



Data Sheet

E300 Series Enterprise Router

2023 - 03 - 28

The Cradlepoint NetCloud Enterprise Branch Service with E300 Series Router is ideally suited for providing 4G and 5G cellular connectivity, agile VPN security, and cellular optimized SD-WAN to pop-up temporary locations, branches, stores, and clinics. The all-inone form factor includes full-featured routing, security, and Wi-Fi, making it easy to connect offices and sites to the Internet and critical applications without the need for extra hardware or complicated configurations. And the embedded 5G or LTE modem means that connectivity is always available from day 1 without waiting for a wired connection.

Ideal for Wireless WAN

For organizations moving to a Wireless WAN, the E300 offers the ability to pair 5G or 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 E300 offers 5G or LTE performance, which can support the throughput needs of a small- or medium-sized office with the ability to add a second cellular connection to increase available bandwidth and reliability.

5G, SD-WAN, and Security Integration

5G has emerged as an essential WAN infrastructure to offer agile and reliable connections. The E300 Enterprise Router with 5G cellular intelligence makes it easy to deploy 5G-enabled networks while optimizing both cellular and wired traffic to enhance application performance. Security postures can be reinforced, and attack surfaces minimized with zero trust privileged access, protected IP addresses, detailed security policies and consolidated authentication usage.

Additionally, the E300 router can serve as the user equipment router for private cellular networks that provide reliable local area network connectivity where wireless LAN fails to meet the network needs due to large areas or excessive congestion.







Notable Features

- Connect to the internet or applications anywhere with all-wireless 5G or LTE connectivity.
- Terminate a primary wired broadband link with cellular as failover for highly resilient hybrid connectivity.
- Open temporary locations without compromising security or reliability with an all-in-one design and compact form factor.
- Reduce network attack surface, build encrypted tunnels, and incorporate zero trust principles with NCX Secure Connect.
- Optimize cellular and wired traffic flows for the best quality of experience (QoE) with SD-WA.
- Define policies through centralized, cloud-based management for easy deployment at scale.
- Add a second cellular modem for dual cellular connectivity.
- Acts as Captive Modem controller for Cradlepoint 5G Wideband Adapters

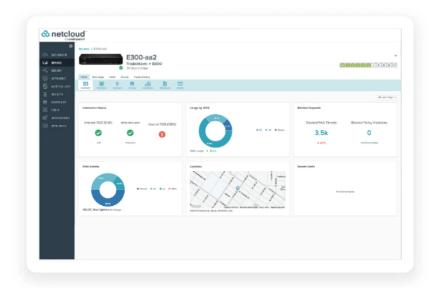


Key Software Capabilities

Cradlepoint NetCloud Service for the E300 provides everything needed to unlock the power of 5G and LTE at the network edge and connect users and IoT devices to critical applications and services. The NetCloud Service package for the E300 includes router software for optimizing routing, VPN, SD-WAN, and security capabilities. The cloud capabilities include group policy definition, 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.

SD-WAN and Routing Services

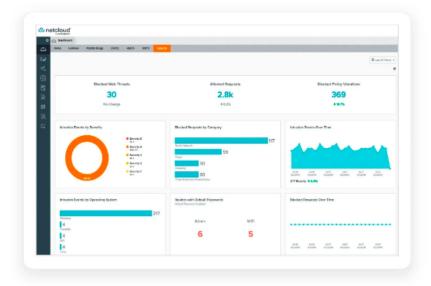
SD-WAN and routing hardware provides local processing power to handle demanding router-delivered services, such as support for VPN tunneling encryption that includes NetCloud Exchange Secure Connect, DMVPN, IPsec, GRE, and other tunneling technologies. NetCloud Exchange SD-WAN optimizes cellular and wired traffic but adds data plan and carrier selection capabilities needed for wireless. NetCloud delivers true zero-touch deployment with the ability to define and deliver policy across entire groups of endpoints.



