

Data Sheet

E102 Series Enterprise Router

2024 - 02 - 19

The Cradlepoint NetCloud Service for Small Branch with the E102 Series Enterprise Router is ideally suited for enabling mission-critical employees to work from home or outside the office with the same services, security, and ease of management. The portable, compact form factor includes full-featured routing, security, traffic shaping, and Wi-Fi, making it easy to connect and maintain connectivity to the Internet for supporting crucial business applications. The embedded LTE modem means that reliable, private connectivity is always available from day one without waiting for a wired connection and without having to depend upon consumer-class, underlying networking conditions.

Ideal for Small Branch Wireless WAN

For organizations moving to a Small Branch Wireless WAN, the E102 offers the ability to pair LTE with a wired link and use a cellular link as a failover connection, hybrid WAN, or a primary connection. For an all-wireless WAN, the E102 offers LTE performance, which can support the throughput needs of a small- sized office with the ability to add a second cellular connection to increase available bandwidth and reliability.

Work from Anywhere

NetCloud Service for Small Branch, combined with an E102 Series Router, provides a dedicated connection for remote, mission-critical workers, and executives with a similar experience as the office network, with access to critical cloud and corporate data center applications. Instead of relying on uneven levels of household equipment, this Work from Anywhere (WFX) solution offers IT providers cloud-based management to define and distribute policies, set security parameters, isolate corporate assets, and fine-tune bandwidth considerations in a uniform, corporate-class offering that interoperates with existing network solutions.

Notable Benefits

- Connect to the internet or applications anywhere with all-wireless 5G or LTE connectivity.
- Open temporary locations without compromising security or reliability with an all-in-one design and compact form factor.
- Extend office networking capabilities to critical remote employees without compromising security or reliability.
- Reduce network attack surface, build encrypted tunnels, and incorporate zero trust principles with NCX Secure Connect and NCX ZTNA.
- Define policies through centralized, cloud-based management for easy deployment at scale.
- Use zero-touch deployment with pre-configured router and pre-inserted SIM to speed installation.



[Product Page](#)



[NetCloud Service](#)



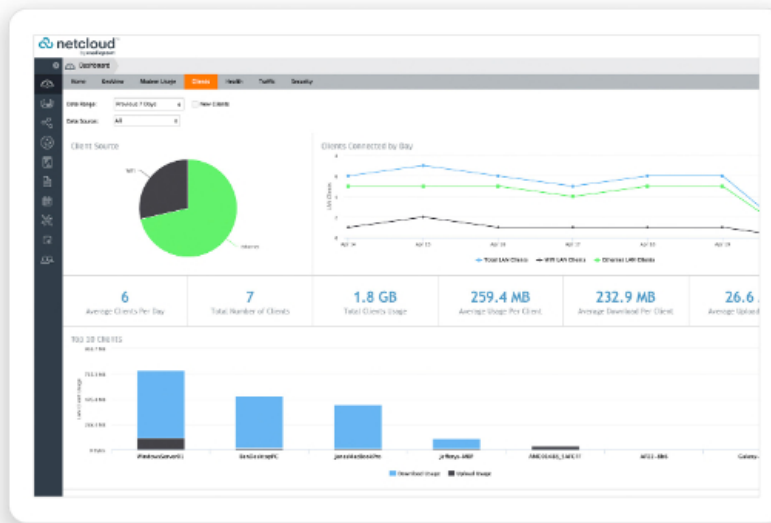
[Quick Start Guide](#)

Key Software Capabilities

Cradlepoint NetCloud Service for Small Branch provides everything needed to connect the remote worker to their corporate applications and services they need most from virtually any location. The NetCloud Service includes cloud-based management for optimizing routing, VPN, SD-WAN, and security capabilities. The cloud capabilities include defining and applying policies, at-a-glance status insights, reports, troubleshooting, and analytics dashboards. The service includes a warranty for as long as there is an active subscription on the router, online training, live and online support, and all software and firmware updates.

