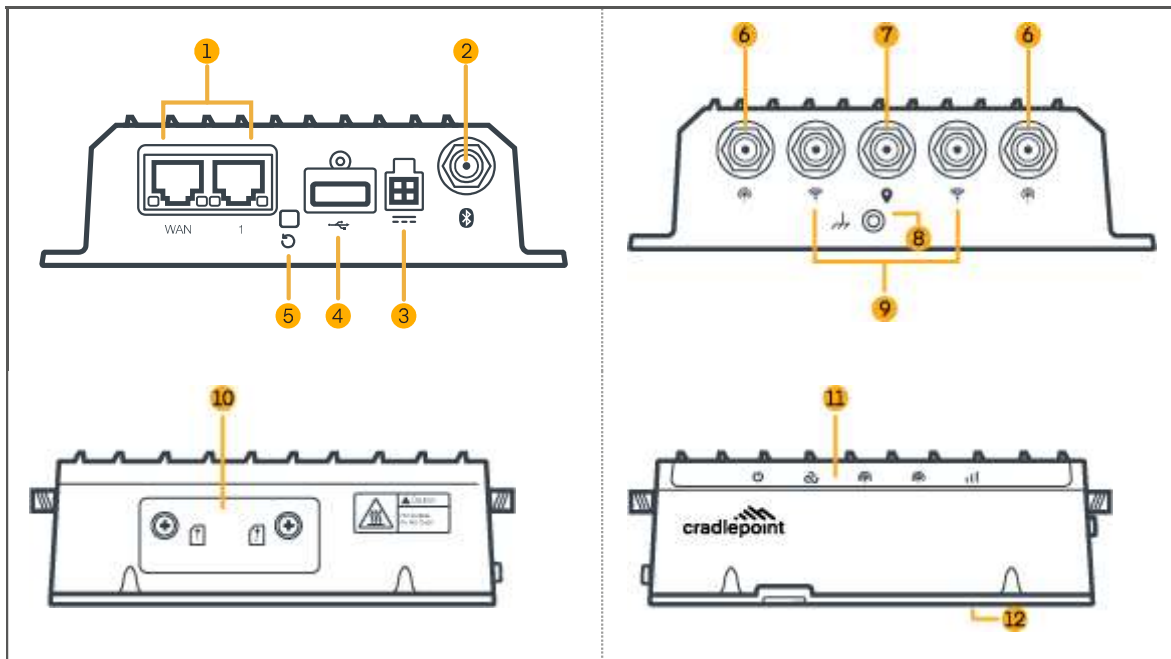
See the Product Disclaimer and Limitation of Liability section for further information.

2 | R920 Series Ruggedized Router Models

This document applies to the following R920 Series Ruggedized Router models:

R920 Series	Model
R920-C7A	S5A235A
R920-C7B	S5A236A

3 | External device components



- | | |
|---|--|
| 1 | Gigabit Ethernet (GbE) Ports |
| 2 | Antenna Connector for Bluetooth [®] Wireless Technology |
| 3 | DC Power Port |
| 4 | Locking USB 2.0 Port |
| 5 | Reset Button |
| 6 | Cellular Antenna Connectors (Female SMA) |
| 7 | GNSS Antenna Connector |
| 8 | Ground Connector |

9	Wi-Fi Antenna Connector (Female RP-SMA)
10	SIM Door (SIM Slots behind)
11	LED Panel
12	RX20 Connector (on bottom, not shown)

4 | Before You Begin

Read through the following before you set up your R920 Series Ruggedized Router.

4.1 | Location Considerations

The R920 router is built for installation in a variety of environments. Ericsson recommends having a professional install the R920 router to ensure proper signal reception and usage. The following are best practices for determining the location for the installation:

- Ensure that the mounting surface is flat and clear of any obstructions or objects that may interfere with the antennas, signal reception, or cables.
- Position the device for optimal cellular and Wi-Fi signal reception.
- Avoid mounting in direct sunlight or in locations where it may be exposed to the weather. Ensure plenty of airflow for ventilation.
- Keep the device out of reach. It is required that the endpoint be installed behind a locked or gated enclosure to restrict unauthorized access. The R920 is designed to work in elevated ambient temperatures, which may cause the surface of the device to become too hot to safely touch.
- Mount in locations compliant with the Safety, Regulatory, and Warranty guide, included in the product shipping box.

For details about mobile installations, see the [Vehicle Installation Guide for Mobile Routers](#) for more information.

IMPORTANT: The R920 router requires separation distances between the Ericsson hardware and human beings. The recommended minimum separation distance is listed on the Safety, Regulatory, and Warranty guide included in the shipping box. For assistance with installation or in locating a professional installer, contact [Sales and Support](#).

4.2 | SIM Card for Wireless Connectivity

A wireless broadband data plan must be added to your R920 Ruggedized Router for wireless broadband connectivity. 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, see [NCOS: Effectively utilizing 2-SIM modems](#).