Security Services

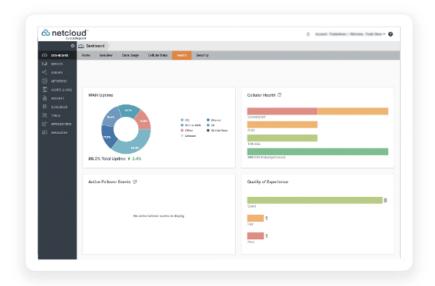
NetCloud Service includes security features and options to optimize the E300 to meet the evolving security needs of distributed environments. The Essential service includes stateful zone-based firewall enhancement capability to Application Aware Traffic Steering with the Advanced package. Secure remote management and other security add-on capabilities such as IPS, Content Filtering, and NetCloud Exchange ZTNA help reduce the network attack surface.





Cellular Intelligence

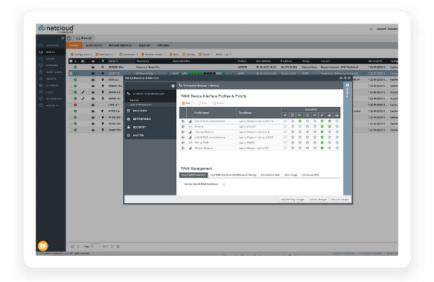
NetCloud Cellular Intelligence collection of software features that allow administrators with distributed Wireless WANs to visualize, optimize, and troubleshoot cellular connections, data plans, and traffic flow. These insights give IT teams the necessary tools to manage the unique demands of cellular with more predictable connectivity, deeper insights, and more accurate cost containment.



Remote Access and Troubleshooting

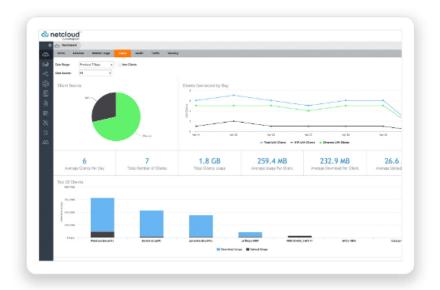
Connection Manager provides the ability to manage all WAN connection types, both wireless and wired, from a single software-defined policy. Our custom-built modern software ensures users establish Wireless WAN connectivity faster while maintaining the highest level of resiliency.





Cloud Insights

Use the dashboard for analytics on client, traffic, and modem data usage to gain insights into network status and make necessary adjustments. Configure device and wireless-carrier alerts to notify when important thresholds or limits are reached to know when to make changes



Hardware Specifications

The following features are delivered through the hardware.

INTERFACES



Modem:	One of the following:			
	 Embedded 5GB low/mid-band modem, including 4 x SMA cellular antenna connectors 			
	 Embedded Cat 7 LTE modem, including 2 x SMA cellular antenna connectors 			
	 Embedded Cat 18 LTE modem, including 4 x SMA cellular antenna connectors 			
	Optional dual modem:			
	— Modular MC400 Modem			
Ethernet:	5 x GbE RJ45 (LAN/WAN switchable)			
	- 1 x 10 GbE SFP+ (LAN/WAN switchable)			
	 SFP: Finisar FTLF8519P3BNL, FTLF1318P3BTL 			
	 SFP+: Finisar FTLX8574D3BCL, FTLX1475D3BCL, FCBG110SD1Cxx 			
Wi-Fi:	Dual-radio, dual-band, concurrent operation (2.4 GHz and 5 GHz)			
	2x2 MU-MIMO 802.11ax Wi-Fi 6 with DFS			
	 574 Mbps (2.4 GHz) and 1,200 Mbps (5 GHz) 			
	 Internal 2x2 antenna 			
	 Global Optimized Wi-Fi 			
	 WPA/WPA2/WPA3 Personal, WPA2/WPA3 Enterprise, Open 			
	— 802.11k, 802.11v			
Expansion:	 1 x MC400 Modular Modem Slot (Peak throughput: 300 Mbps) 			
	- 1 x USB 2.0 Type A (output: 5V, 500mA, 2.5W)			
	- 1 x Expansion Slot			
	 MC20BT Bluetooth[®] wireless technology Low Energy Module 			
GNSS/GPS:	1 x SMA GNSS antenna connector [†]			
ENVIRONMENTAL				
Temperature:	 Operating: 0 °C to 45 °C (32 °F to 113 °F) 			
·	 Storage: -20 °C to 70 °C (-4 °F to 158 °F) 			
Humidity:	— Operating: 10% to 90%			
manifulty.	— Storage: 5% to 95%			
POWER				
Required:	Powered by external DC power supply, 100-240 VAC input, 12 VDC 3A output (included)			
PHYSICAL	Totaled by external be perfor supply, 100 2 to 1710 input, 12 100 on output (included)			
Size:	135 x 270 x 44 mm (5.3 x 10.6 x 1.7 in)			
Weight:	.86 kg (1 lb 14 oz)			
CERTIFICATIONS				
Safety:	UL/cUL, CB Scheme, EN 60950-1, EN 62368-1			
Materials:	WEEE, RoHS, REACH, California Prop 65			
WI-FI POWER:				



