

# Cellular Router - EVDO/CDMA, UMTS/GSM

Spectre™ RT3G-300-x Series



## PRODUCT FEATURES

- EV-DO/CDMA and HSPA+/GPRS/GSM cellular networks in one SKU
- Up to 5.7 Mbps upload and 14.4 Mbps download speeds
- Industrial design - wide operating range (-30 to +60 C)
- 10-30 VDC power
- Class 1/Division 2 Certified
- Modbus compatible
- Wi-Fi 802.11 b/g/n access point

Built for plug-and-play simplicity with extensive remote management, deployment and customization options, the Spectre 3G cellular industrial router is used to wirelessly connect Ethernet equipment and other devices to the Internet or intranet. It creates secure connections in locations where cable connections are impractical. The standard configuration includes a 10/100 Ethernet port, USB host port, binary input/output (I/O) port and dual SIM card holders. Network redundancy is provided by the second SIM card holder. It also has 2 auxiliary ports for connecting to other types of networks such as additional Ethernet switch ports, RS-232, RS-485/422 interfaces and additional Digital/Analog I/O. The function of each port is dependent on the specific router model. An additional option is integrated 802.11b/g/n Wi-Fi technology, which allows the Spectre router to serve as a Wi-Fi access Point (AP) or "Hotspot".

The router supports the creation of VPN tunnels using IPsec, OpenVPN and L2TP to ensure safe communication. The web interface provides detailed statistics about router activities, signal strength, etc. The router supports DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS, and many other functions. The router provides diagnostic functions which include automatically monitoring the PPP connection, automatic restart in case of connection losses, and a hardware watchdog that monitors the router status. The router can automatically upgrade its configuration and firmware from your central server. This allows for mass reconfiguration of numerous routers at the same time. Additional management software, like R-SeeNet, for router monitoring are also supported.

Uniquely designed on an open source LINUX architecture, Spectre products are customizable through installation of software plug-in modules. Users can create their own with common LINUX commands and scripts, or add from B&B's existing library, including Modbus gateway, dynamic routing protocols and secure VPNs.

## ORDERING INFORMATION

MODEL NUMBER	WI-FI	ETHERNET 10/100	USB	I/O	RS-232	RS-422/ RS-485	I/O INPUT/ OUTPUT
RT3G-300-W	✓	1	1	1			
RT3G-310-W	✓	2	1	1			
RT3G-320-W	✓	1	1	1	1		
RT3G-330-W	✓	1	1	1			1
RT3G-340-W	✓	1	1	1		1	
RT3G-300		1	1	1			
RT3G-302		1	1	1	1		
RT3G-304		1	1	1		1	
RT3G-310		2	1	1			
RT3G-311		3	1	1			
RT3G-322		1	1	1	2		
RT3G-324		1	1	1	1	1	
RT3G-330		1	1	1			1

USA, Canada. Check with your local distributor for availability and options.

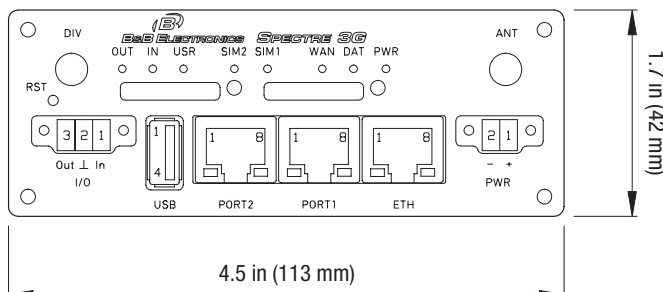
## INCLUDED WITH PRODUCT

- 2 3G right-angle dipole antenna
- 1 WiFi right-angle dipole antenna
- 1 Ethernet cable
- 1 AC power adaptor
- 1 DIN rail clip

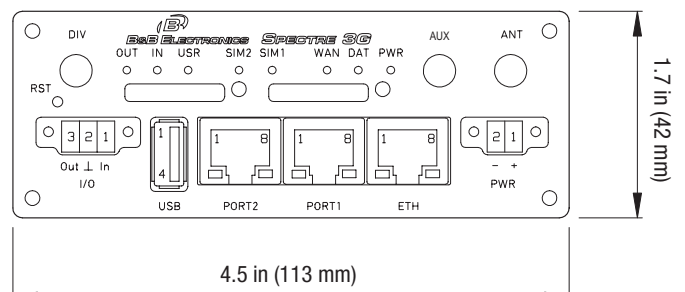
## ACCESSORIES - OPTIONAL

- MDR-20-24 24VDC, 20W, 1A Power Supply
- C5UMB3FBG Category 5E Cable, UTP, 1 m (3 ft), Beige
- C5UMB10FBL Category 5E Cable, UTP, 3 m (10 ft), Blue
- TRAB806/17103P Cellular Antenna, Multi-Band, Low Profile
- RT3G-ANT001 3G Cellular Antenna, Penta-Band, Right-Angle SMA
- RT3G-ANT002 3G Cellular Antenna, Penta-Band, Magnetic Mount SMA