4.3 | Router Communication and Data Usage

The factory default configuration of the router is set to communicate with Ericsson and other resources at regular intervals to access the latest NetCloud OS and modem updates, clock synchronization (NTP), and NetCloud Manager. Such communication may result in data usage and applicable charges regardless of whether the router uses a wired or wireless internet connect. To avoid such data usage and potential charges, see [Router Communication/Data Usage](#) for more information.

4.4 | Required Tools for Setup

Ericsson recommends that a professional install the R920 in any environment. However, the following tools may be necessary for setup:

- #0 Philips-head screwdriver for SIM cover screws
- #2 Philips-head screwdriver for mounting screws
- Mounting tools – Depending on the location of installation, additional mounting tools may be necessary. These tools may include, but are not limited to:
 - Screwdrivers
 - Drill and drill bits
 - Additional screws
 - Zip ties

5 | Quick Start Setup

Follow these steps to prepare your router for installation and mounting.

1. Verify box contents.

Model	Standard orders include	Orders with accessories also include
R920-C7A	• [1] R920 Series Ruggedized Router • [1] 3-meter (2x2) Power and GPIO cable • [1] Small accessories kit ◦ [4] M4 screws, nuts, and washers	• [2] Cellular Antennas • [2] Wifi Antennas • [1] Power Supply (PSU) • [3] PSU clips
R920-C7B	• [1] Mounting template • [1] Getting Started card • [1] Safety, Warranty, and Regulatory guide	

2. Remove the SIM door screws, insert at least one activated 4FF-sized SIM card in the SIM1 slot first (and optionally insert a second in the SIM2 slot), and then reinstall the SIM door and screws.

3. Optionally, attach the RX20 Managed Accessory to the R920.

See the installation instructions detailed in the [RX20 Series Managed Accessory Quick Start Guide](#) and then continue to the next step when the managed accessory is attached.

IMPORTANT: The RX20 Series Managed Accessory is for in-vehicle installations only, using cabled-out antennas to connect to a modem installed in the unit.

4. Attach the antennas.

R920 Series Ruggedized Router Quick Start Guide

The R920 series router does not include antennas. Antennas must be purchased separately or through a third-party vendor. See the [Cradlepoint Antenna](#) web page for more information and options.

5. Mount the router.

The R920 series router may be mounted in a number of ways and should be completed by a professional installer.

6. Connect an Ethernet cable (if using Ethernet).

If you are using a wired, Ethernet WAN connection, connect the Ethernet cable to the WAN port on the R920. Connect the other end to your WAN source.

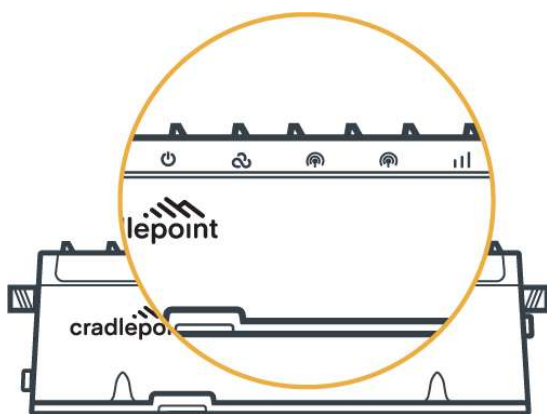
7. Power up the router.

If using an optionally available power adapter, you cannot attach an RX20 Series Managed Accessory.

8. Activate the router through NetCloud Manager.

Activate your R920 Series Ruggedized Router through NetCloud Manager (NCM). Your router is packaged with NetCloud services and requires that you log into your NetCloud account to activate. Refer to [Getting Started with NetCloud Manager](#) for more information.

6 | Understanding LEDs



See the following table for information about LED indicators.

Status Indicators



POWER: The Cradlepoint R920 must be powered using an approved 9-36 V DC power source.



No Light = Not receiving power. Check the power switch and source connection.



Solid White = Powered on.



NCM STATE: Detects whether the device is able to connect to NetCloud Manager.



No Light = Unable to connect to NetCloud Manager.



Solid White = Connected to NetCloud Manager.



EMBEDDED MODEM STATE: Indicates information about the integrated modem.



No Light = Modem not connected.

NOTE: You will not be able to see the icon when the modem is not connected.



Solid Green = Modem has established an active WAN connection.



Flashing Green = Modem is connecting.

Status Indicator Behavior



Solid Yellow = Modem is not active.



Flashing Yellow = Data connection error. No modem connection possible.



Solid Red = Carrier reject.



Flashing Red = No SIM or SIM Door Open.



MC400 MODEM STATE: Indicates information about the optional MC400 modem.



No Light = Modem not connected.

NOTE: You will not be able to see the icon when the modem is not connected.



Solid Green = Modem has established an active WAN connection.



Flashing Green = Modem is connecting.



Solid Yellow = Modem is not active.