FCC:	 2.4 GHz: 33.14 dBm EIRP 5150-5250 MHz: 32.94 dBm EIRP 5250-5350 MHz: 29.90 dBm EIRP 5470-5725 MHz: 30.00 dBm EIRP 5725-5850 MHz: 32.81 dBm EIRP 	
IC:	 2.4 GHz: 33.14 dBm EIRP 5150-5250 MHz: 25.74 dBm EIRP 5250-5350 MHz: 25.84 dBm EIRP 5470-5725 MHz: 29.82 dBm EIRP 5725-5850 MHz: 32.81 dBm EIRP 	
Europe:	 2.4 GHz: 19.93 dBm EIRP 5150-5250 MHz: 22.76 dBm EIRP 5250-5350 MHz: 22.92 dBm EIRP 5500-5700 MHz: 29.08 dBm EIRP 	
Australia/ New Zealand:	 2.4 GHz: 19.93 dBm EIRP 5150-5250 MHz: 22.98 dBm EIRP 5250-5350 MHz: 22.98 dBm EIRP 5500-5700 MHz: 29.82 dBm EIRP 5475-5825 MHz: 32.81 dBm EIRP 	
PERFORMANCE		
Stateful Firewall Throughput:	940 Mbps	
IPS Throughput:	940 Mbps	
Application Aware Services & Analytics:	940 Mbps	
IPSec VPN Throughput:	400 Mbps	
Concurrent VPN Tunnels:	20	
Concurrent Sessions (TCP):	130,000	
Typical Client Count:	50	
LEDs		
	Refer to the E300 Series Enterprise Branch Router Quick Start Guide.	

[†]Not available on E300-5GB routers.

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	E300-C18B



Technology: Cat 18 LTE Advanced Pro (3GPP Rel. 12)		
	Dual SIM slots, 2FF form factor	
	SIM-based auto-carrier selection	
3G:	WCDMA/UMTS/HSPA+	
Carrier Aggregation:	Up to 5 x CA downlink, 2 x CA uplinkRefer to the Modem Carrier Aggregations article.	
Peak Downlink Rates: — LTE: 1.2 Gbps		
	— WCDMA: 42.2 Mbps	
Peak Uplink Rates:	- LTE: 150 Mbps	
	- WCDMA: 5.76 Mbps	
MIMO:	4x4 MIMO	
Modulation:	Up to 256 QAM	
4G/LTE Bands: LTE FDD		
	 B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71 LTE TDD B38, B39, B40, B41, B42, B43, B46, B48 	
3G Bands:	B1, B2, B4, B5, B8, B19	
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 4, included)	
GNSS/GPS:	Active GNSS	
	GPS, GLONASS, BeiDou, Galileo	
	DC voltage bias supplied (typical 3.1v)	
SMS:	Yes	
Regulatory:	FCC (U.S.), IC (Canada), CE, RCM	
Network Operator Standards:	PTCRB (U.S., Canada), GCF (Worldwide)	
Network Operator AT&T, Telstra (Cat 16), T-Mobile, Verizon†		
Certifications:		
Public Safety Network	Verizon Frontline	
Certifications:		
Private Cellular Network:	Yes, includes FCC Part 96 (CBRS OnGo 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.



