

Data Sheet

W1855 Series 5G Wideband Adapter

2024-02-19

Designed for fixed locations that require the higher performance of 5G and the flexibility of wireless, the outdoor Cradlepoint W1855-5GC Wideband Adapter ushers in the latest generation of wireless WAN networking. The W-Series is designed to accommodate the latest spectrums, recent innovations, and breadth of new technologies in 5G while delivering enterprise-class scalability standards, comprehensive management, and security.

High Performance Wideband

The W1855-5GC adapters are purpose-built for outdoor deployment in the high-performance low-, mid-band 5G spectrum. To address the tradeoff of lower propagation in the mid-band spectrum, Cradlepoint designed the W1855 Series outdoor adapter to be placed separately from the router for optimal signal reception. The stylized W1855-5GC adapter is less than half the size of the previous outdoor 5G adapter which makes installation easier.

Designed for Enterprise-Class Business

While the performance of 5G is top of mind, the W-Series was also designed with enterprise-class standards for high scalability, comprehensive management, and security. Representing the latest available 5G standards which are a collection of spectrum, technologies, and network infrastructure enhancements, the Cradlepoint 5G edge networking service and endpoints accommodate the diverse deployments of an organization with hundreds or even tens of thousands of sites.

Notable Benefits

- Increase the size and types of your WAN use cases with 5G performance
- Experience the dependability of dual connectivity with simultaneous 5G and 4G connections
- Gain carrier-class connectivity using a software-defined modem and integrated multilevel test and recovery utilities
- Deploy an enterprise-class 5G solution with greater simplicity and confidence with the wizard-based installation application
- Manage the Cradlepoint router and 5G adapter as one entity for singular control and visibility with captive modem
- Evaluate the benefits of your 5G service with value confirmation tools built into the NetCloud Platform
- Deploy within any existing networking or SD-WAN environment



[Product Page](#)



[NetCloud Service](#)



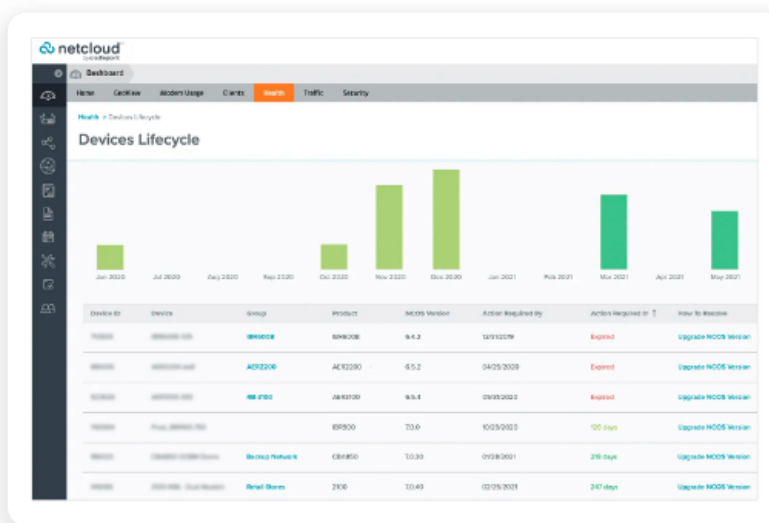
[Quick Start Guide](#)

Carrier-Class Connectivity

Although each network operator conforms to 3GPP standards, they implement those standards differently to gain optimal efficiency and performance from their network. Additionally, software from modem manufacturers is designed to serve multiple operators within broad markets. The W-Series uses a customized software-defined modem, pre-programmed endpoints, and multilevel integrity testing to predict vulnerable connections and deliver carrier-class connectivity.

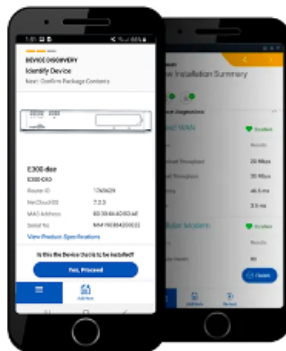
5G Spectrum Solutions

The W1855 5G Series supports low- and mid-band 5G spectrum ensuring that organizations have access to the 5G layers that are most widely used globally. These layers offer a balance of speed, capacity, coverage, and propagation that works with bandwidth-intensive and latency-sensitive use cases.



Support for a Full Range of Cellular Technologies

Cradlepoint 5G solutions support all cellular generations, from 4G LTE to Gigabit-Class LTE to 5G — with the ability to gracefully transition tens of thousands of sites between generations as technology becomes available in individual locations.



