B&B ELECTRONICS

PRODUCT INFORMATION

SPECTRE 3G
Cellular Router

✓ **Designed for M2M applications**

✓ **Modbus TCP to Modbus RTU**

✓ **Modular design to fit application requirements**

✓ **Dual SIM Cards for redundant backhaul**

✓ **Up to 5.7 MBps upload/14.4 MBps download**

✓ **LINUX Platform & Advanced Networking Functions**

✓ **'C' based dev environment to build user applications**

The SPECTRE 3G cellular router connects Ethernet equipment and remote LANs via the cellular telephone network. It creates secure Ethernet connections in locations where cable connections are impractical, as is so often the case with devices like ATM machines and remote video cameras. The SPECTRE 3G also creates reliable mobile Ethernet connections.

With upload speeds of up to 5.7 MBps and download speeds of up to 14.4 MBps, the SPECTRE 3G provides ample bandwidth, even for applications that require video. The standard configuration includes multiple 10/100 Ethernet ports, one USB host port, one binary input/output (I/O) port and dual SIM card holders. The second SIM card holder provides network redundancy, as the router can automatically switch between cellular service providers if one connection fails.

The router supports the creation of VPN tunnels using IPsec, OpenVPN and L2TP. It supports DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS, and numerous other functions, as well as additional software like SmartCluster, VPN Server and R-SeeNet. A password-protected Web interface allows users to configure and manage the SPECTRE 3G from remote locations. The router can automatically upgrade its configuration and firmware from the operator's central server, allowing for simultaneous mass reconfiguration of every router on the network.

Users may insert Linux scripts and they can create up to four different configurations for the same router. Examples would include the SMS and binary input configurations. Users may switch from one configuration to another at any time.

Specifications	
Interfaces	
Standard	
Ethernet	10/100 Mbits
USB	USB Type A Host
Binary I/O	1 input / 1 output
SIM 1	SIM Card Slot
SIM 2	SIM Card Slot
Expansion Port Options	
Port 1	Ethernet 10/100, RS-232/422/485, Modbus, CNT (I/O)
Port 2	RS-232/422/485, Modbus, CNT (I/O)
I/O CNT	4 Binary inputs, 1 Binary output (2 inputs maybe configured as counters)
	2 analog inputs, I Binary output
Antenna connectors	SMA – 50 Ohm
Frequency bands	Quad Band UMTS (WCDMA): 850, 900,1900 and 2100 MHz Quad-Band GSM/GPRS/EDGE: 850, 900, 1800,1900 MHz
Internal	
32b ARM microprocessor	
512 Mb DDR SDRAM	
128 Mb Flash	
1 Mb MRAM	
Power	
Source	10 – 30 VDC
Consumption	300 mW receive mode Up to 3.5 W (GPRS transmission)
	Up to 5.5 W (UMTS/HSDPA transmission)
Mechanical	
Dimensions	42x76x113 mm (DIN 35mm)
Enclosure	Metal
Weight	150 g
Environmental	
Operating Temperature	-30 to 60°C
Storage Temperature	-40 to 85°C
Ordering Information	
SPECTRE 3G	See chart of model numbers below

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Spectre 3G Wireless Routers		
Model No.	Auxiliary Port 1	Auxiliary Port 2
RT3G-300	No connect	No connect
RT3G-302	No connect	RS-232
RT3G-304	No Connect	RS-422/485
RT3G-310	Ethernet	No connect
RT3G-311	Ethernet	Ethernet
RT3G-322	RS-232	RS-232
RT3G-324	RS-232	RS-422/485
RT3G-330	12-bit I/O (AI, DI, DO)	No connect
RT3G-300-W	No connect	No connect
RT3G-310-W	Ethernet	No connect
Features		
Networking	DHCP – automatic IP addressing in LAN network	
	NAT – IP address and ports translation between inside/outside network	
	Firewall: filtering of addresses, ports, protocols	
	VRRP – 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	
	NTP client, NTP Server: time synchronization	
	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	
	GPRS state signalization by LED	
	On-line info on GSM signal status (level, cell, neighbors)	
	SMS info – power on, GPRS connection or disconnection	
	SMS control – on/off GPRS 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	

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Approvals / Certifications	
CE	EN 301 511, v9.0.2
	EN 301 908-1&2, v3.2.1
	ETSI EN 301 489-1 V1.8.1
	EN 60950-1:06 ed.2 + A11:09 + A1:10