Technology: 5G NR (Low/Mid-Band FR1) and 4G LTE Category 20 LTE Advanced Pro with Dual		
	Dual SIM slots, 2FF form factor	
	SIM-based auto-carrier selection	
3G:	WCDMA/UMTS/HSPA+	
Carrier Aggregation:	LTE only; up to 7CA downlink, 2CA uplink ENDC 5G + LTE; downlink and uplink supported	
	Refer to the Modem Carrier Aggregations article.	
Peak Downlink Rates:	Up to 4.14 Gbps — based on 20 Layers LTE + TDD (100 MHz BW, 256 QAM, 4X4)	
Peak Uplink Rates:	Up to 660 Mbps — based on 2 Layers LTE + TDD (100 MHz BW, 256 QAM, SISO)	
MIMO:	4x4 MIMO	
Modulation:	Up to 256 QAM — FR1	
4G/LTE Bands:	B1, B2, B4, B5, B7, B8, B12, B13, B14, B18, B19, B20, B21, B25, B26, B28, B29, B30, B32, B34, B38, B39,	
	B40, B41, B42, B43, B46, B48, B66, B71	
5G NR Bands:	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79	
Power:	 LTE only; 23 dBm ± 1 (typical conducted) 	
	 ENDC 5G + LTE; 20 dBm ± 1 (typical conducted) 	
Antennas:	SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 4, included)	
GNSS/GPS:	Passive GNSS (multiplex with DIV/MIMO2 antenna ports)	
SMS:	Yes	
Regulatory:	FCC (U.S.), CE (EU), RCM (AU/NZ)	
Network Operator Standards:	s: PTCRB (U.S., Canada), GCF (Worldwide)	
Network Operator	AT&T, T-Mobile, Verizon [†]	
Certifications:		
Public Safety Network	Safety Network FirstNet Trusted™, T-Mobile Connecting Heros, Verizon Frontline	
Certifications:		
Private Cellular Network:	Yes, includes FCC Part 96 (CBRS Band 48)	

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SPECIFICATION	E300-C7C
Technology:	Cat 7 LTE (3GPP Rel. 11)
	 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 Refer to the Modem Carrier Aggregations article.



Peak Downlink Rates:	LTE: 300 MbpsWCDMA: 42.2 Mbps	
Peak Uplink Rates:	LTE: 150 MbpsWCDMA: 5.76 Mbps	
MIMO:	2x2 MIMO	
Modulation:	Up to 64 QAM	
4G/LTE Bands:	LTE FDD	
	— B2, B4, B5, B7, B12, B13, B14, B25, B26, B66, B71	
	LTE TDD	
	— B41, B42, B43, B48	
3G Bands:	B2, B4, B5	
Power:	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)	
GNSS/GPS:	Passive GNSS	
SMS:	Yes	
Regulatory:	FCC (U.S.), IC (Canada)	
Network Operator Standards:	PTCRB (U.S., Canada)	
Network Operator Certifications:	AT&T, T-Mobile, Verizon [†]	
Public Safety Network Certifications:	FirstNet Trusted™, T-Mobile Connecting Heros, Verizon Frontline	
Private Cellular Network:	Yes, includes FCC Part 96 (CBRS Band 48)	

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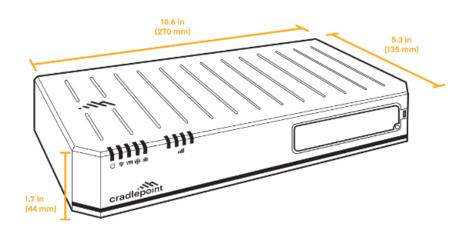
SPECIFICATION	E300-C7D	
Technology:	Cat 7 LTE (3GPP Rel. 11)	
	 Dual SIM slots, 2FF form factor SIM-based auto-carrier selection 	
3G:	WCDMA/UMTS/HSPA+	
Carrier Aggregation: Up to 2 x CA downlink, 2 x CA uplink		
	Refer to the Modem Carrier Aggregations article.	
Peak Downlink Rates:	LTE: 300 MbpsWCDMA: 42.2 Mbps	



