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NetCloud Services
Branch

Data Sheet

L950 Series LTE Adapter

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Designed for remote sites that require secure, reliable failover connectivity in the event of a primary link disruption, the L950 Series cellular broadband adapter is a simple addition at the branch which significantly improves uptime and business continuity. These sophisticated devices can be configured at scale with NetCloud to offer a full range of zero-touch deployment, troubleshooting, and management features and integrate into existing configurations with standards-based routing, traffic shaping, and VPN support.

Notable Features

— Maximize network uptime using LTE WAN for failover and link diversity.

— Deploy within any existing networking or SD-WAN environment.

— Configure with greater simplicity and confidence with the wizard-based installation application.

— 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 L950 Series Adapter establishes a cellular connection based on established failover policies. The L950, despite its compact design, houses a Cat 7 modem, two Ethernet interfaces with a power over ethernet (PoE), a dual SIM capability to connect up to two carriers, and antenna. With this performance, 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. L950 Series Adapters uniquely connect via LTE independently of the primary link so they don't require prior connection via 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 L950 Series Adapter falls into backup mode.

Performance

IP Passthrough Mode Throughput	Standard NAT Mode Throughput	Captive Modem Mode Throughput
940 Mbps	**940 Mbps**	**940 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 L950 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.
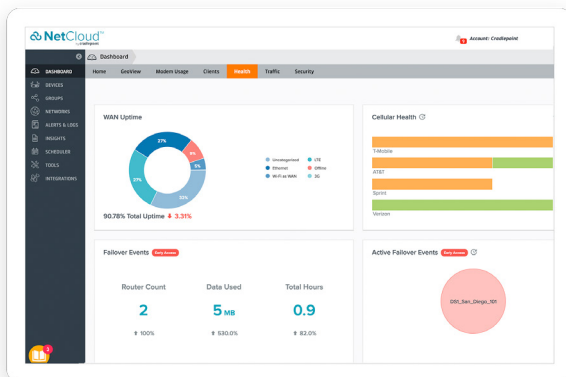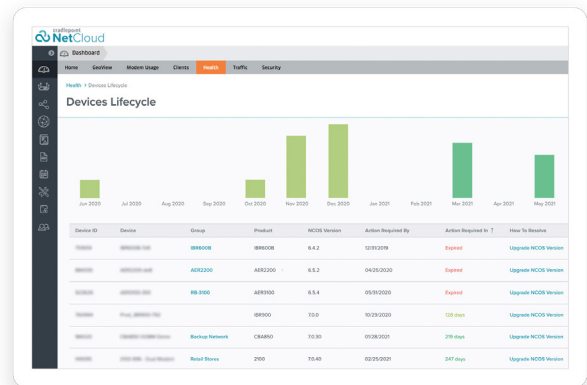

Quantifiable Data and Insights on Failover Events

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 L950 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.

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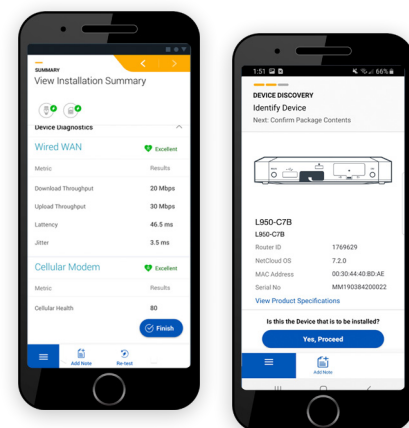
Hardware Specifications

The following features are delivered through the hardware.

INTERFACES	
Modem:	Embedded Cat 7 modem
	— 2 x SMA cellular antenna connectors
Ethernet:	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:	Passive GNSS (multiplex with DIV antenna port)

ENVIRONMENTAL	
Temperature:	0 °C to 50 °C (32 °F to 122 °F) operating -40 °C to 85 °C (-40 °F to 185 °F) storage
Humidity:	10% to 90% operating 5% to 95% storage

POWER	
Power Required:	PoE
	— 802.3af PSE Type 1 (15W)
	— PoE power injector optional

PHYSICAL	
Size:	5.7 x 5.7 x 1.2 in (145 x 145 x 30 mm)
Weight:	13.9 oz (0.39 kg)

CERTIFICATIONS	
Safety:	UL/cUL, CB Scheme, EN 60950-1, EN 62368-1
Materials:	WEEE, RoHS, REACH, California Prop 65

LEDs	
Refer to the L950 Series LTE Adapter Quick Start Guide.	

