



Data Sheet

# E102 Series Enterprise Router



The Cradlepoint NetCloud Service with the E102 Series 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.

## Notable Features

- Extend office networking capabilities to critical remote employees without compromising security or reliability.
- Access the network or applications with an embedded LTE modem for fast, secure connectivity in the home, vacation home, or on the road.
- Integrate into your existing network with standards-based, dynamic routing, traffic-shaping and VPN tunnel support.
- 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.
- Segment and isolate work devices — computers, printers, and more — from household network and devices.
- Expand working radius with secure, enterprise class Wi-Fi.

## Ideal for Work from Anywhere

NetCloud Service, combined with the 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.

## Dedicated Enterprise Network

By using a resilient, LTE connection dedicated to the corporate functions, the E102 router avoids resource and bandwidth competition with other household devices on the network. Coupled with the high-speed connection and extension of company configurations through NetCloud, this extends an office-based environment to a secure network in a home, a remote office, or on the road. Additionally, this capability permits completely segmenting and isolating work devices — computers, printers, and more — from all other streaming and digital work in the household — ensuring high performance for key applications and providing a natural layer of information protection.

## Performance

Stateful Firewall Throughput*	IPS Throughput*	Application Aware Services & Analytics*	IPSec VPN Throughput*	Concurrent VPN Tunnels	Concurrent Sessions (TCP)	Typical Client Count
<b>850 Mbps</b>	<b>250 Mbps</b>	<b>250 Mbps</b>	<b>40 Mbps</b>	<b>20</b>	<b>32,000</b>	<b>5</b>

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.

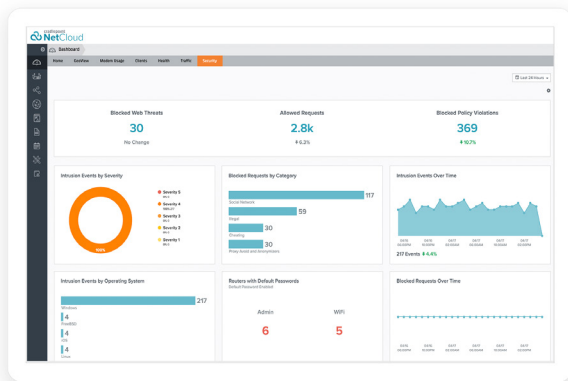
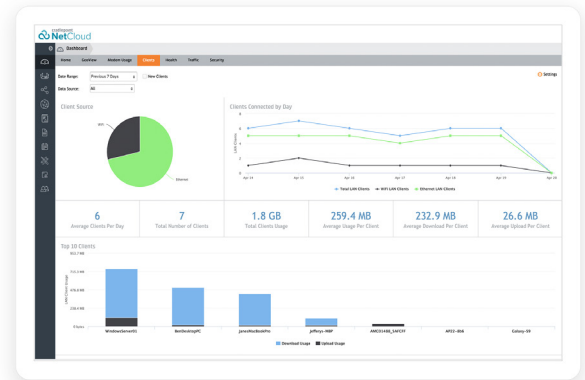
Results do not reflect performance of the cellular wireless operator networks.

## Key Software Capabilities

Cradlepoint NetCloud Service with the E102 Series Router 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 the E102 router, locate the best cellular connection path, and instantly setup the pre-established office parameters through the NetCloud Service, upon authentication.

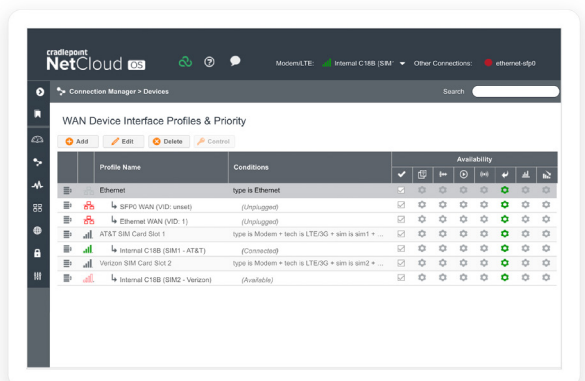


## Security Services

NetCloud Service includes Unified Edge security features and options to optimize the E102 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 Manager 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

