

LTE Advanced Carrier Aggregation 600Mbps CAT12 Gateway w/802.11ac

The BulletPlusAC-CAT12 is an industrial strength cellular solution using LTE Advanced Carrier Aggregation technology for critical data applications. The BulletPlusAC-CAT12 provides fast CAT12 LTE connections with download speeds of up to 600 Mbps for today's data intensive applications. The BulletPlusAC-CAT12 features 4x Gigabit LAN Ports, 2x Independent Gigabit WAN Ports, Dual SIM w/Failover, 802.11ac WIFI, RS232/485 Serial Data Ports, 2x Programmable I/O and Standalone GPS.

CAT12 - 600 Mbps LTE

Carrier Aggregation

Dual Independent WAN

6 Gigabit Ethernet Ports

802.11bgna/ac WIFI

Dual Serial Ports



Features

- Ultra Fast CAT12 LTE Operation
- Up to 600 Mbps Downlink / 150 Mbps Uplink Over Air
- Dual SIM Card Support w/Failover & Load Balancing
- Support for 802.11bgna/ac devices (Up to 1.3 Gbps)
- Firewall with ACL Security, DMZ & Port Forwarding
- 2x Programmable Analog/Digital Inputs or 2 Digital Outputs
- IPSec, GRE / VPN Tunneling
- RS232/485 Serial Data Port / RS232 Console/Data Port
- 6 - 10/100/1000 Ethernet (PoE), (6LAN/2WAN)
- IPv6 & IPv4 Support
- Standalone GPS (TCP/UDP/SMTP)
- Wide Operating Temperature (-40°C to +85°C)
- Data Usage Alerts (Email, SMS)
- User interface via SSH or HTTP/HTTPS web browser
- Microhard NMS Support



BulletPlusAC-CAT12 Specifications

Cellular Supported Bands 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 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; 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 UL 2×CA: B3+3; B41+41	GPS GNSS Systems GPS Protocols Acquisition Sensitivity Tracking Sensitivity Accuracy Standalone time to first fix Total number of SVs TCP/UDP/Email Reporting, GpsGate, TAIP 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																																																																				
Cellular Data Features* *Module Standalone Laboratory Performance LTE-FDD: Max 600Mbps (DL), Max 150Mbps (UL) LTE-TDD: Max 430Mbps (DL), Max 30Mbps (UL) DC-HSDPA: Max 42Mbps (DL) HSUPA: Max 5.76Mbps (UL) WCDMA: Max 384Kbps (DL), Max 384Kbps (UL)	Carrier Connection ICMP Keep Alive, Traffic Watchdog, DDNS, Failover Network Protocols IPv4, IPv6, TCP, UDP, TCP/IP, ARP, ICMP, DHCP, HTTP, SNMP, FTP, DNS, Serial over IP, Modbus Slave (TCP/Serial), Load Balancer Security VPN, IPSec with IKE/ISAKMP; Multiple tunnel support (16); 3DES and up to 256-bit AES Encryption, VPN Tunneling L2TP, GRE, Open VPN, HTTPS, RADIUS Firewall NAT, NAT-T VPN Tunneling, Port Forwarding, VPN/GRE pass-through; Access Control Lists, DMZ Management Telnet, WebUI, SNMP V1/2/3, Wireless Upgrade (HTTP/FTP), AT Command Interface (Serial/Telnet), Microhard NMS Support, Data Usage Alerts, SSH Diagnostics RSSI, Ec/No, Voltage, Temperature, Remote diagnostics, UDP Event Reporting, SMS Alerts, Netflow																																																																				
WiFi Features	802.11b/g/n (2.4GHz), 802.11a/n/ac (5.8 GHz)																																																																				
WiFi Performance (3X3 MIMO)	<table border="1"> <thead> <tr> <th>Rate</th> <th>Mode</th> <th>Tx(dBm)*</th> <th>Rx(dBm)</th> </tr> </thead> <tbody> <tr><td>6 Mbps</td><td>a</td><td>26</td><td>-94 ± 2</td></tr> <tr><td>54 Mbps</td><td>a</td><td>26</td><td>-80 ± 2</td></tr> <tr><td>1 Mbps</td><td>b</td><td>26</td><td>-95 ± 2</td></tr> <tr><td>11 Mbps</td><td>b</td><td>26</td><td>-90 ± 2</td></tr> <tr><td>6 Mbps</td><td>g</td><td>26</td><td>-94 ± 2</td></tr> <tr><td>54 Mbps</td><td>g</td><td>26</td><td>-80 ± 2</td></tr> <tr><td>MCS0</td><td>n (HT20)</td><td>26</td><td>-94 ± 2</td></tr> <tr><td>MCS7</td><td>n (HT20)</td><td>26</td><td>-76 ± 2</td></tr> <tr><td>MCS0</td><td>n (HT40)</td><td>26</td><td>-92 ± 2</td></tr> <tr><td>MCS7</td><td>n (HT40)</td><td>26</td><td>-73 ± 2</td></tr> <tr><td>MCS0</td><td>ac (VHT20)</td><td>26</td><td>-93 ± 2</td></tr> <tr><td>MCS8</td><td>ac (VHT20)</td><td>26</td><td>-71 ± 2</td></tr> <tr><td>MCS0</td><td>ac (VHT40)</td><td>26</td><td>-90 ± 2</td></tr> <tr><td>MCS9</td><td>ac (VHT40)</td><td>26</td><td>-67 ± 2</td></tr> <tr><td>MCS0</td><td>ac (VHT80)</td><td>26</td><td>-88 ± 2</td></tr> <tr><td>MCS9</td><td>ac (VHT80)</td><td>26</td><td>-66 ± 2</td></tr> </tbody> </table> <p>*Total Tx power in dBm for 3 chains</p>	Rate	Mode	Tx(dBm)*	Rx(dBm)	6 Mbps	a	26	-94 ± 2	54 Mbps	a	26	-80 ± 2	1 Mbps	b	26	-95 ± 2	11 Mbps	b	26	-90 ± 2	6 Mbps	g	26	-94 ± 2	54 Mbps	g	26	-80 ± 2	MCS0	n (HT20)	26	-94 ± 2	MCS7	n (HT20)	26	-76 ± 2	MCS0	n (HT40)	26	-92 ± 2	MCS7	n (HT40)	26	-73 ± 2	MCS0	ac (VHT20)	26	-93 ± 2	MCS8	ac (VHT20)	26	-71 ± 2	MCS0	ac (VHT40)	26	-90 ± 2	MCS9	ac (VHT40)	26	-67 ± 2	MCS0	ac (VHT80)	26	-88 ± 2	MCS9	ac (VHT80)	26	-66 ± 2
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Serial Interface	RS232/485 Data Port, RS232 Console/Data Port																																																																				
Serial Baud Rate	300bps to 921kbps																																																																				
Serial Port Service	Extensive Serial Port Support: TCP Server/Client / UDP Server/Client / Modbus / SMTP																																																																				
Ethernet	4x LAN 10/100/1000, Auto - MDI/X IEEE 802.3 2x WAN 10/100/1000, Auto - MDI/X IEEE 802.3																																																																				
I/O	2x Programmable Analog/Digital Inputs or 2x Digital Outputs																																																																				
USB	Type A USB 2.0																																																																				
SMS	SMS to/from Ethernet via Telnet SMS Alerts SMS Remote Control																																																																				
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