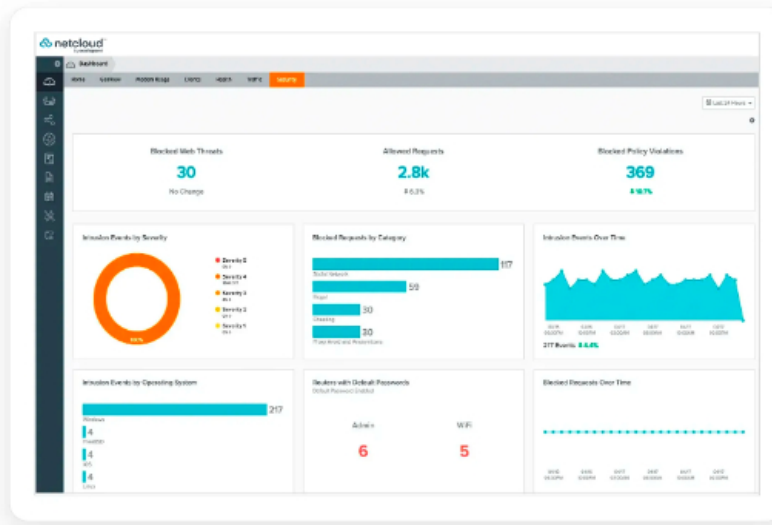
Deployment Capabilities

Zero-touch deployment features allow pre-configured and pre-activated equipment to arrive on location, so the employee is able to power up an E102 Series Router, locate the best cellular connection path, and instantly setup the pre-established office parameters through the NetCloud Service, upon authentication.



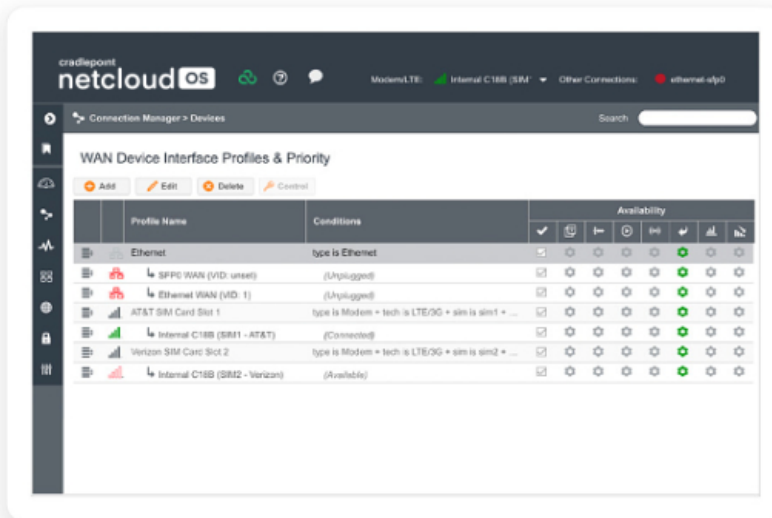
Security Services

NetCloud Service includes Unified Edge security features and options to optimize an E102 Series Router to meet and scale to the security needs of distributed environments. The service includes stateful zone-based and application-aware firewall, unified threat management, and authenticated wireless connection that is fully isolated from the surrounding networks.



Cloud Services

NetCloud delivers true zero-touch deployment with the ability to define and deliver policy across entire groups of endpoints. Users can create a cloud-orchestrated hub and spoke VPN network and gain insights and analytics required for rapid troubleshooting and diagnostic workflows.



Hardware Specifications

The following features are delivered through the hardware.

