



Data Sheet

CBA850 Series LTE Adapter



The Cradlepoint CBA850 Series LTE Adapter is a turnkey branch continuity solution for Gigabit-Class LTE failover that integrates seamlessly with existing network and SD-WAN infrastructure. Using secure wireless access, the CBA850 Adapter provides the ability to extend management capability to any primary router Out-of-Band without the need for a wired connection. Equipped with Power-over-Ethernet for flexible, unobtrusive placement anywhere to optimize cellular reception, this powerful solution reduces truck rolls, consolidates infrastructure, and maximizes uptime for businesses that require always-on connectivity.

Notable Features

- Maximize network uptime using non-intrusive, easy to install overlay failover.
- Elastic Wideband technology for exceptional cellular connectivity.
- Power-over-Ethernet placement flexibility.
- Utilize Day-1 connectivity while waiting for terrestrial links.
- Manage the Cradlepoint router and LTE adapter as one entity for singular control and visibility.
- Troubleshoot adapter and in-line devices with advanced Out-of-Band Management to reduce truck rolls.
- Offload primary connections during traffic surges and network congestion.

High Performance LTE for Failover Link Diversity

LTE wireless WANs provide a powerful, flexible, and cost-effective failover option to minimize disruption in the event of an outage. Working in conjunction with an existing router or SD-WAN, the CBA850 Adapter establishes a cellular connection based on established failover policies. With this adapter, many remote location operations and applications continue functioning while in failover.

Day-1 Connectivity for Rapid Deployment

Establish secure network connections to get operations running while waiting for a wired connection. CBA850 Adapters uniquely connect through LTE independently of the primary link so they do not require prior connection through wired networks. Cradlepoint wireless broadband solutions can be set up in hours with zero-touch deployment without IT staff on location, so local personnel can set up the network. Once the wired link is established, the CBA850 Adapter falls into backup mode.

Performance

IP Passthrough
Mode Throughput

275 Mbps

Standard NAT
Mode Throughput

275 Mbps

Captive Modem
Mode Throughput

275 Mbps

Performance testing was conducted based on requirements as defined in RFC2544 using fixed-frame 1518 byte packets. Throughput results reflect unidirectional. UDP traffic with less than 1% packet loss as tested with wired connections.

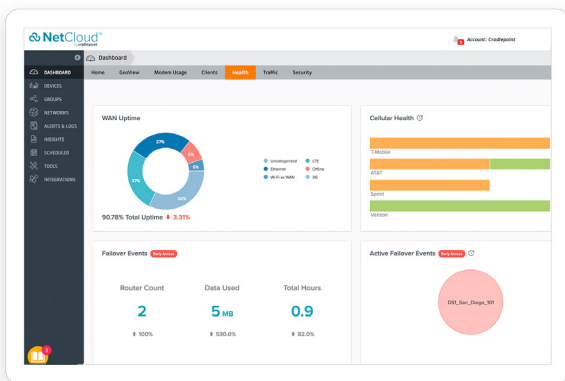
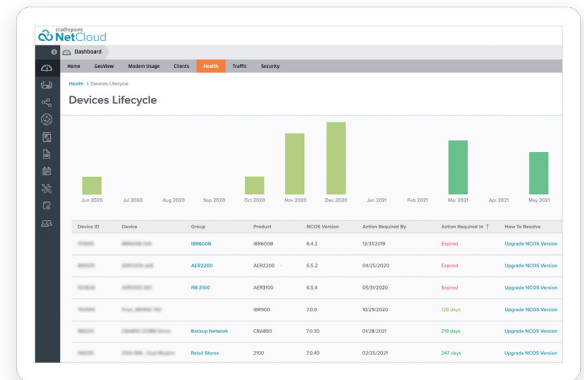
Results do not reflect performance of the cellular wireless operator networks.

Key Software Capabilities

The NetCloud Service provides everything needed to unlock the power of LTE at the network edge and connect devices to critical applications and services. It enables customers to build and manage wireless WANs with complete lifecycle management, true zero-touch deployment, robust security, and foundational SD-WAN traffic management for optimal application performance and reliability. The service includes a warranty for as long as an active subscription on the router, online training, live and online support, and all software and firmware updates.

Out-of-Band Management

To mitigate the effects of an unreachable router, the CBA850 Adapter offers efficient, advanced Out-of-Band Management. Network administrators can connect to the router and other in-line devices over the air, even if IP and Ethernet are unavailable on the router, improving uptime and reducing truck rolls.