The following features are delivered through the hardware.

INTERFACES	
Modem:	Embedded 5G FR1 NSA/SA 3GPP release 16 and 4G LTE Category 19 modem
Ethernet:	2 x 2.5 GbE RJ45 (LAN/WAN switchable)
Bluetooth:	Inactive, for future use
Wi-Fi:	N/A
ENVIRONMENTAL	
Temperature:	<ul style="list-style-type: none"> — Operating: -30 °C to 70 °C (-22 °F to 158 °F) — Storage: -40 °C to 85 °C (-40 °F to 185 °F)
Humidity:	<ul style="list-style-type: none"> — Operating: 10% to 90% — Storage: 5% to 95%
Ingress Protection/Corrosion:	<ul style="list-style-type: none"> — IP67 (dust tight and water emersion up to 1 meter) — IEC60068-2-11 corrosion resistance (salt mist) — IEC60068-2-32 free fall rating
Wind/Lightning:	<ul style="list-style-type: none"> — 135 MPH sustained wind rating — ITU-T K.21 lightning protection
Electromagnetic Compatibility:	<ul style="list-style-type: none"> — EN 61000-4-2 level 2 contact discharge, level 3 air discharge — EN 61000-4-3 level 2 — EN 61000-4-4 level 2 — EN 61000-4-5 level 4 — EN 61000-4-6 level 2 — Radiated Emissions/Conducted Emissions Class B
POWER	
Required:	PoE+ 802.3at PSE Type 2 (30 W)
PHYSICAL	
Size:	204 x 165 x 56 mm (8.03 x 6.5 x 2.2 in)
Weight:	1.3 kg (2 lb 13.8 oz)
RELIABILITY	
Calculated MTBF:	376,671 hours (Telcordia SR332 at 25 °C)
CERTIFICATIONS	
Safety:	<ul style="list-style-type: none"> — UL/cUL — CB Scheme — EN 60950-22 — EN 62368-1

Materials:	<ul style="list-style-type: none"> — WEEE — RoHS — REACH — California Prop 65
CLOUD SERVICES	
Service Plans:	NetCloud Service for Branch 5G Adapter
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.
PERFORMANCE	
IP Passthrough Mode Throughput:	2.0 Gbps
Standard NAT Mode Throughput:	2.0 Gbps
Captive Modem Mode Throughput:	2.0 Gbps
LEDs	
See the W1855 Series 5G Wideband Adapter Quick Start Guide .	

Performance testing was 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

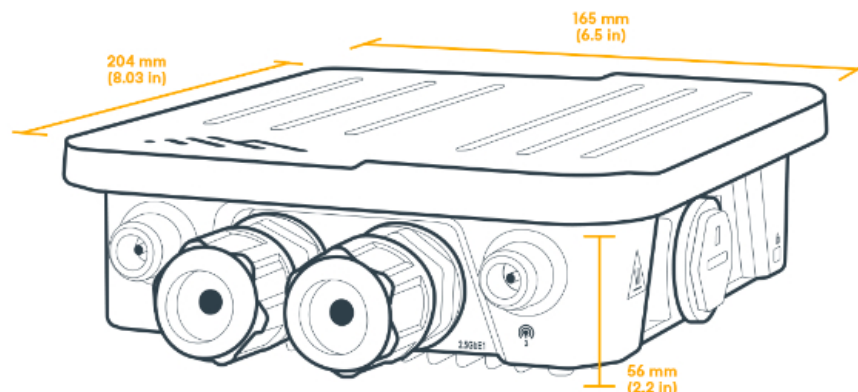
SPECIFICATION	
Technology:	<p>5G FR1 NSA/SA</p> <ul style="list-style-type: none"> — LTE Advanced Pro Category 19 fallback — Dual SIM slots, 4FF form factor — 3GPP Release 16
3G:	WCDMA/HSPA+