INTERFACES

Modem:	One of the following: <ul style="list-style-type: none"> — Embedded C7C Modem <ul style="list-style-type: none"> — 2 x SMA cellular antenna connectors — Embedded C7C Modem <ul style="list-style-type: none"> — 2 x SMA cellular antenna connectors
Ethernet:	5 x GbE RJ45 (LAN/WAN switchable)
Wi-Fi:	Dual-radio, dual-band, concurrent operation (2.4 GHz and 5 GHz) <ul style="list-style-type: none"> — 2x2 MU-MIMO 802.11ac Wi-Fi 5 with DFS — 300 Mbps (2.4 GHz) and 867 Mbps (5 GHz) — Internal 2x2 antenna
Expansion:	1 x USB 2.0 Type A (Output: 5 V, 500 mA, 2.5 W)
GNSS/GPS:	1 x SMA GNSS antenna connector
ENVIRONMENTAL	
Temperature:	<ul style="list-style-type: none"> — Operating: 0 °C to 50 °C (32 °F to 122 °F) — Storage: -20 °C to 70 °C (-4 °F to 158 °F)
Humidity:	<ul style="list-style-type: none"> — Operating: 10% to 90% — Storage: 5% to 95%
POWER	
Required:	External power supply (included) <ul style="list-style-type: none"> — Input: 100-240 VAC 1 A — Output: 12 VDC 3 A
Consumption:	<ul style="list-style-type: none"> — Idle: 6 W — Typical: 9.5 W — Heavy: 12 W
PHYSICAL	
Size:	135 x 270 x 32.4 mm (5.3 x 10.6 x 1.3 in)
Weight:	.62 kg (1 lb 6 oz)
RELIABILITY	
Calculated MTBF:	453,508 hours (Telcordia SR332 at 25 °C)
CERTIFICATIONS	
Safety:	UL/cUL, CB Scheme, EN 62368-1
Materials:	RoHS
Security :	Secureboot
CLOUD SERVICES	
Service Plans:	NetCloud Service for Small Branch
Service Add-Ons:	NetCloud Exchange, NetCloud Advanced
Support:	NetCloud Packages include support for the full subscription term.

Warranty:	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.
Device Management:	NetCloud Manager for the full subscription term.
Software Updates:	NetCloud Manager for the full subscription term.
WI-FI POWER	
FCC:	<ul style="list-style-type: none"> — 2412–2462 (2.4 GHz): 31.58 dBm EIRP — 5180–5240 MHz (5 GHz band 1): 27.95 dBm EIRP — 5260–5320 MHz (5 GHz band 2a): 27.1 dBm EIRP — 5500–5720 MHz (5 GHz band 2c): 28.99 dBm EIRP — 5745–5825 MHz (5 GHz band 3): 26.46 dBm EIRP
IC:	<ul style="list-style-type: none"> — 2412–2462 MHz (2.4 GHz): 31.58 dBm EIRP — 5150–5250 MHz (5 GHz band 1): 25.4 dBm EIRP — 5250–5350 MHz (5 GHz band 2a): 24.65 dBm EIRP — 5470–5725 MHz (5 GHz band 2c): 28.99 dBm EIRP — 5745–5850 MHz (5 GHz band 3): 26.46 dBm EIRP
CE:	<ul style="list-style-type: none"> — 2412–2472 MHz (2.4 GHz): 19.80 dBm EIRP — 5180–5240 MHz (5 GHz band 1): 22.70 dBm EIRP — 5260–5320 MHz (5 GHz band 2a): 22.59 dBm EIRP — 5500–5700 MHz (5 GHz band 2c): 25.98 dBm EIRP
PERFORMANCE	
Stateful Firewall Throughput:	850 Mbps
IPS Throughput:	250 Mbps
Application Aware Services & Analytics	250 Mbps
IPsec VPN Throughput:	40 Mbps
Concurrent VPN Tunnels:	20
Concurrent Sessions (TCP):	32,000
Typical Client Count:	5
LEDs	
Refer to the E102 Enterprise Router Quick Start Guide .	

Performance testing conducted based on requirements as defined in RFC2544 using fixed-frame 1518-byte packets. Throughput results reflect uni-directional UDP traffic with less than 1% packet loss as tested with wired connections. Results do not reflect performance of the cellular wireless operator networks.