	Flashing Yellow = Data connection error. No modem connection possible.
	Solid Red = Carrier reject.
	Blinking Red = No SIM or SIM Door Open.
	CELLULAR HEALTH: Indicates the health of the primary cellular modem's signal.
	No Light = No cellular connection.
	Solid Green = Cellular health is excellent/good.
	Solid Yellow = Cellular health is fair.
	Solid Red = Cellular health is poor.

7 | Troubleshooting

If the device takes longer than five 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 to do this. If there is no internet connection, see the following:

[No Internet or Connection Issues](#)

[NCOS: How to Configure WAN Interfaces](#)

Once the device connects to the internet, ensure that desired functionality is working appropriately through NetCloud Manager.

8 | Help and Support

- [Cradlepoint Customer Connect Community](#)
- [Cradlepoint Support Services](#)

9 | Terms of Service

[Terms of Service](#)

[Privacy Policy](#)

[GDPR Privacy Policy](#)

10 | Product Disclaimer and Limitation of Liability

10.1 | Disclaimer

Cradlepoint, Inc. (“Cradlepoint”) does not warrant that the hardware will work properly in all environments or applications, and makes no warranty or representation, either implied or expressed, with respect to the quality, performance, merchantability, or fitness for a particular purpose of the R920 Series router or RX20 Managed Accessory even when installed in accordance with this Professional Installation Guide.

This Professional Installation Guide is provided “AS IS,” without any warranty of any kind. Without limiting the foregoing, to the maximum extent permitted by applicable law Cradlepoint expressly disclaims all representations, warranties and conditions, whether express, implied, statutory, or otherwise, with respect to this Professional Installation Guide, including without limitation any warranty of title, non-infringement, merchantability or fitness for a particular purpose. While Cradlepoint has made every effort to ensure this Professional Installation Guide is accurate, Cradlepoint disclaims liability for any inaccuracies or omissions that may have occurred and shall not be liable for any adverse results caused, in whole or in part, by the installer’s reliance upon the instructions in this Professional Installation Guide. Information in this Professional

Installation Guide is subject to change without notice and does not represent a commitment on the part of Cradlepoint. Cradlepoint assumes no responsibility for any inaccuracies that may be contained in this Professional Installation Guide. Cradlepoint makes no commitment to update or keep current the information in this Professional Installation Guide and reserves the right to make improvements to this Professional Installation Guide and/or to the products described in this Professional Installation Guide, at any time without notice.

10.2 | Installer Responsibility

Cradlepoint hereby disclaims any liability for failure of the installer to install the hardware properly and for any other acts and omissions of the installer. By using this Professional Installation Guide, you agree to indemnify and hold Cradlepoint harmless from and against any and all, liabilities, losses, damages, costs and expenses (including without limitation attorneys' fees and costs) incurred by Cradlepoint arising out of or in connection with any installation work that is done other than in accordance with the instructions in this Professional Installation Guide.

10.3 | Limitation of Liability

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL CRADLEPOINT BE LIABLE TO YOU OR TO ANYONE CLAIMING THROUGH OR UNDER YOU FOR ANY LOST PROFITS, EQUIPMENT DOWNTIME, OR LOSS OF DATA OR BUSINESS OPPORTUNITY, OR FOR ANY INDIRECT, SPECIAL, EXEMPLARY, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND UNDER ANY THEORY OF LIABILITY, ARISING IN ANY WAY IN CONNECTION WITH YOUR INSTALLATION ACTIVITIES, EVEN IF CRADLEPOINT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. SOME JURISDICTIONS (SUCH AS THE STATE OF NEW JERSEY) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN NO EVENT SHALL THE AGGREGATE LIABILITY OF CRADLEPOINT AND/OR ITS AFFILIATES ARISING UNDER OR IN CONNECTION WITH THE PRODUCT, HOWEVER ARISING, REGARDLESS OF THE NUMBER OF EVENTS, OCCURRENCES, OR CLAIMS GIVING RISE TO LIABILITY, EXCEED THE PRICE PAID BY THE ORIGINAL PURCHASER OF THE PRODUCT. IN NO EVENT SHALL THE AGGREGATE LIABILITY OF CRADLEPOINT AND/OR ITS AFFILIATES ARISING UNDER OR IN CONNECTION WITH THE PRODUCT, HOWEVER ARISING, REGARDLESS OF THE NUMBER OF EVENTS, OCCURRENCES, OR CLAIMS GIVING RISE TO LIABILITY, EXCEED THE PRICE PAID BY THE ORIGINAL PURCHASER OF THE PRODUCT. THE FOREGOING LIMITATIONS WILL APPLY EVEN IF THE ABOVE STATED REMEDY FAILS OF ITS ESSENTIAL PURPOSE.

10.4 | Professional Installer Network

Email our Professional Installer Network for assistance in locating a professional installer in your service area at installernetwork@cradlepoint.com (installernetwork@cradlepoint.com).