<b>Modem:</b>	One of the following: <ul style="list-style-type: none"> <li>— Embedded C7C Modem           <ul style="list-style-type: none"> <li>— 2 x SMA cellular antenna connectors</li> </ul> </li> <li>— Embedded C7D Modem           <ul style="list-style-type: none"> <li>— 2 x SMA cellular antenna connectors</li> </ul> </li> </ul>
<b>Ethernet:</b>	5 x GbE RJ45 (LAN/WAN switchable)
<b>Wi-Fi:</b>	Dual-radio, dual-band, concurrent operation (2.4 GHz and 5 GHz) <ul style="list-style-type: none"> <li>— 2x2 MU-MIMO 802.11ac Wi-Fi 5 with DFS</li> <li>— 300 Mbps (2.4 GHz) and 867 Mbps (5 GHz)</li> <li>— Internal 2x2 antenna</li> </ul>
<b>Expansion:</b>	1 x USB 2.0 Type A (Output: 5 V, 500 mA, 2.5 W)
<b>GNSS/GPS:</b>	1 x SMA GNSS antenna connector

## ENVIRONMENTAL

<b>Temperature:</b>	Operating: 0 °C to 50 °C (32 °F to 122 °F) Storage: -20 °C to 70 °C (-4 °F to 158 °F)
<b>Humidity:</b>	Operating: 10% to 90% Storage: 5% to 95%

## POWER

<b>Required:</b>	Powered by external DC power supply, 100-240 VAC input, 12 VDC 3A output (included)
<b>Consumption:</b>	<ul style="list-style-type: none"> <li>— Idle: 6 W</li> <li>— Typical: 9.5 W</li> <li>— Heavy: 12 W</li> </ul>

## PHYSICAL

<b>Size:</b>	135 x 270 x 32.4 mm (5.3 x 10.6 x 1.3 in)
<b>Weight:</b>	.62 kg (1 lb 6 oz)

## CERTIFICATIONS

<b>Safety:</b>	UL/cUL, CB Scheme, EN 62368-1
<b>Materials:</b>	RoHS
<b>Security:</b>	Secureboot

# Hardware Specifications

The following features are delivered through the hardware.

## WI-FI POWER

- FCC:**
- 2412–2462 (2.4 GHz): 31.58 dBm EIRP
  - 5150–5250 MHz (5 GHz band 1): 27.95 dBm EIRP
  - 5250–5350 MHz (5 GHz band 2a): 27.1 dBm EIRP
  - 5470–5725 MHz (5 GHz band 2c): 28.99 dBm EIRP
  - 5745–5850 MHz (5 GHz band 3): 26.46 dBm EIRP

- IC:**
- 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:**
- 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

## LEDs

Refer to the [E102 Enterprise Router Quick Start Guide](#).