Carrier Aggregation:	<p>LTE Only</p> <ul style="list-style-type: none"> — Downlink: Up to 5CA — Uplink: Up to 2CA <p>LTE + 5G NR ENDC</p> <ul style="list-style-type: none"> — Downlink: Up to 4CA (LTE) + Up to 1CA (5G NR) — Uplink: Up to 2CA (LTE) + Up to 2CA (5G NR) <p>5G NR Only</p> <ul style="list-style-type: none"> — Downlink: Up to 2CA — Uplink: 1CA <p>See Understanding Carrier Aggregation.</p>
Peak Rates:	<p>NSA</p> <ul style="list-style-type: none"> — Downlink: Up to 3.4 Gbps — Uplink: Up to 550 Mbps <p>SA</p> <ul style="list-style-type: none"> — Downlink: Up to 2.4 Gbps — Uplink: Up to 450 Mbps <p>LTE</p> <ul style="list-style-type: none"> — Downlink: Up to 1.6 Gbps — Uplink: Up to 200 Mbps
MIMO:	4x4 MIMO
Modulation:	<p>5GC FR1</p> <ul style="list-style-type: none"> — Downlink: Up to 256 QAM — Uplink: Up to 256 QAM
4G/LTE Bands:	<p>FDD</p> <ul style="list-style-type: none"> — B1 (2100), B2 (1900), B3 (1800), B4 (1700), B5 (850), B7 (2600), B8 (900), B12 (700), B13 (700), B14 (700), B17 (700), B18 (850), B19 (850), B20 (800), B25 (1900), B26 (850), B28 (700), B29 (700), B30 (2300), B32 (1500), B66 (1700), B71 (600) <p>TDD</p> <ul style="list-style-type: none"> — B34 (2000), B38 (2600), B39 (1900), B40 (2300), B41 (2500), B42 (3500), B43 (3700), B46 (5200), B48 (3500)
5G NR Bands:	<p>NSA and SA</p> <ul style="list-style-type: none"> — n1 (2100), n2 (1900), n3 (1800), n5 (850), n7 (2600), n8 (900), n12 (700), n13 (700), n14 (700), n18 (850), n20 (800), n25 (1900), n26 (850), n28 (700), n29 (700), n30 (2300), n38 (2600), n40 (2300), n41 (2500), n48 (3500), n66 (1700/2100), n70 (2000), n71 (600), n75 (1500), n76 (1500), n77 (3700), n78 (3500), n79 (4900)
3G Bands:	B1, B2, B4, B5, B8, B19

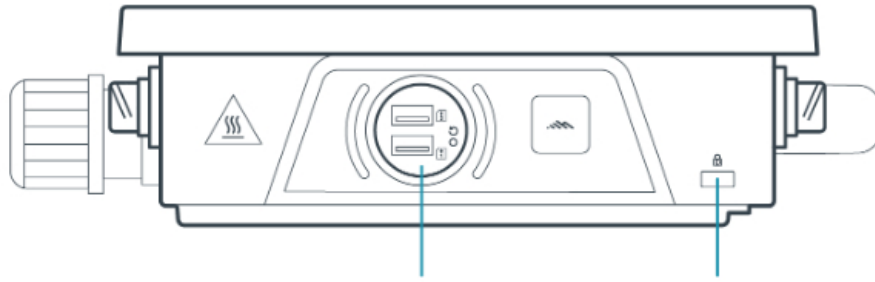
Power:	<p>LTE</p> <ul style="list-style-type: none"> — LTE bands: 23 dBm ± 2 (typical conducted) — LTE HPUE bands: 26 dBm ± 2 (typical conducted) <p>5G NR</p> <ul style="list-style-type: none"> — 5G NR bands: 23 dBm ± 2 (typical conducted) — 5G NR HPUE bands: 26 dBm ± 2 (typical conducted)
Antennas:	N-type female connectors, external 600 MHz - 6 GHz cellular antennas (Qty 4, included)
GNSS:	<p>Passive GNSS</p> <ul style="list-style-type: none"> — GPS, GLONASS, BeiDou, Galileo
SMS:	Yes
Regulatory:	FCC (U.S.), IC (Canada), UK CA (UK), RCM (AU/NZ)
Network Operator Standards:	PTCRB (U.S., Canada), GCF (Worldwide)
GCF Global Operators:	https://www.globalcertificationforum.org/membership/gcf-members.html [†]
PTCRB North America Operators:	https://www.ptcrb.com/about/
Network Operator Certifications:	AT&T, T-Mobile, Verizon [†]
Public Safety Network Certifications:	FirstNet Trusted™, T-Mobile Connecting Heroes, Verizon Frontline
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, to operate on their network. 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.