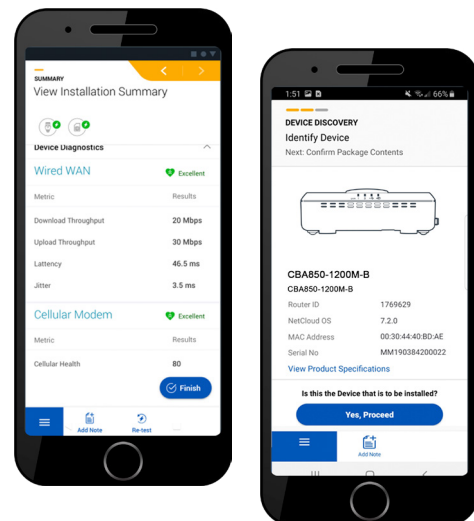


Quantifiable Data and Insights on Failover Events

In the NetCloud Health dashboard, view data for avoided disruptions from failover events, and see quantified ROI in the NetCloud Insights failover report. Additionally, analyze the primary-links service level agreement (SLA) performance for potential to recoup costs, as well as understand the secondary network’s performance, including Interface Uptime, Cellular Health, and Quality of Experience.

Cradlepoint Verify™ Mobile Application

As an extension to NetCloud, Cradlepoint Verify helps installers quickly and accurately install the CB850 adapter for optimal LTE signal reception. Upon a verified installation, users receive a detailed report that includes installation pictures, speed test results, and modem health metrics.



Hardware Specifications

The following features are delivered through the hardware.

INTERFACES

Modem:	<ul style="list-style-type: none"> Modular 1200M-B Cat 18 Modem — 4 x SMA cellular antenna connectors Modular 1200M Cat 18 Modem Modular LP6 Cat 6 Modem Modular LP5 Cat 6 Modem Modular LP4 Cat 4 Modem — 2 x SMA cellular antenna connectors Optional dual modem: <ul style="list-style-type: none"> — Modular MC400 Modem
Ethernet:	<ul style="list-style-type: none"> 2 x GbE RJ45 (LAN/WAN switchable) — LAN1 port pre-configured in IP NAT LAN mode — LAN2 port pre-configured in IP Passthrough LAN mode
Wi-Fi:	N/A
GNSS/GPS:	Active GPS via modular modem

ENVIRONMENTAL

Temperature:	<ul style="list-style-type: none"> 0 °C to 50 °C (32 °F to 122 °F) operating -20 °C to 70 °C (-4 °F to 158 °F) storage
Humidity:	<ul style="list-style-type: none"> 10% to 85% operating 5% to 90% storage

POWER

Required:	<ul style="list-style-type: none"> 12 V DC/1.5 A adapter — 802.3af PSE Type 1 (15 W) or 8.023at (30 W) PoE capable — PoE power injector optional
Consumption:	<ul style="list-style-type: none"> — Idle: 4.0 W — Single modem: 6.0 W

PHYSICAL

Size:	122 x 122 x 42 mm (4.8 x 4.8 x 1.7 in)
Weight:	0.35 kg (12.8 oz)

CERTIFICATIONS

Safety:	UL/cUL, CB Scheme
Materials:	WEEE, RoHS, RoHS-2, California Prop 65

LEDs

Refer to the [CBA850 Series LTE Adapter Quick Start Guide](#).

Enterprise-Class Modem Specifications

SPECIFICATION	CBA850-1200M-B	CBA850-1200M
Technology:	Category 18 LTE Advanced Pro — DC-HSPA+ — SIM-based auto-carrier selection	Category 18 LTE Advanced Pro — DC-HSPA+ — SIM-based auto-carrier selection
Fallback:	WCDMA/DC-HSPA+ (42/5.76 Mbps)	WCDMA/DC-HSPA+ (42/5.76 Mbps)
Carrier Aggregation:	Up to 5CA downlink, 2CA uplink Refer to the Modem Carrier Aggregations article.	Up to 5CA downlink, 2CA uplink Refer to the Modem Carrier Aggregations article.
Peak Downlink Rates:	LTE: 1.2 Gbps DC-HSPA+: 42.2 Mbps	LTE: 1.2 Gbps DC-HSPA+: 42.2 Mbps
Peak Uplink Rates:	LTE: 150 Mbps DC-HSPA+: 5.76 Mbps	LTE: 150 Mbps DC-HSPA+: 5.76 Mbps
MIMO:	4x4 MIMO	4x4 MIMO
QAM:	Up to 256	Up to 256
LTE Bands:	LTE FDD — B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71 LTE TDD — B38, B39, B40, B41, B42, B43, B46, B48	LTE FDD — B2, B4, B5, B12, B13, B14, B29, B30, B66 LTE TDD — B46, B48
HSPA+ Bands:	B1, B2, B4, B5, B8	B1, B2, B4, B5, B8
Power:	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1
Antennas:	SMA & RP-SMA male connectors	SMA & RP-SMA male connectors
GNSS/GPS:	Active GPS	Active GPS
SMS:	Yes	Yes
Regulatory:	FCC (U.S.), IC (Canada), CE (EU)	FCC (U.S.)
Network Operator Standards:	PTCRB (U.S., Canada), GCF-CC (Worldwide)	PTCRB (U.S., Canada)
Network Operator Certifications:	AT&T, Verizon, Sprint, U.S. Cellular, Rogers, Telstra [†]	AT&T, Verizon [†]
Public Safety Network Certifications:	FirstNet Ready™	N/A
Private Cellular Network:	N/A	N/A