— LTE: 150 Mbps	
— WCDMA: 5.76 Mbps	
2x2 MIMO	
Up to 64 QAM	
LTE FDD	
— B1, B3, B7, B8, B20, B28, B32	
LTE TDD	
— B38, B40, B41, B42, B43	
B1, B5, B8	
LTE 22.5 dBm ± 1, DC-HSPA+ 23 dBm ± 1	
SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included)	
Passive GNSS	
Yes	
CE (EU)	
GCF (Worldwide)	
See note [†]	
N/A	
N/A	

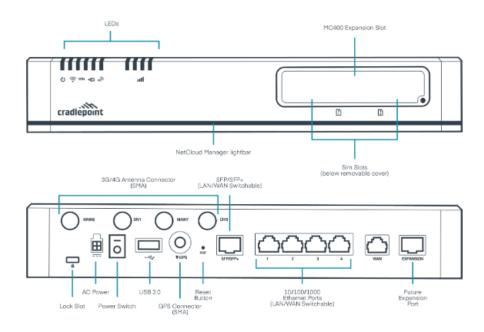
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Physical Measurements & Features

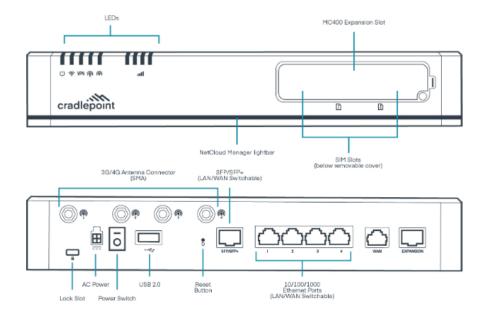




Features — E300-C18 & C7C/D



Features — E300-5GB



SIM Card Info





Ordering Guide

NetCloud Enterprise Branch Essentials packages and plans contain all the features and capabilities required for small to mid-sized branch applications. Essentials 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 Enterprise Branch Advanced Plan** can be added to the NetCloud Enterprise Branch Essentials Package at any time.

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

NetCloud Branch Packages for the E300 Series Router

REGION	MODEM	BRANCH PACKAGE PLAN	PART NUMBER
North America: U.S. & Canada	5G with Wi-Fi	Essentials	BF0x-03005GB-GN
		Essentials + Advanced	BFAx-03005GB-GN
	Cat 18 (1200 Mbps)	Essentials	BF0x-0300C18B-GN
	with Wi-Fi		
		Essentials + Advanced	BFAx-0300C18B-
			GN
	Cat 7 (300 Mbps)	Essentials	BF0x-0300C7C-GN
	with Wi-Fi		
		Essentials + Advanced	BFAx-0300C7C-GN
United States: Federal Government	5G with Wi-Fi	Essentials	TAA-BF0y-
			03005GB-GN
		Essentials + Advanced	
			TAA-BFAy-
			03005GB-GN
	Cat 18 (1200 Mbps)	Essentials	TAA-BF0y-
	with Wi-Fi		0300C18B-GN
		Essentials + Advanced	
			TAA-BFAy-
			0300C18B-GN
	Cat 7 (300 Mbps)	Essentials	TAA-BF0y-
	with Wi-Fi		0300C7C-GN
		Essentials + Advanced	
			TAA-BFAy-
			0300C7C-GN



Rest of World:	5G with Wi-Fi	Essentials	BF0x-03005GB-GM
European Union, United Kingdom, Australia, Malaysia,			
Singapore, South Africa & New Zealand		Essentials + Advanced	BFAx-03005GB-GM
	Cat 7 (300 Mbps) with Wi-Fi	Essentials	BF0x-0300C7D-GM
		Essentials + Advanced	BFAx-0300C7D-GM
	Cat 18 (1200 Mbps)	Essentials	BF0x-0300C18B-
	with Wi-Fi		GM
		Essentials + Advanced	
			BFAx-0300C18B-
			GM
All Regions:		Renewal Essentials	BF0x-NCESS-R
		Advanced Upgrade	BF0x-NCADV
		Renewal Advanced Upgrade	BAx-NCADV-R
		Renewal Essentials +	BFAx-NCEA-R
		Advanced	