## MECHANICAL DIAGRAM



## MECHANICAL DIAGRAM - WIFI MODELS



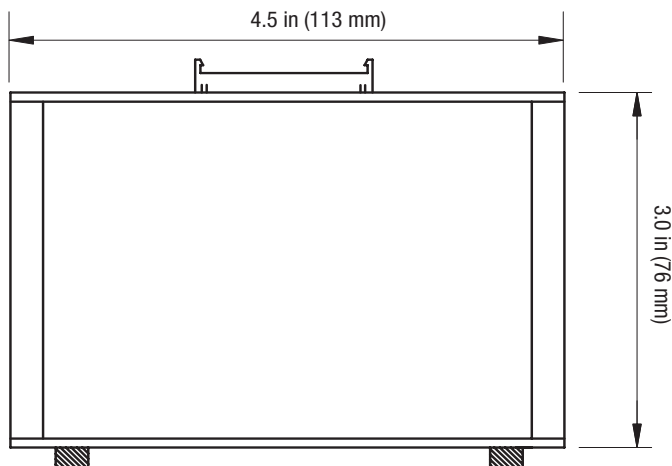
# Cellular Router - EVDO/CDMA, UMTS/GSM

Spectre RT3G-300-x Series



## SPECIFICATIONS

INTERFACES	
Standard	
Ethernet	10/100 Mbps
USB	USB Type A host
Binary I/O	1 input / 1 output
SIM 1	SIM card
SIM 2	SIM card
Expansion Port Options	
	Ethernet 10/100 Mbps
	RS-232
	RS-422/485
	I/O CNT:
	4 Binary inputs
	2 Analog inputs (4-20 mA)
	1 Binary output (2 inputs may be configured as counters)
ANTENNA:	CELLULAR & WI-FI
	SMA – 50 Ohms
	3G: 2 dBi, penta band, right angle dipole (2)
	WiFi: 1.8 dBi right angle dipole (1)
FREQUENCY BANDS	
Quad Band UMTS (WCDMA): 850, 900, 1900 and 2100 MHz	
Quad-Band GSM/GPRS/EDGE: 850, 900, 1800 and 1900 MHz	
POWER	
Source	10 – 30 VDC
	300 mW receive mode
Consumption	Up to 3.5 W (GPRS transmission)
	Up to 5.5 W (UMTS/HSDPA transmission)
MECHANICAL	
Dimensions	1.7 x 3.0 x 4.5 in (42 x 76 x 113 mm), 35mm DIN rail
Enclosure	Metal
Weight	150 g
ENVIRONMENTAL	
Operating Temperature	-30 to +60°C
Storage Temperature	-40 to +85°C



## FEATURES

WiFi Specifications	802.11 b/g/n - 2.4 GHz
	11b 11 Mbps -85 dBm
	11g 54 Mbps -70 dBm
RX Sensitivity	(HT20) 11n MSC7 -66 dBm
	(HT20) 11n MSC7 -62 dBm
	11b 11 Mbps 54 19 dBm
	11g Mbps (HT20) 16 dBm
TX Output Power	802.11n (HT20) 15 dBm
	802.11n (HT20) 15 dBm

Security Protocols	WAP-PSK, WAP2-PSK
Authentication	64/128 WEP, TCIP, AES

## NETWORKING

DHCP	– automatic IP addressing in LAN network
NAT	– IP address and ports translation between inside/outside network
Firewall	– filtering of addresses, ports, protocols
VRPP	– virtual backup router function
DynDNS client	– access to the router with a dynamic IP address
VLAN 802.11Q	– virtual LAN
QoS	– quality of service
Dial-in	– Communicate via CSD call
PPPoE Bridge	– PPP frames encapsulation inside ETH frames

## VPN TUNNELING

IPsec, OpenVPN, L2TP	– secure encrypted tunnels
GRE tunnel	– simple tunnel without security measures

## CONFIGURATION AND DIAGNOSTICS

HTTP server	– configuration via web server
Telnet	– configuration and access to the file system
SNMP	– router diagnostics, communication with I/O and M-Bus
Cellular state signalization	by LED
On-line info on cellular signal status	(level, cell, neighbors)
SMS info	– power on, cellular connection or disconnection
SMS control	– on/off cellular connection, switch SIM, I/O, etc.
Transferred data counting	one more APN as backup
Remote router group configuration change	switching among configuration profiles
SSH	– encrypted configuration and access to the file system

## ADDITIONAL FUNCTIONS

Linux based:	program your own applications
NTP client, NTP Server	– time synchronization
SMS communication	– AT commands on RS232, Ethernet and I/O
M-RAM memory inside	– router statistic saved into memory

## APPROVALS / CERTIFICATIONS

	FCC Part 15, CE
	Class 1/Division 2
Certifications	AT&T, Rogers, T-Mobile, Sprint, Verizon, Telus, PTCRB
	EN 301 511, v9.0.2
	EN 301 908-1&2, v3.2.1
CE	ETSI EN 301 489-1 V1.8.1
	EN 60950-1:06 ed.2 + A11:09 + A1:10
Emission	EN 55022/B
Immunity	ETS 300 342 immunity
Safety	EN 60950
Isolation	EN 60747 isolation