[†] Cellular carriers and operators throughout the world may only require telecom industry certifications, like PTCRB or GCF, to operate on their network. Some carriers require additional testing and approval, beyond telecom certifications. A carrier listed in the approvals section means Cradlepoint completed additional testing and acquired technical approval for that given carrier. Any carrier not listed may not require additional testing or approval beyond telecom industry certifications to operate on their network.

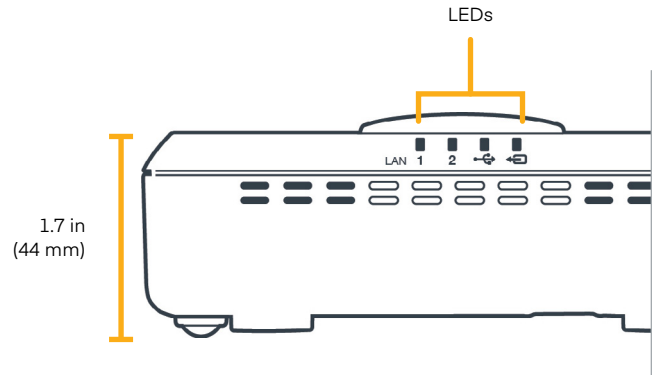
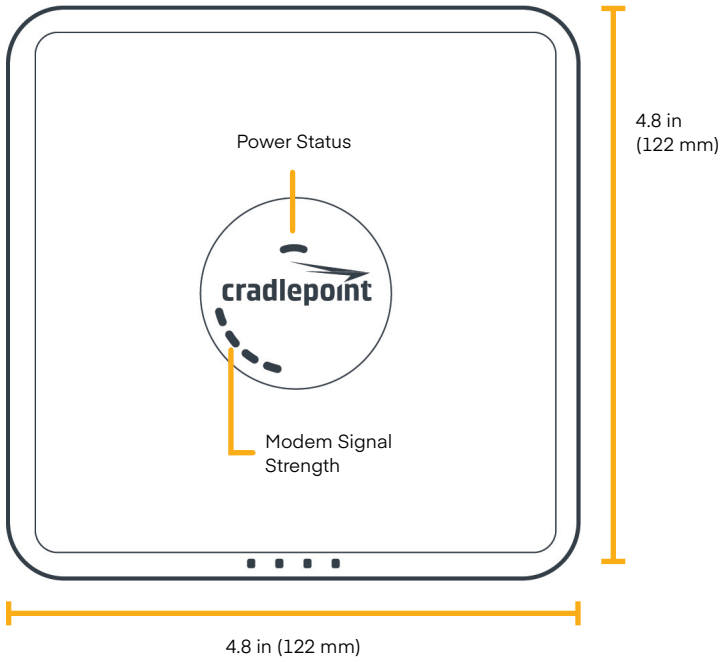
Enterprise-Class Modem Specifications