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

Accessories

INCLUDED	PART NUMBER
One of the following:	170716-000
 Power Supply for North America, 12V, 2A, 2×2, -20 °C to 60 °C 	170717-000
 Power Supply, 12V, 3A, -20 °C to 60 °C, 2×2, (U.S., EU, UK, AU clips) 	
Cellular Antenna, Charcoal, 600 MHz - 6 GHz, SMA, 152 mm (Qty 2 or 4)	170801-000
One of the following:	N/A
E3000-C18B Cat 18 Cellular Antenna Alignment Tool E300-5GB Cat 18 Cellular Antenna Alignment Tool	N/A
Wall Mount Screw Pack	N/A
Rubber Feet for Desktop Mounting	N/A
OPTIONAL	PART NUMBER
Enterprise Branch E300 Cat 18 LTE Advanced Pro Modular Modem Kit [†]	BF-MC400-1200M-B
 MC400 Cat 18 LTE Advanced Pro Modular Modem. Includes modem door with screw and 4 cellular antennas MC400 5G Modem (requires 4FF SIM) upgrade for E300/E3000 Branch Routers. Includes doors and 4 cellular antennas 	BF-MC400-5GB



Small 2x2 Power to Barrel Adapter, 152 mm	170665-000
LTE Captive Modem Accessory, Indoor	170900-001
— CBA550-150M-D (150 Mbps modem), Americas	170900-003
— CBA850-1200M-B (1200 Mbps modem), Americas	170900-005
— L950-C7A (300 Mbps modem), Americas	
5G Captive Modem Accessory, Outdoor	170900-007
- W2005-5GB (4.1 Gbps modem), North America	170900-011
W2005-5GB (4.1 Gbps modern), North America High-Band, W4005-5GB (7.5 Gbps modern), North America	
— High-Band, W4003-3GB (7.5 Gbps modern), North America	
5G Captive Modem Accessory, Indoor	170900-012
W1850-5GB (4.1 Gbps modem), Americas	
Bluetooth® wireless technology Low Energy 5.1 (BLE) Module for E300 and E3000 Series Routers	BF-MC20-BT
UNITED STATES FEDERAL GOVERNMENT	PART NUMBER
Power Supply, 12 V Small 2x2, 1.5 meters (North America Type A)	TAA-170716-000
Power Supply, 12 V Small 2x2, 1.5 meters (North America-United Kingdom-Europe-Australia Types A-G-C-I)	TAA-170717-000
Small 2x2 Power to Barrel Adapter, 152 mm	TAA-170665-000
Cellular Antenna, Charcoal, 600 MHz - 6 GHz, SMA, 180 mm	TAA-170801-000
LTE Captive Modem Accessory, Indoor	TAA-170900-001
OD4550 3504 D (350 M)	TAA-170900-005
CBA550-150M-D (150 Mbps modem), Americas	
L950-C7A (300 Mbps modem), Americas	
5G Captive Modem Accessory, Outdoor	TAA-170900-007
W2225 500 (43 o)	TAA-170900-011
W2005-5GB (4.1 Gbps modem), North America	
High-Band, W4005-5GB (7.5 Gbps modem), North America	
5G Captive Modem Accessory, Indoor	TAA-170900-012
W1850-5GB (4.1 Gbps modem), Americas	
MC400 Modular Modem [†] :	TAA-BF-MC400-
LTE Advanced Pro Cat 19 (1200 Mbps) modern ungrade for E200/E2000 Enterprise Branch Bouters with	1200M-B
LTE Advanced Pro Cat 18 (1200 Mbps) modem upgrade for E300/E3000 Enterprise Branch Routers with doors and 4 charcoal antennas	TAA-BF-MC400-5GI
5G Modem (requires 4FF SIM) upgrade for E300/E3000 Branch Routers with doors and 4 antennas	
Bluetooth® wireless technology Low Energy 5.1 (BLE) Module for E300 and E3000 Series Routers	TAA-BF-MC20-BT

 $^{^\}dagger$ Refer to the Cradlepoint MC400 Modular Modem webpage for more information of modular modems.

Support & Warranty

The E300 Enterprise Branch Router is only sold as a component of NetCloud Branch Packages.



inetCloud 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/e300-series