

## BulletCAT12 - LTE Advanced Carrier Aggregation 600 Mbps CAT12 Gateway

The BulletCAT12 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 CAT12 LTE connections with speeds of up to 600 Mbps for today's data intensive applications. The BulletCAT12 features Dual SIM (Failover), Gigabit Ethernet, RS232/485 Serial Data, 2x Programmable I/O and GPS.

*CAT12 - 600 Mbps LTE*

*Carrier Aggregation*

*Standalone GPS*

*Gigabit Ethernet*

*Dual SIM (Failover)*

*RS232/485 Serial Port*



## Features

- **Input Voltage:** 5-30V<sub>DC</sub> (5V @ 2.0A)
- **Ultra Fast CAT12 LTE Operation**
- **Up to 600 Mbps Downlink / 150 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**



# BulletCAT12

# Specifications

<b>Supported Bands</b>	<p>LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B21/B25/B26/B28/B29/B30/B32/B66;                      LTE-TDD: B38/39/B40/B41</p> <p>DL 2xCA:                      B1+3/5/18/19/20/26; B2+2/4/5/12/13/17/29/30/66;                      B3+3/5/7/8/19/20/28; B4+4/5/12/13/17/29/30;                      B5+7/30/66; B7+7/20/28; B12+30; B13+66; B19+21;                      B20+B32; B29+30; B38+38; B39+39;                      B39+39; B39+41; B40+40; B41+41; B66+66; 12,29,30,5;                      B2+B14; B14+B30; B14+B66;</p> <p>DL 3xCA:                      DL inter-band 3CA:                      B1+3+5/7/8/19/20/28; B1+7+20; B2+4+5; B2+4+13,                      B2+5+30; B2+12+30; B2+29+30, B3+7+20, B3+7+28,                      B3+7+8, B4+5+30, B4+12+30, B4+29+30, B5+66+2,                      B13+66+2,                      B66+12+30, B66+29+30, B66+5+30; B2+B14+B66;                      DL 2 intra-band plus inter-band 3CA:                      B2+2+5, B2+2+13, B3+3+7, B3+7+7, B3+3+20, B3+3+28,                      B3+3+1, B4+4+5, B4+4+13, B7+7+28,                      B5+66+66, B13+66+66, B66+66+2, B39+B39+B41;                      B39+B41+B41; B14+B66+B66                      DL 3 intra-band 3CA:                      B40+40+40, B41+41+41, B66+66+66</p>	<b>Network Protocols</b>	IPv4, IPv6, TCP, UDP, TCP/IP, ARP, ICMP, DHCP, HTTP, SNMP, FTP, DNS, Serial over IP, Modbus Slave (TCP/Serial), MQTT
<b>Cellular Data Features*</b> <small>*Module Standalone Laboratory Performance</small>	<p>LTE-FDD: Max 600Mbps (DL), Max 150Mbps (UL)                      LTE-TDD: Max 430Mbps (DL), Max 30Mbps (UL)                      UMTS:                      DC-HSDPA: Max 42Mbps (DL)                      HSUPA: Max 5.76Mbps (UL)                      WCDMA: Max 384Kbps (DL), Max 384Kbps (UL)</p>	<b>Security</b>	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
<b>Serial Interface</b>	RS232/485 Serial Data Port	<b>Firewall</b>	NAT, NAT-T VPN tunneling, Port forwarding, VPN/GRE pass-through; Access control lists (IP/MAC filtering), Data origin / integrity Authentication, DMZ
<b>Serial Baud Rate</b>	300bps to 921kbps	<b>Management</b>	Telnet, WebUI, SNMP V1/2/3, Wireless Upgrade (HTTP/FTP), RADIUS authentication, AT Command Interface (Serial/Telnet), Microhard NMS Support, Data Usage Alerts, SSH
<b>Serial Port Server</b>	Extensive Serial Port Support: TCP Server/Client / UDP Server/Client / Modbus / SMTP	<b>Diagnostics</b>	RSSI, Ec/No, Voltage, Temperature, Remote diagnostics, Watchdog, UDP Event Reporting, SMS Alerts, Netflow
<b>Ethernet</b>	10/100/1000 BaseT, Auto - MDI/X IEEE 802.3	<b>Input Voltage</b>	5 - 30VDC or Passive PoE on LAN Reverse polarity protection
<b>I/O</b>	2x Programmable Analog/Digital Inputs or 2x Digital Outputs	<b>Connectors:</b>	Antenna Data USB SIM 3x SMA Female (Cell, Diversity, GPS) RJ-45 (Ethernet) 4 PIN Interlock (Vin, I/O) DB9 RS232 Micro-AB Dual Nano (4FF)
<b>USB</b>	USB 2.0 USB (Device)	<b>Environmental</b>	Temperature Humidity -40°C to +85°C -40°F to +185°F 5-95%, non-condensing
<b>GPS</b>	TCP/UDP/Email Reporting, GpsGate, TAIP	<b>Weight</b>	Approx. 150 grams
GNSS Systems GPS Protocols Acquisition Sensitivity Tracking Sensitivity Accuracy Standalone time to first fix Total number of SVs	GLONASS, BeiDou & Galileo NMEA 0183 V3.0 -145 dBm (Cold-start) -160 dBm (Open Sky/Active-patch Antenna) <2m CEP-50 (Open sky, 1 Hz tracking) 1s/29s/32s (hot/warm/cold) ~55 SVs	<b>Dimensions</b>	Approx. 1.75" x 3.25" x 1.0" (45mm x 85mm x 25mm)
<b>SMS</b>	SMS to/from Ethernet via Telnet SMS Alerts SMS Remote Reboots	<b>Approvals</b>	FCC/IC PTCRB UL Hazloc (C1D2) Carrier Specific Approvals
<b>Carrier Connection</b>	ICMP Keep Alive, DDNS	<h2>Order Options</h2>	
		<b>Model</b>	BulletCAT12

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