SPECIFICATION	CBA850-LP6	CBA850-LP5
Technology:	LTE Advanced <ul style="list-style-type: none"> — DC-HSPA+ — SIM-based auto-carrier selection 	FDD/TDD (Category 6) LTE Advanced <ul style="list-style-type: none"> — DC-HSPA+ — SIM-based auto-carrier selection
Fallback:	WCDMA/DC-HSPA+ (42/5.76 Mbps)	WCDMA/DC-HSPA+ (42/5.76 Mbps)
Carrier Aggregation:	Up to 2CA downlink Refer to the Modem Carrier Aggregations article.	Up to 2CA downlink Refer to the Modem Carrier Aggregations article.
Peak Downlink Rates:	LTE: 300 Mbps DC-HSPA+: 42.2 Mbps	LTE: 300 Mbps DC-HSPA+: 42.2 Mbps
Peak Uplink Rates:	LTE: 50 Mbps DC-HSPA+: 5.76 Mbps	LTE: 50 Mbps DC-HSPA+: 5.76 Mbps
MIMO:	2x2 MIMO	2x2 MIMO
QAM:	Up to 64	Up to 64
LTE Bands:	LTE FDD <ul style="list-style-type: none"> — B1, B2, B3, B4, B5, B7, B8, B12, B13, B20, B25, B26, B29, B30, B41 	LTE FDD <ul style="list-style-type: none"> — B1, B3, B5, B7, B8, B11, B18, B19, B21, B28, B38, B39, B40, B41
HSPA+ Bands:	B1, B2, B3, B4, B5, B8	B1, B5, B6, B8, B9, B19
Power:	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1	LTE: 23 dBm ± 1; DC-HSPA+: 23 dBm ± 1
Antennas:	SMA male connectors	SMA male connectors
GNSS/GPS:	Active GPS	Active GPS
SMS:	Yes	Yes
Regulatory:	FCC (U.S.), IC (Canada), CE (EU)	CE (EU)
Network Operator Standards:	PTCRB (U.S., Canada), GCF-CC (Worldwide)	GCF-CC (Worldwide), RC (Australia)
Network Operator Certifications:	AT&T, Verizon, Sprint [†]	See note [†]
Public Safety Network Certifications:	N/A	N/A
Private Cellular Network:	N/A	N/A

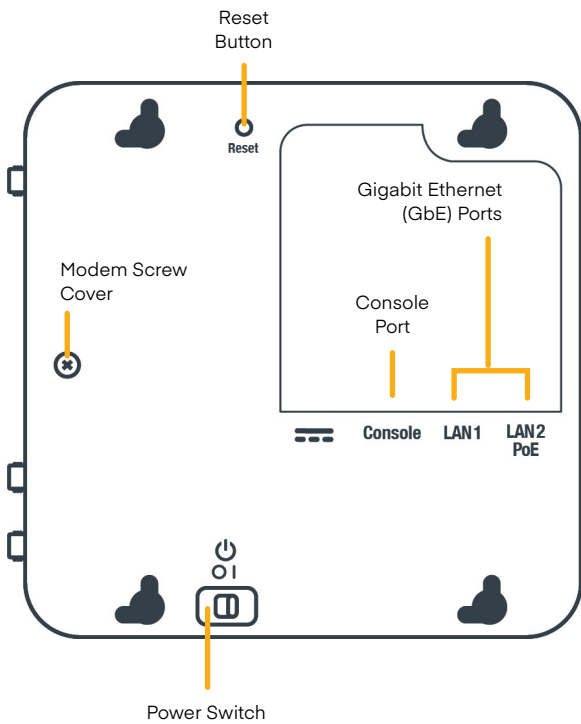
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Hardware

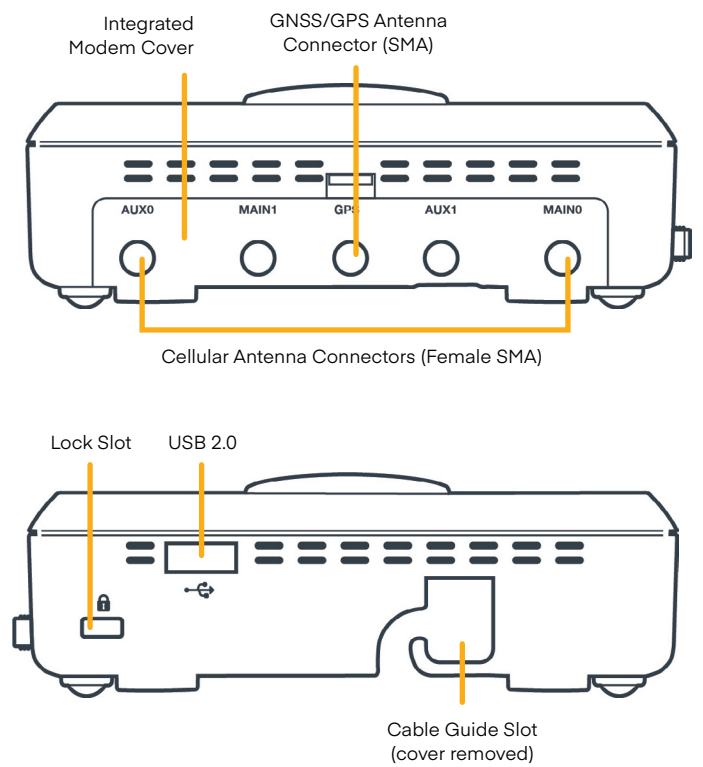
Physical Measurements



Bottom



Sides



Ordering Guide

NetCloud Branch LTE Essentials and Advanced packages and plans are full featured for performance and connectivity. Essentials and Advanced packages include 24x7 support (phone support: 24 hour weekdays with emergency response on weekends, web: 24x7, chat: 24x5) and a limited lifetime warranty.