## Enterprise-Class Modem Specifications

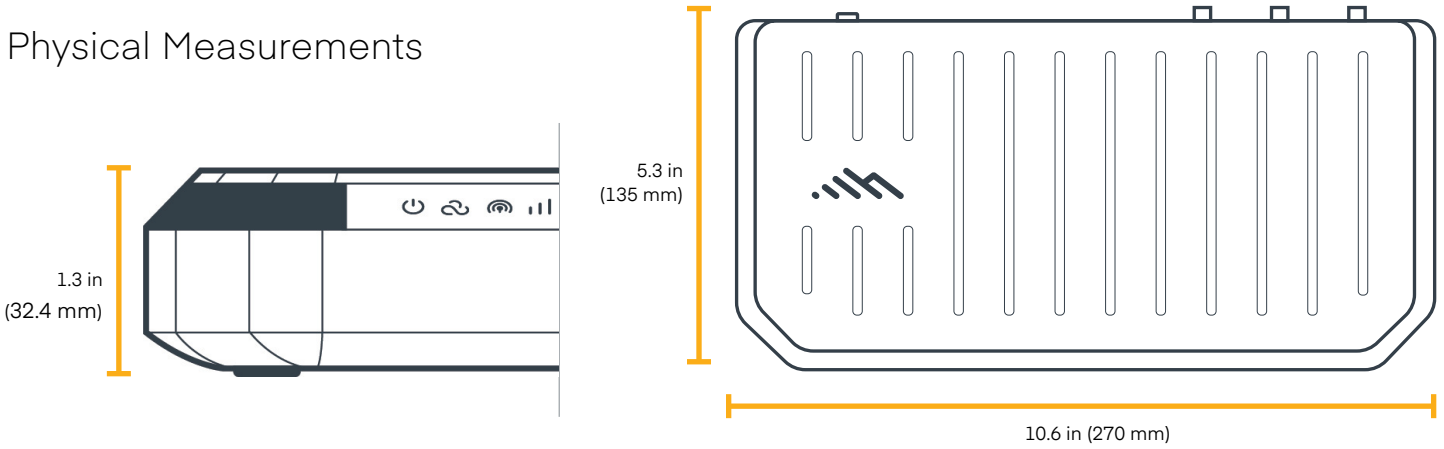
SPECIFICATION	E102-C7C	E102-C7D
<b>Technology:</b>	Cat 7 LTE (3GPP Rel. 11) <ul style="list-style-type: none"> <li>— Dual SIM slots, 2FF form factor</li> <li>— SIM-based auto-carrier selection</li> </ul>	Cat 7 LTE (3GPP Rel. 11) <ul style="list-style-type: none"> <li>— Dual SIM slots, 2FF form factor</li> <li>— SIM-based auto-carrier selection</li> </ul>
<b>Fallback:</b>	WCDMA/UMTS/HSPA+	WCDMA/UMTS/HSPA+
<b>Carrier Aggregation:</b>	Up to 2 x CA downlink, 2 x CA uplink Refer to the <a href="#">Modem Carrier Aggregations</a> article.	Up to 2 x CA downlink, 2 x CA uplink Refer to the <a href="#">Modem Carrier Aggregations</a> article.
<b>Peak Downlink Rates:</b>	<ul style="list-style-type: none"> <li>— LTE: 300 Mbps</li> <li>— WCDMA: 42.2 Mbps</li> </ul>	<ul style="list-style-type: none"> <li>— LTE: 300 Mbps</li> <li>— WCDMA: 42.2 Mbps</li> </ul>
<b>Peak Uplink Rates:</b>	<ul style="list-style-type: none"> <li>— LTE: 150 Mbps</li> <li>— WCDMA: 5.76 Mbps</li> </ul>	<ul style="list-style-type: none"> <li>— LTE: 150 Mbps</li> <li>— WCDMA: 5.76 Mbps</li> </ul>
<b>MIMO:</b>	2x2 MIMO	2x2 MIMO
<b>QAM:</b>	Up to 64	Up to 64
<b>LTE Bands:</b>	LTE FDD <ul style="list-style-type: none"> <li>— B2, B4, B5, B7, B12, B13, B14, B25, B26, B66, B71</li> </ul> LTE TDD <ul style="list-style-type: none"> <li>— B41, B42, B43, B48</li> </ul>	LTE FDD <ul style="list-style-type: none"> <li>— B1, B3, B7, B8, B20, B28, B32</li> </ul> LTE TDD <ul style="list-style-type: none"> <li>— B38, B40, B41, B42, B43</li> </ul>
<b>WCDMA Bands:</b>	B2, B4, B5	B1, B5, B8
<b>Power:</b>	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1 (typical conducted)	LTE 22.5 dBm ± 1, DC-HSPA+ 23 dBm ± 1
<b>Antennas:</b>	SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included)	SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included)
<b>GNSS/GPS:</b>	Active GNSS	Active GNSS
<b>SMS:</b>	Yes	Yes
<b>Regulatory:</b>	IFITEL (MX) <sup>††</sup>	CE (EU), UKCA, RCM (AU/NZ) <sup>††</sup>
<b>Network Operator Standards:</b>	PTCRB (Mexico), GCF (Worldwide)	GCF (Worldwide)
<b>Network Operator Certifications:</b>	See note <sup>†</sup>	See note <sup>†</sup>
<b>Public Safety Network Certifications:</b>	N/A	N/A
<b>Private Cellular Network:</b>	Yes	Yes

<sup>†</sup> 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.