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Enterprise-Class Modem Specifications

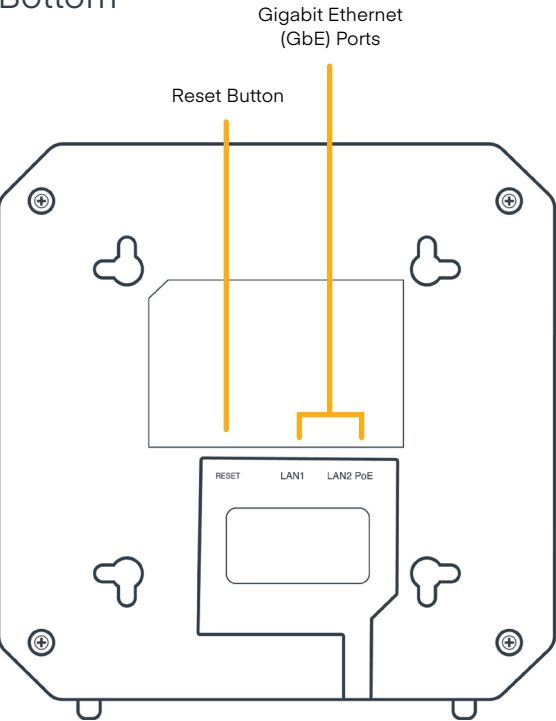| SPECIFICATION	L950-C7A	L950-C7B
Technology:	Cat 7 LTE (3GPP Rel. 11) — Dual SIM slots, 4FF form factor — SIM-based auto-carrier selection	Cat 7 LTE (3GPP Rel. 11) — Dual SIM slots, 4FF form factor — SIM-based auto-carrier selection
Fallback:	WCDMA/UMTS/HSPA+	WCDMA/UMTS/HSPA+
Carrier Aggregation:	Downlink Cat 7 with 2CA with 64 QAM = 300 Mbps, Uplink Cat 13 with 2CA 64 QAM = 150 Mbps Refer to the Modem Carrier Aggregations article.	Downlink Cat 7 with 2CA with 64 QAM = 300 Mbps, Uplink Cat 13 with 2CA 64 QAM = 150 Mbps Refer to the Modem Carrier Aggregations article.
Peak Downlink Rates:	— LTE: 300 Mbps — WCDMA: 42.2 Mbps	— LTE: 300 Mbps — WCDMA: 42.2 Mbps
Peak Uplink Rates:	— LTE: 150 Mbps — WCDMA: 5.76 Mbps	— LTE: 150 Mbps — WCDMA: 5.76 Mbps
MIMO:	2x2 MIMO	2x2 MIMO
QAM:	Up to 64	Up to 64
LTE Bands:	LTE FDD — B2, B4, B5, B7, B12, B13, B14, B25, B26, B66, B71 LTE TDD — B41, B42, B43, B48	LTE FDD — B1, B3, B7, B8, B20, B28, B32 LTE TDD — B38, B40, B41, B42, B43
HSPA+ Bands:	B2, B4, B5	B1, B5, B8
Power:	LTE 22.5 dBm ± 1, DC-HSPA+ 23 dBm ± 1	LTE 22.5 dBm ± 1, DC-HSPA+ 23 dBm ± 1
Antennas:	— SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included) — (LTE) External Multi-Band 2 x 2 MIMO Antenna System	— SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included) — (LTE) External Multi-Band 2 x 2 MIMO Antenna System
GNSS/GPS:	Passive GNSS (multiplex with DIV antenna port)	Passive GNSS (multiplex with DIV antenna port)
SMS:	Yes	Yes
Regulatory:	FCC (US), IC (Canada)	CE (EU)
Network Operator Standards:	PTCRB (US, Canada)	GCF (Worldwide)
Network Operator Certifications:	AT&T, T-Mobile, Verizon[†]	
Private LTE:	Yes, includes FCC Part 96 (CBRS Band 48)	

