

## 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 (IKEv1/v2), GRE, OpenVpn**
- **RS232/485 Serial Console/Data Port**
- **10/100/1000 Ethernet (PoE)**
- **Full 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                  WCDMA: B1/B2/B3/B4/B5/B8/B9/B19</p> <p>DL 2×CA:                  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 3×CA:                  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> <p>UL 2×CA:                  B3+3; B41+41</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>Security</b>	VPN, IPsec(IKEv1/v2/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>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>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>Diagnostics</b>	RSSI, Ec/No, Voltage, Temperature, Remote diagnostics, Watchdog, UDP Event Reporting, SMS Alerts, Netflow
		<b>Input Voltage</b>	5 - 30VDC or Passive PoE on LAN Reverse polarity protection
<b>Cellular Data Features*</b>	<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>Connectors:</b>	<p>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)</p>
<small>*Module Standalone Laboratory Performance</small>		<b>Environmental</b>	<p>Operating Temperature -40°C to +85°C                  -40°F to +185°F                  Humidity 5-95%, non-condensing</p>
<b>Serial Interface</b>	RS232/485 Serial Data Port	<b>Weight</b>	~150 grams
<b>Serial Baud Rate</b>	300bps to 921kbps	<b>Dimensions</b>	~1.75" x 3.25" x 1.0" (45mm x 85mm x 25mm)
<b>Serial Port Server</b>	Extensive Serial Port Support: TCP Server/Client / UDP Server/Client / Modbus / SMTP	<b>Approvals</b>	FCC/IC PTCRB CE EN301908-1, EN301908-2, EN301908-13 EN303413, EN301489-1, EN301489-52 EN 62311, EN55032, EN55035, EN62368 RoHS 2 2011/65/EU Compliant REACH EC1907/2006 Compliant RCM: Australia & New Zealand UL Hazloc (C1D2) Carrier Specific Approvals
<b>Ethernet</b>	10/100/1000 BaseT, Auto - MDI/X IEEE 802.3		
<b>I/O</b>	2x Programmable Analog/Digital Inputs or 2x Digital Outputs		
<b>USB</b>	USB 2.0 USB (Device)		
<b>GPS</b>	TCP/UDP/Email Reporting, GpsGate, TAIP		
	<p>GNSS Systems GLONASS, BeiDou &amp; Galileo                  GPS Protocols NMEA 0183 V3.0                  Acquisition Sensitivity -145 dBm (Cold-start)                  Tracking Sensitivity -160 dBm (Open Sky/Active-patch Antenna)                  Accuracy &lt;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</p>		
<b>SMS</b>	SMS to/from Ethernet via Telnet SMS Alerts SMS Remote Reboots		
<b>Carrier Connection</b>	ICMP Keep Alive, DDNS		

## Order Options

**CA-MHK117730** BulletCAT12  
**CA-MHK117732** BulletCAT12 w/Acc Kit

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