Enterprise-Class Modem Specifications

SPECIFICATION	E102-C7C
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Technology:	Cat 7 LTE (3GPP Rel. 11) <ul style="list-style-type: none"> — Dual SIM slots, 2FF form factor — SIM-based auto-carrier selection
3G:	WCDMA/UMTS/HSPA+
Carrier Aggregation:	Up to 2 x CA downlink, 2 x CA uplink See Understanding Carrier Aggregation .
Peak Downlink Rates:	<ul style="list-style-type: none"> — LTE: 300 Mbps — WCDMA: 42.2 Mbps
Peak Uplink Rates:	<ul style="list-style-type: none"> — LTE: 150 Mbps — WCDMA: 5.76 Mbps
MIMO:	2x2 MIMO
Modulation:	<ul style="list-style-type: none"> — Up to 64 QAM DL — Up to 64 QAM UL
4G/LTE Bands:	LTE FDD <ul style="list-style-type: none"> — B2, B4, B5, B7, B12, B13, B14, B25, B26, B66, B71 LTE TDD <ul style="list-style-type: none"> — B41, B42, B43, B48
3G Bands:	B2, B4, B5
Power:	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1 (typical conducted)
Antennas:	SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included)
GNSS/GPS:	Active GNSS
SMS:	Yes
Regulatory:	IFITEL (MX) ^{††}
Network Operator Standards:	PTCRB (Mexico), GCF (Worldwide)
Network Operator Certifications:	See note [†]
Public Safety Network Certifications:	N/A
Private Cellular Network:	Yes

[†]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.

^{††}Refer to <https://cradlepoint.com/products/certifications/> for a list of country/region regulatory certifications.

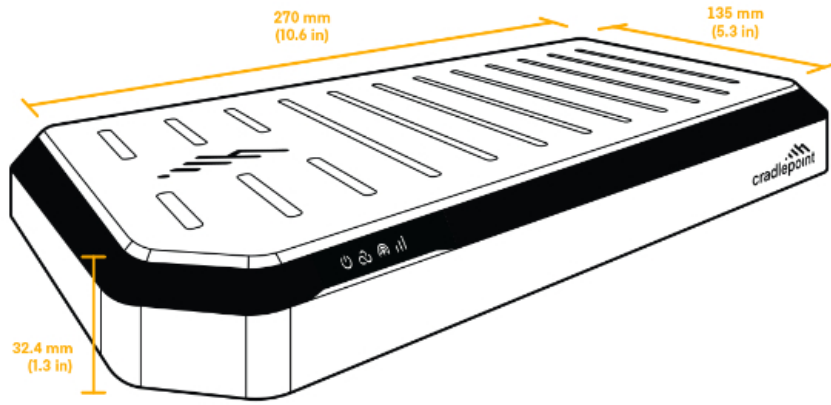
SPECIFICATION	E102-C7D
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Technology:	Cat 7 LTE (3GPP Rel. 11) <ul style="list-style-type: none"> — Dual SIM slots, 2FF form factor — SIM-based auto-carrier selection
3G:	WCDMA/UMTS/HSPA+
Carrier Aggregation:	Up to 2 x CA downlink, 2 x CA uplink See Understanding Carrier Aggregation .
Peak Downlink Rates:	<ul style="list-style-type: none"> — LTE: 300 Mbps — WCDMA: 42.2 Mbps
Peak Uplink Rates:	<ul style="list-style-type: none"> — LTE: 150 Mbps — WCDMA: 5.76 Mbps
MIMO:	2x2 MIMO
Modulation:	<ul style="list-style-type: none"> — Up to 64 QAM DL — Up to 64 QAM UL
4G/LTE Bands:	LTE FDD <ul style="list-style-type: none"> — B1, B3, B7, B8, B20, B28, B32 LTE TDD <ul style="list-style-type: none"> — B38, B40, B41, B42, B43
3G Bands:	B1, B5, B8
Power:	LTE 22.5 dBm ± 1, DC-HSPA+ 23 dBm ± 1
Antennas:	SMA female connectors, external 600 MHz - 6GHz cellular paddle antennas (Qty 2, included)
GNSS/GPS:	Active GNSS
SMS:	Yes
Regulatory:	CE (EU), UKCA, RCM (AU/NZ) ^{††}
Network Operator Standards:	GCF (Worldwide)
Network Operator Certifications:	See note [†]
Public Safety Network Certifications:	N/A
Private Cellular Network:	Yes