[†] 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.
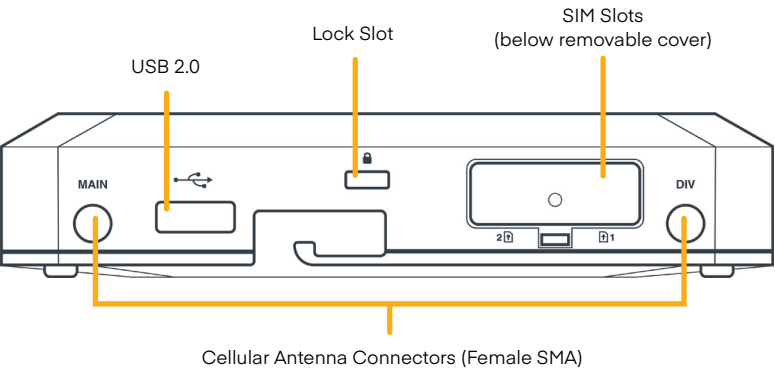
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Hardware

Physical Measurements

5.7 in
(144 mm)

5.7 in
(144 mm)

LED
(top)

1.2 in
(30.5 mm)

MAIN

Bottom

Gigabit Ethernet
(GbE) Ports

Reset Button

RESET   LAN1   LAN2 PoE

Side

USB 2.0

Lock Slot

SIM Slots
(below removable cover)

MAIN   DIV

2   1

Cellular Antenna Connectors (Female SMA)
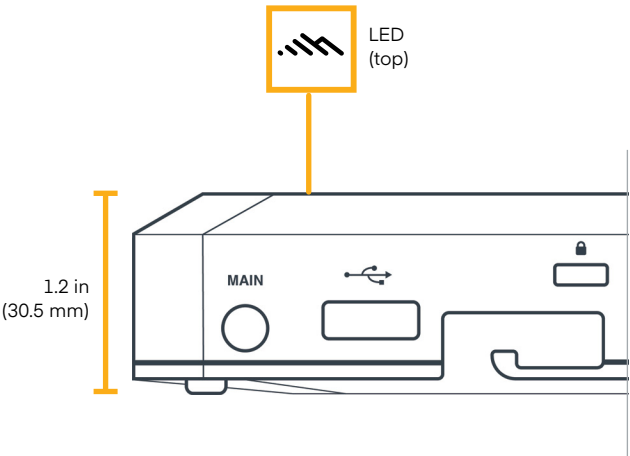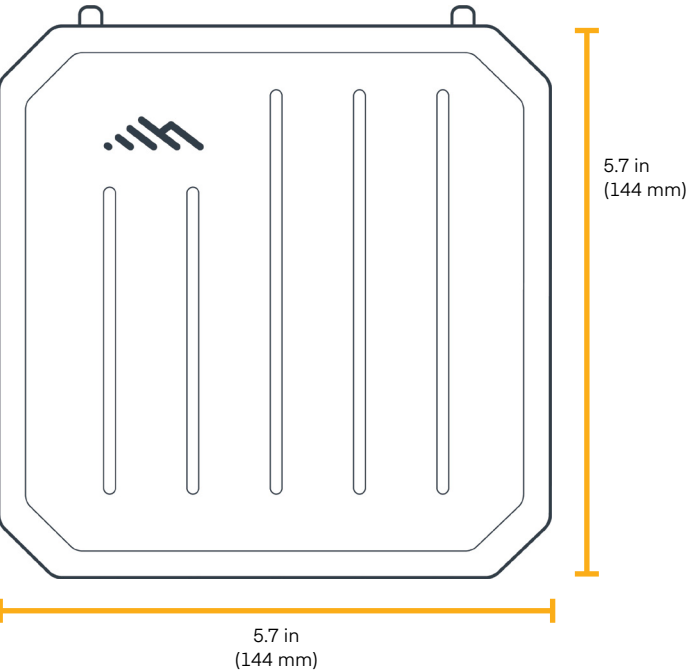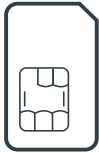
Correct SIM: Nano SIM — 4FF

Nano SIM
(12.3mm x 8.8mm)
4FF

Micro SIM
(15mm x 12mm)
3FF

Mini SIM
(25mm x 15mm)
2FF

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Ordering Guide

NetCloud L950 Adapter Essentials and Advanced packages and plans are full featured for performance and connectivity. Essentials + 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 L950 Series Adapters, included with Essentials + Advanced packages, see below.