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

# Hardware

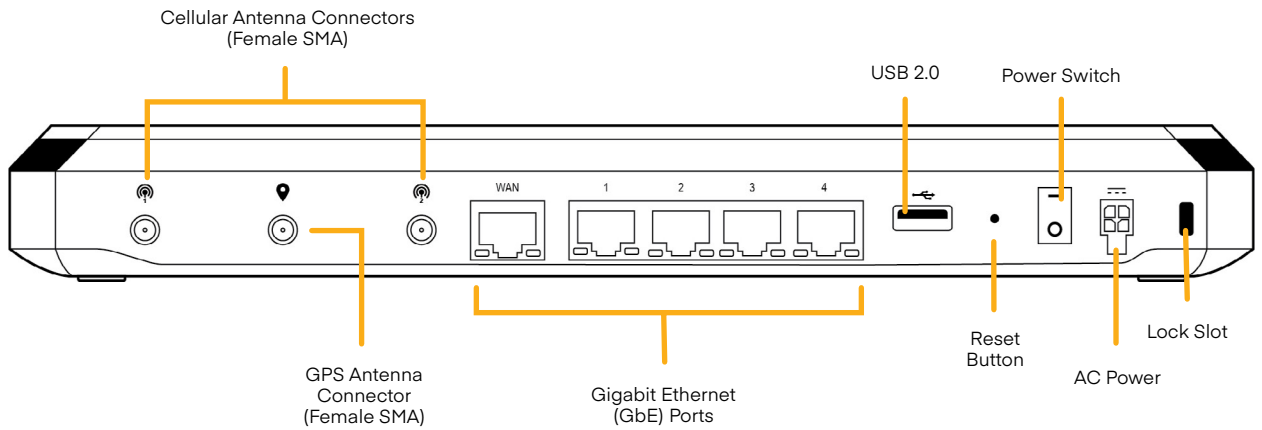
## Physical Measurements



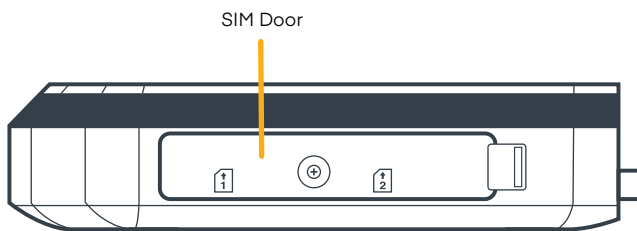
## Front View



## Back View



## Side View



**Correct SIM: Mini SIM — 2FF**

Nano SIM (12.3 mm x 8.8 mm) 4FF	Micro SIM (15 mm x 12 mm) 3FF	Mini SIM (25 mm x 15 mm) 2FF

## Ordering Guide

**NetCloud SOHO 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.

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

For more details on the E102 Series Routers, included with the NetCloud SOHO packages, see below.

## NetCloud Package & Plans

REGION	DESCRIPTION	PART NUMBER
<b>Mexico:</b>	NetCloud SOHO Branch Essentials Plan and E102 router with Wi-Fi (300 Mbps modem), Americas	BH0y-0102C7C-GN
	NetCloud SOHO Branch Essentials Plan, Advanced Plan, and E102 router with Wi-Fi (300 Mbps modem), Americas	BHAY-0102C7C-GN
<b>European Union, United Kingdom, Australia &amp; New Zealand</b>	NetCloud SOHO Branch Essentials Plan and E102 router with Wi-Fi (300 Mbps modem), Global	BH0y-0102C7D-GM
	NetCloud SOHO Branch Essentials Plan, Advanced Plan, and E102 router with Wi-Fi (300 Mbps modem), Global	BHAY-0102C7D-GM
<b>All Regions:</b>	NetCloud SOHO Branch Advanced Plan Upgrade	BH0y-NCADV
	Renewal NetCloud SOHO Branch Essentials Plan and Advanced Plan	BHAX-NCEA-R
	Renewal NetCloud SOHO Branch Essentials Plan	BH0x-NCESS-R
	Renewal NetCloud SOHO Branch Advanced Plan	BH0x-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)	170716-000
— 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
Kit, small accessories, E102	500062-000
— SIM door screw (Qty 1)	
— Rubber feet (Qty 4)	

## Support & Warranty

The E102 router is only sold as a component of NetCloud SOHO 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/e102](https://www.cradlepoint.com/e102)**