Physical Measurements & Features

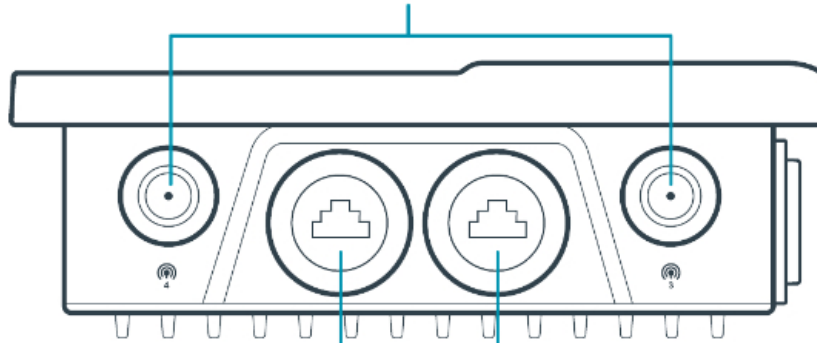


Features



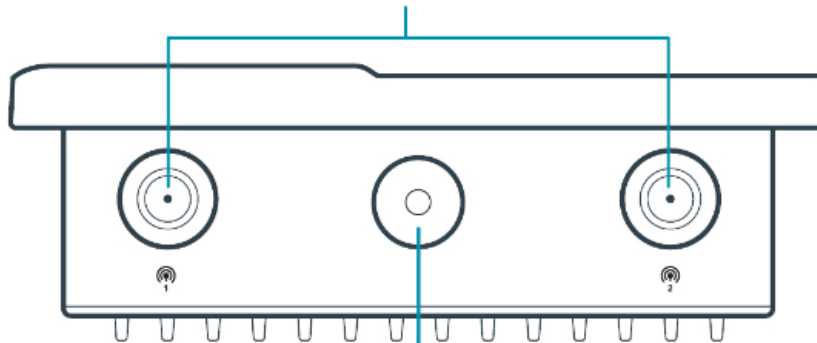
SIM slots (cover removed) Kensington lock port

Cellular antenna connectors (Type-N)