NetCloud Package & Plans

REGION	DESCRIPTION	PART NUMBER
North America: U.S. & Canada	NetCloud Branch LTE Adapter Essentials Plan and L950 Adapter (300 Mbps modem), Americas	BB0x-0950C7A-N0
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and L950 Adapter (300 Mbps modem), Americas	BBAx-0950C7A-N0
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, PoE Injector, Line Cord and L950 adapter (300 Mbps modem, 4FF SIM), North America	BBAx-0950C7A-NC
United States: Federal Government	TAA Compliant NC Branch LTE Adapter Essentials Plan and L950 Adapter (300 Mbps modem, 4FF SIM), Americas	TAA-BB0y-0950C7A-N0
	TAA Compliant NC Branch LTE Adapter Essentials Plan, Advanced Plan, and L950 Adapter (300 Mbps modem, 4FF SIM), Americas	TAA-BBAy-0950C7A-N0
	TAA Compliant NC Branch LTE Adapter Essentials Plan, PoE Injector, Line Cord and L950 Adapter (300 Mbps modem, 4FF SIM), North America	TAA-BB0y-0950C7A-NC
	TAA Compliant NC Branch LTE Adapter Essentials Plan, Advanced Plan, PoE Injector, Line Cord and L950 Adapter (300 Mbps modem, 4FF SIM), North America	TAA-BBAy-0950C7A-NC
Global: Rest of World	NetCloud Branch LTE Adapter Essentials Plan and L950 Adapter (300 Mbps modem), Global	BB0x-0950C7B-G0
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and L950 Adapter (300 Mbps modem), Global	BBAx-0950C7B-G0
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, and L950 Adapter (300 Mbps modem, 4FF SIM), Indonesia, Israel & Taiwan	BBAx-0950C7B-I0
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, PoE Injector, Line Cord and L950 Adapter (300 Mbps modem, 4FF SIM), EU	BBAx-0950C7B-GF
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, PoE Injector, Line Cord and L950 Adapter (300 Mbps modem, 4FF SIM), UK	BBAx-0950C7B-GS
	NetCloud Branch LTE Adapter Essentials Plan, Advanced Plan, PoE Injector, Line Cord and L950 Adapter (300 Mbps modem, 4FF SIM), AU	BBAx-0950C7B-GR
All Regions:	Renewal NetCloud Branch LTE Adapter Essentials Plan	BBx-NCESS-R
	Renewal NetCloud Branch LTE Adapter Advanced Plan	BBx-NCSDV-R
	Renewal NetCloud Branch LTE Adapter Essentials Plan and Advanced Plan	BBAx-NCEA-R

x = 1, 3, or 5 years
y = 3 or 5 years

Accessories

INCLUDED	PART NUMBER
L950 Series Branch Adapter	
— Cellular Antenna, White mini, 600 MHz - 4.2 GHz, SMA, 145 mm (Qty 2)	170765-000

OPTIONAL	PART NUMBER
PoE Injector, 56 V with 1.8 meters C5 line cord (North America Type B)	170732-001
PoE Injector, 56 V with 1.8 meters C13 line cord (Europe Type F)	170732-002
PoE Injector, 56 V with 1.8 meters C13 line cord (United Kingdom Type G)	170732-003
PoE Injector, 56 V with 1.8 meters C13 line cord (Australia Type I)	170732-004

UNITED STATES FEDERAL GOVERNMENT	PART NUMBER
Cellular Antenna, White mini, 600 MHz - 4.2 GHz, SMA, 145 mm	TAA-170765-000
PoE Injector, 56 V with 1.8 meters C5 line cord (North America Type B)	TAA-170732-001

Support & Warranty

The L950 Series Adapters are only sold as components of Branch LTE Performance Adapter Essentials + 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/L950**

CRADLEPOINT/ ERICSSON L950-C7A

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