See additional details of what is included in the Essentials + Advanced NetCloud software: cradlepoint.com/netcloud-service

For more details on the CB850 LTE Series Adapters, included with Essentials and Advanced packages, see below.

NetCloud Package & Plans

REGION	DESCRIPTION	PART NUMBER
North America: U.S. & Canada	LP6 Modem	
	NetCloud Branch LTE Adapter Essentials Plan and CBA850 Adapter (LP6 modem), North America	BBx-0850LP6-N0N
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and CBA850 Adapter (LP6 modem), North America	BBAx-0850LP6-NN
	CAT 18 Modem	
	NetCloud Branch LTE Adapter Essentials Plan and CBA850 Adapter (1200 Mbps modem), North America	BBx-0850120B-N0N
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and CBA850 Adapter (1200 Mbps modem), North America	BBAx-0850120B-NN
Europe: European Union, Saudi Arabia, South Africa, United Arab Emirates & United Kingdom	LP6 Modem	
	NetCloud Branch LTE Adapter Essentials Plan and CBA850 Adapter (LP6 modem), Europe	BBx-0850LP6-E0M
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and CBA850 Adapter (LP6 modem), Europe	BBAx-0850LP6-EM
	CAT 18 Modem	
	NetCloud Branch LTE Adapter Essentials Plan and CBA850 Adapter (1200 Mbps modem), Europe	BBx-0850120B-E0M
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and CBA850 Adapter (1200 Mbps modem), Europe	BBAx-0850120B-EM
Asia Pacific: Australia, New Zealand, & Singapore	LP5 Modem	
	NetCloud Branch LTE Adapter Essentials Plan and CBA850 Adapter (LP5 modem), APAC	BBx-0850LP5-P0M
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and CBA850 Adapter (LP5 modem), APAC	BBAx-0850LP5-PM
	CAT 18 Modem	
	NetCloud Branch LTE Adapter Essentials Plan and CBA850 Adapter (1200 Mbps modem), APAC	BBx-0850120B-P0M
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and CBA850 Adapter (1200 Mbps modem), APAC	BBAx-0850120B-PM
All Regions	NetCloud Branch LTE Adapter Essentials Plan	BBx-NCESS
	NetCloud Branch LTE Adapter Advanced Plan	BBx-NCADV
	Renewal NetCloud Branch LTE Adapter Essentials Plan	BBx-NCESS-R
	Renewal NetCloud Branch LTE Adapter Essentials Plan and Advanced Plan	BBx-NCADV-R

x = 1, 3, or 5 years

Accessories

INCLUDED	PART NUMBER
CBA850 Series LTE Adapter	
Cellular Antenna, SMA connector (Qty. 2)	N/A
OPTIONAL	PART NUMBER
PoE Injector, 48V, .35A, 15.4W, 1.8 meters (with C5 NA line cord)	170732-000
Power Supply, 12V Barrel, 1.8 meters (North America Type A)	170677-002
Power Supply, 12V Barrel, 1.8 meters (Types A-C-G-I)	170677-004
RJ45 Rollover Serial Cable, 2.1 meters	170663-000
RJ45 Rollover Serial Cable, 4.3 meters	170663-001
Cellular Antenna, White, 700 MHz - 2.7 GHz, SMA, 210 mm (CBA850-LP6 models only)	170659-001
Cellular Antenna, White, 600 MHz - 6 GHz, SMA, 180 mm (CBA850-1200M-B models only)	170761-001
Wall or Ceiling Mounting Bracket	170666-000
MC400-LP5 Cat 5 LTE Advanced Modular Modem†	MC400LP5
MC400-LP6 Cat 6 LTE Advanced Modular Modem†	MC400LP6
LTE Advanced Pro Modular Modem Kit†	BB-MC400-1200M-B
<ul style="list-style-type: none"> — MC400-1200M 1200 Mbps LTE Advanced Pro Modular Modem — CBA850 MC400-1200M Modem Door with Screw — White Antennas (Qty 4) 	

†Refer to the [Cradlepoint MC400 Modular Modem](#) webpage for more information about modular modems.

Support & Warranty

The CBA850 LTE Series Adapters are only sold as components of NetCloud Branch LTE Adapter Essentials and Advanced packages.

- NetCloud Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a limited lifetime warranty for as long as they have a subscription license to an active NetCloud Service Plan.

**Find the most up-to-date information
at cradlepoint.com/cba850**