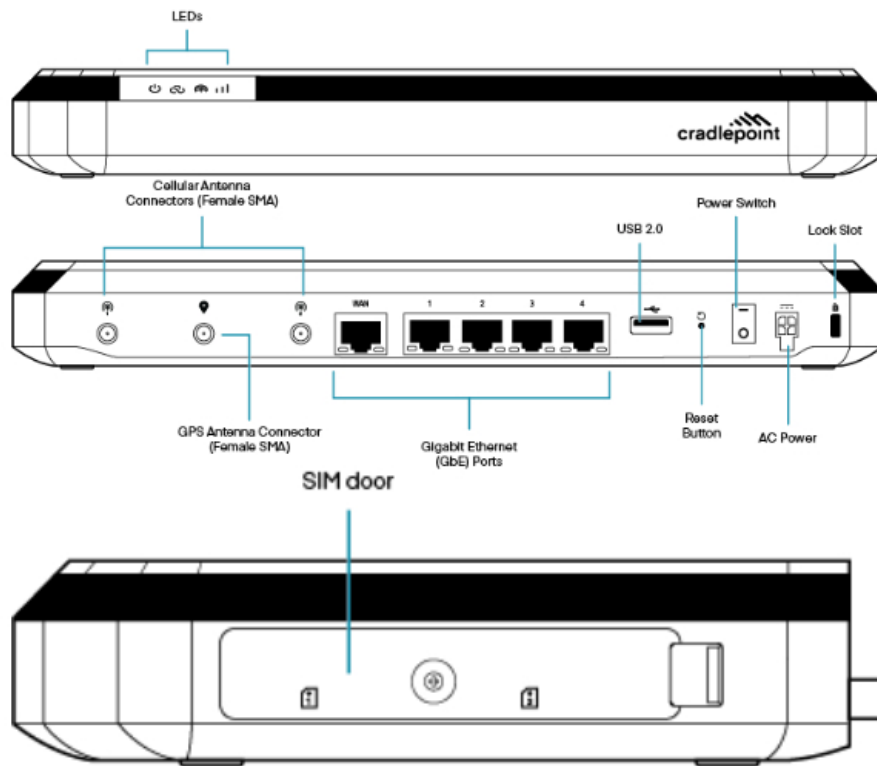
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Physical Measurements & Features



Features



SIM Card Info



Ordering Guide

NetCloud Small Branch Essentials + Advanced packages and plans contain all the features and capabilities required for remote or virtual workers. NetCloud Packages include 24x7 support (phone support: 24-hour weekdays with emergency response on weekends, web: 24x7, chat: 24x5) and a limited lifetime warranty.

For additional capabilities, a **NetCloud Small Branch Advanced Plan** can be added to the NetCloud Small Branch Essentials Package at any time.

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

NetCloud Packages for the E102 Series Router

REGION	MODEM	PACKAGE PLAN	PART NUMBER
Mexico:	Cat 7 (300 Mbps) with Wi-Fi	Small Branch — Essentials	BK0x-0102C7C-GN
		Small Branch — Essentials + Advanced	BKAx-0102C7C-GN
Australia, European Union, New Zealand, Philippines, & United Kingdom:	Cat 7 (300 Mbps) with Wi-Fi	Small Branch — Essentials	BK0x-0102C7D-GM
		Small Branch — Essentials + Advanced	BKAx-0102C7D-GM
All Regions:		Small Branch — Renewals	
		— Advanced Upgrade (requires Essentials)	BK0x-NCADV
		— Essentials	BK0x-NCESS-R
		— Essentials + Advanced	BKAx-NCEA-R
		— Advanced (requires Essentials)	BK0x-NCADV-R

x = 1, 3, or 5 years

y = 3 or 5 years

Accessories

INCLUDED	PART NUMBER
One of the following:	
— Power Supply, 12VDC, 2X2 1.5 meters (North America)	170716-001
— Power Supply, 12VDC, 2x2 1.5 meters (International)	170717-000
Cellular Antenna, Charcoal, 600 MHz - 6 GHz, SMA, 180 mm (Qty 2)	170801-000
Cable, Ethernet RJ45-to-RJ45, Black, 1.5 meters	N/A
E102 Small Accessories Kit	500062-000
— SIM door screw (Qty 1)	
— Rubber feet (Qty 4)	

Support & Warranty

The E102 router is only sold as a component of NetCloud Small Branch 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.

More information

[Find the most up-to-date information at **cradlepoint.com/e102**](https://www.cradlepoint.com/e102)