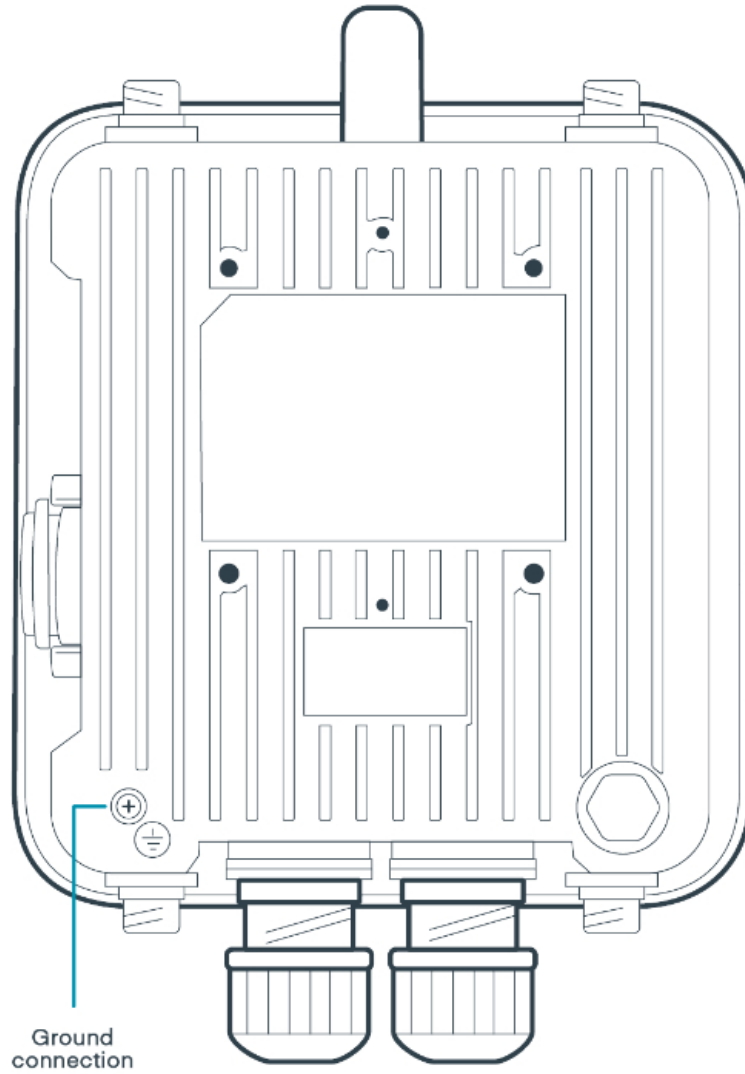


2.5 GbE PoE port 2.5 GbE port

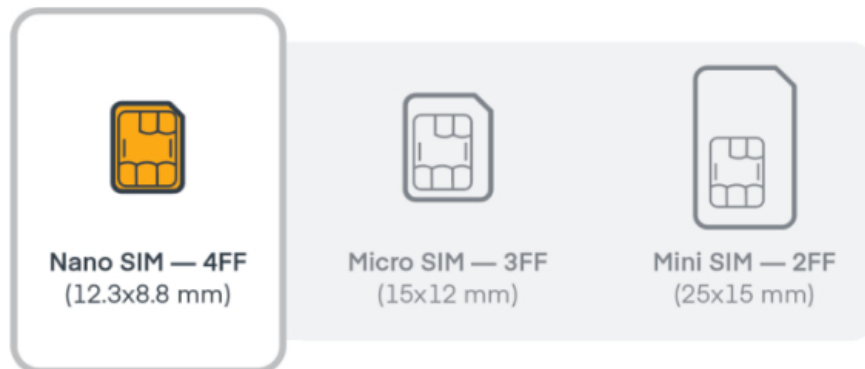
Cellular antenna connectors (Type-N)



Bluetooth® wireless technology antenna



SIM Card Info



Ordering Guide

NetCloud Branch 5G Adapter Essentials + Advanced packages and plans full featured for 5G 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

NetCloud Enterprise Branch Packages for the W1855 Series 5G Wideband Adapter

REGION	PACKAGE PLAN	PART NUMBER
North America: U.S. & Canada	Essentials	BE0x-1855-5GC-GN
	Essentials + Advanced	BEAx-1855-5GC-GN
U.S. Federal Government	TAA Compliant NC — Essentials + Advanced	TAA-BEAy-1855-5GC-GN
Europe: European Union	Essentials	BE0x-1855-5GC-GE
	Essentials + Advanced	BEAx-1855-5GC-GE
Europe: United Kingdom	Essentials	BE0x-1855-5GC-GU
	Essentials + Advanced	BEAx-1855-5GC-GU
Africa: South Africa	Essentials	BE0x-1855-5GC-GZ
	Essentials + Advanced	BEAx-1855-5GC-GZ
Asia Pacific: Australia, Singapore, and New Zealand	Essentials	BE0x-1855-5GC-GP
	Essentials + Advanced	BEAx-1855-5GC-GP
Asia Pacific: Taiwan	Essentials	BE0x-1855-5GC-TW
	Essentials + Advanced	BEAx-1855-5GC-TW
All Regions	Advanced Upgrade (requires Essential)	BE0x-NCADV
	Renewal — Essentials	BE0x-NCESS-R
	Renewal — Advanced	BE0x-NCADV-R
	Renewal — Essentials + Advanced	BEAx-NCEA-R

x = 1, 3, or 5 years

y = 3 or 5 years

Accessories

INCLUDED	PART NUMBER
W1855 Series 5G Wideband Adapter	

One of the following:	
— PoE Injector, 30 W, 802.3at with 1.8 meters, NA Type B line cord	170877-000
— PoE Injector, 30 W, 802.3at with 1.8 meters, EU Type F line cord	170877-001
— PoE Injector, 30 W, 802.3at with 1.8 meters, UK Type G line cord	170877-002
— PoE Injector, 30 W, 802.3at with 1.8 meters, AU Type I line cord	170877-003
— PoE Injector, 30 W, 802.3at with 1.8 meters, ZA Type M line cord	170877-004
— PoE Injector, 30 W, 802.3at with 1.8 meters, NA Type B line cord, Taiwan	170877-005
Cellular antenna, outdoor 5G low/mid-band with N type connector (Qty 4)	N/A
Wall/pole mounting bracket	N/A
Pole mounting clamp (Qty 2)	N/A
Ethernet port plug (Qty 2)	N/A
Ethernet cable gland (Qty 2)	N/A
Small accessories kit	N/A
— Device to bracket screws (Qty 4)	
— Wall mount screws (Qty 4)	
— Wall anchors (Qty 4)	
— Grounding lug	
Plate to W1855 mounting screws	N/A

Support & Warranty

The W-Series Adapters are only sold as components of Branch 5G 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.

More Information

[Find the most up-to-date information at **cradlepoint.com/w1855**](https://www.cradlepoint.com/w1855)