

## High Performance 5G Cellular Ethernet/Serial Gateway w/ Dual Band WIFI

The BulletPlus5G is a high performance, industrial strength, multi-network router for fixed and mobile applications. The BulletPlus5G rugged 5G router/gateway features a Qualcomm Snapdragon Chipset and is capable of up to 3.4 Gbps download<sup>1</sup> and 900 Mbps upload<sup>1</sup>, ideal for data hungry applications! The BulletPlus5G features Dual Gigabit Ethernet Ports (LAN/WAN), Dual SIM w/Failover, Dual Band 802.11 WIFI, RS232/485 Serial Port, 2x Programmable I/O and Standalone GPS.

# 5G



5G Cellular

Dual Gigabit Ethernet Ports

Dual Band WIFI

Dual SIM w/Failover

RS232/485 Serial Port

## Features

- Ultra Fast 5G Operation with 4G/LTE Fallback
- Up to 3.4 Gbps Download / 950 Mbps Upload <sup>1</sup>
- Dual SIM Card Support w/Failover & Load Balancing
- Dual Band 802.11AC (2.4 & 5 GHz) WIFI
- Firewall with ACL Security, DMZ & Port Forwarding
- 2x Programmable I/O
- IPSec, GRE / VPN Tunneling
- RS232/485 Serial Console/Data Port
- Dual Gigabit Ethernet (LAN/WAN)
- 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 & Microhard IoT Portal Support



# BulletPlus5G Specifications



Cellular Data Rate (Max.) <sup>1</sup>			
5G SA Sub-6	DL 2.4 Gbps; UL 900 Mbps		
5G NSA Sub-6	DL 3.4 Gbps; UL 550 Mbps		
LTE	DL 1.6 Gbps; UL 200 Mbps		
WCDMA	DL 42 Mbps; UL 5.76 Mbps		
Cellular Frequency Bands			
5G NR	NSA n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 29/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 75/ 76/ 77/ 78/ 79		
	SA n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 29/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 75/ 76/ 77/ 78/ 79		
LTE	FDD B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 29/ 30/ 32/ 66/ 71		
	TDD B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48		
	LAA B46		
	WCDMA B1/ 2/ 4/ 5/ 8/ 19		
UMTS	WCDMA B1/ 2/ 4/ 5/ 8/ 19		
Wi-Fi Features			
Modes	Access Point, Client, Repeater 802.11b/g/n (2.4GHz), 802.a/n/ac (5.8GHz)		
Performance (2X2 MIMO)	<b>Rate</b>	<b>Mode</b>	<b>Rx(dBm)</b>
	6 Mbps	a	-94 ± 2
	54 Mbps	a	-80 ± 2
	1 Mbps	b	-95 ± 2
	11 Mbps	b	-90 ± 2
	6 Mbps	g	-94 ± 2
	54 Mbps	g	-80 ± 2
	MCS0	n (HT20)	-94 ± 2
	MCS7	n (HT20)	-76 ± 2
	MCS0	n (HT40)	-92 ± 2
	MCS7	n (HT40)	-73 ± 2
	MCS0	ac (VHT20)	-93 ± 2
	MCS8	ac (VHT20)	-71 ± 2
	MCS0	ac (VHT40)	-90 ± 2
	MCS9	ac (VHT40)	-67 ± 2
	MCS0	ac (VHT80)	-88 ± 2
MCS9	ac (VHT80)	-66 ± 2	
Serial Ports			
Serial Interface	RS232/485 Console/Data Port Baud Rate: 300bps to 230kbps TCP Server/Client / UDP Server/Client / Modbus / SMTP		
Ethernet Ports			
LAN	1x RJ45 Ethernet Ports (10/100/1000 Gbps)		
WAN	1x RJ45 Ethernet Port (10/100/1000 Gbps)		
I/O			
	2x Programmable I/O		
USB			
	1x Type A USB 2.0 Host Mode		
	1x MicroUSB		

GPS	
Reporting	TCP/UDP/Email, GpsGate, TAIP
GNSS	GPS, GLONASS, BDS, Galileo, QZSS
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
Network	
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
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
Host Interfaces	
Antenna	WIFI: RPSMA Female Cellular: SMA Female
Data	Ethernet: 2x RJ45 Serial: DB9 USB: 1x Type A, 1x MicroUSB
SIM	2x Nano (4FF)
Power, I/O	4 PIN Interlock
Input Voltage	
	9-30V <sub>DC</sub> Reverse Polarity Protection 802.3af PoE (Optional)
Environmental	
Operating Temperature	-40°C to +85°C
Humidity	5-95%, non-condensing
Dimensions	
Size	Approx. 3.0" x 3.5" x 1.25" (76mm x 89mm x 32mm)
Weight	Approx. 325 grams
Approvals	
	FCC/IC PTCRB RoHS Compliant
Order Options	
Model	BulletPlus5G

1. Chipset rated speeds



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