

BulletCAT9 - LTE Advanced Carrier Aggregation 450 Mbps CAT9 Gateway

The BulletCAT9 provides a feature packed, compact industrial strength wireless solution using robust LTE Advanced Carrier Aggregation technology for critical data communications. This Bullet provides incredibly fast CAT9 LTE connections with speeds of up to 450 Mbps for today's data intensive applications. The BulletCAT9 features Dual SIM (Failover), Gigabit Ethernet, RS232/485 Serial Data, 2x Programmable I/O and GPS.

CAT9 - 450 Mbps LTE

Carrier Aggregation

Standalone GPS

Gigabit Ethernet

Dual SIM (Failover)

RS232/485 Serial Port



Features

- **Input Voltage:** 5-30V_{DC} (5V @ 2.0A)
- **Ultra Fast CAT 9 LTE Operation**
- **Up to 450 Mbps Downlink / 50 Mbps Uplink Over Air**
- **Increased performance with Carrier Aggregation**
- **Data Usage & Systems Alerts (Email, SMS)**
- **Firewall with ACL Security, DMZ & Port Forwarding**
- **2x Programmable Analog/Digital Inputs or 2 Digital Outputs**
- **IPSec, GRE / VPN Tunneling**
- **RS232/485 Serial Console/Data Port**
- **10/100/1000 Ethernet (PoE)**
- **IPv6 & IPv4 Support**
- **MQTT Support**
- **Standalone GPS (TCP/UDP/SMTP)**
- **Wide Operating Temperature (-40°C to +85°C)**
- **User interface via SSH or HTTP/HTTPS web browser**
- **Microhard NMS Support**



BulletCAT9

Specifications

Supported Bands	LTE FDD Bands: 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 17, 18, 19, 20, 21, 26, 28, 29, 30, 66 LTE TDD Bands: 38, 39, 40, 41 HSPA+ Bands: 1, 2, 4, 5, 8 LTE 2DL carrier aggregation combinations North America 1+3,5,8,18,19,20,21,26;2+2;2+4,5,12,13,17,29,30,66;3+3;3+5,7,8,19,20,28;4+4;4+5,12,13,17,29,30;5+7,30,66;7+7;7+20,28;12+30;13+66;29+30;40+40;41+41 LTE 3DL carrier aggregation combinations North America 2+2+5,2+2+13,3+3+7,3+7+7,3+3+20,4+4+5,4+4+13,5+66+66,13+66+66,66+66+2,66+66+66,1+3+7,1+3+19,1+3+20,1+19+21,2+4+5,2+4+13,2+5+30,2+12+30,2+29+30,3+7+20,3+7+28,4+5+30,4+12+30,4+29+30,5+66+2,13+66+2	Security VPN, IPSec with IKE/ISAKMP; Multiple tunnel support (16); 3DES and up to 256-bit AES Encryption, Site to Site Tunneling, L2TP, GRE, Open VPN, SSH, HTTPS, RADIUS	
Cellular Data Features* <small>*Module Standalone Laboratory Performance</small>	LTE FDD: 450 Mbps DL, 50 Mbps Up LTE TDD: 347 Mbps DL, 30Mbps UL HSPA+: DL/UL 42/5.76 Mbps	Firewall NAT, NAT-T VPN tunneling, Port forwarding, VPN/GRE pass-through; Access control lists (IP/MAC filtering), Data origin / integrity Authentication, DMZ	
Serial Interface	RS232/485 Serial Data Port	Management Telnet, WebUI, SNMP V1/2/3, Wireless Upgrade (HTTP/FTP), RADIUS authentication, AT Command Interface (Serial/Telnet), Microhard NMS Support, Data Usage Alerts, SSH	
Serial Baud Rate	300bps to 921kbps	Diagnostics RSSI, Ec/No, Voltage, Temperature, Remote diagnostics, Watchdog, UDP Event Reporting, SMS Alerts, Netflow	
Serial Port Server	Extensive Serial Port Support: TCP Server/Client / UDP Server/Client / Modbus / SMTP	Input Voltage 5 - 30VDC or Passive PoE on LAN Reverse polarity protection	
Ethernet	10/100/1000 BaseT, Auto - MDI/X IEEE 802.3	Connectors: Antenna 3x SMA Female (Cell, Diversity, GPS) Data RJ-45 (Ethernet) 4 PIN Interlock (Vin, I/O) DB9 RS232 USB Micro-AB SIM Dual Nano (4FF)	
I/O	2x Programmable Analog/Digital Inputs or 2x Digital Outputs	Environmental Operating Temperature -40°C to +85°C -40°F to +185°F Humidity 5-95%, non-condensing	
USB	USB 2.0 USB (Device)	Weight Approx. 150 grams	
GPS	TCP/UDP/Email Reporting, GpsGate, TAIP GNSS Systems GLONASS, BeiDou & Galileo GPS Protocols NMEA 0183 V3.0 Acquisition Sensitivity -145 dBm (Cold-start) Tracking Sensitivity -160 dBm (Open Sky/Active-patch Antenna) Accuracy <2m CEP-50 (Open sky, 1 Hz tracking) Standalone time to first fix 1s/29s/32s (hot/warm/cold) Total number of SVs ~55 SVs	Dimensions Approx. 1.75" x 3.25" x 1.0" (45mm x 85mm x 25mm)	
SMS	SMS to/from Ethernet via Telnet SMS Alerts SMS Remote Reboots	Approvals FCC/IC PTCRB UL HazLoc (C1D2) Carrier Specific Approvals	
Carrier Connection	ICMP Keep Alive, DDNS	<h2>Order Options</h2>	
Network Protocols	IPv4, IPv6, TCP, UDP, TCP/IP, ARP, ICMP, DHCP, HTTP, SNMP, FTP, DNS, Serial over IP, Modbus Slave (TCP/Serial), MQTT	MHK117720 BulletCAT9 Serial/Ethernet Gateway MHK117722 BulletCAT9 Serial/Ethernet Gateway w/Kit	

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