

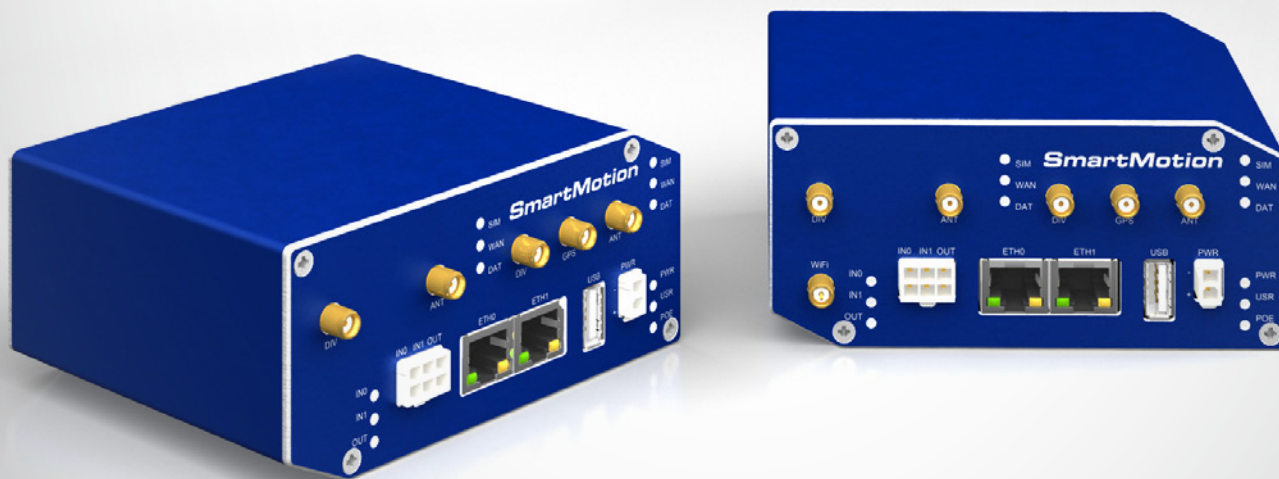
+ ROUTERS & GATEWAYS

SmartMotion™

TWIN MODULE CELLULAR ROUTER FOR REDUNDANT RELIABILITY

PRODUCT FEATURES

- Two Independent cellular modules for advanced fail over feature
- Powerful CPU and enhanced memory to support high demand customer applications
- Load Balancing
- Extended operational temperature range from -40 °C to +75 °C
- 10-60 VDC operated with transient and reverse polarity voltage protection
- GPS and GLONASS support
- Low power consumption mode for solar and battery power applications
- Optional industrial grade WiFi
- PoE PD, PoE PSE, In/Out, USB Host, MicroSD card holder
- Advanced security features



B+B SMARTWORX

Powered by

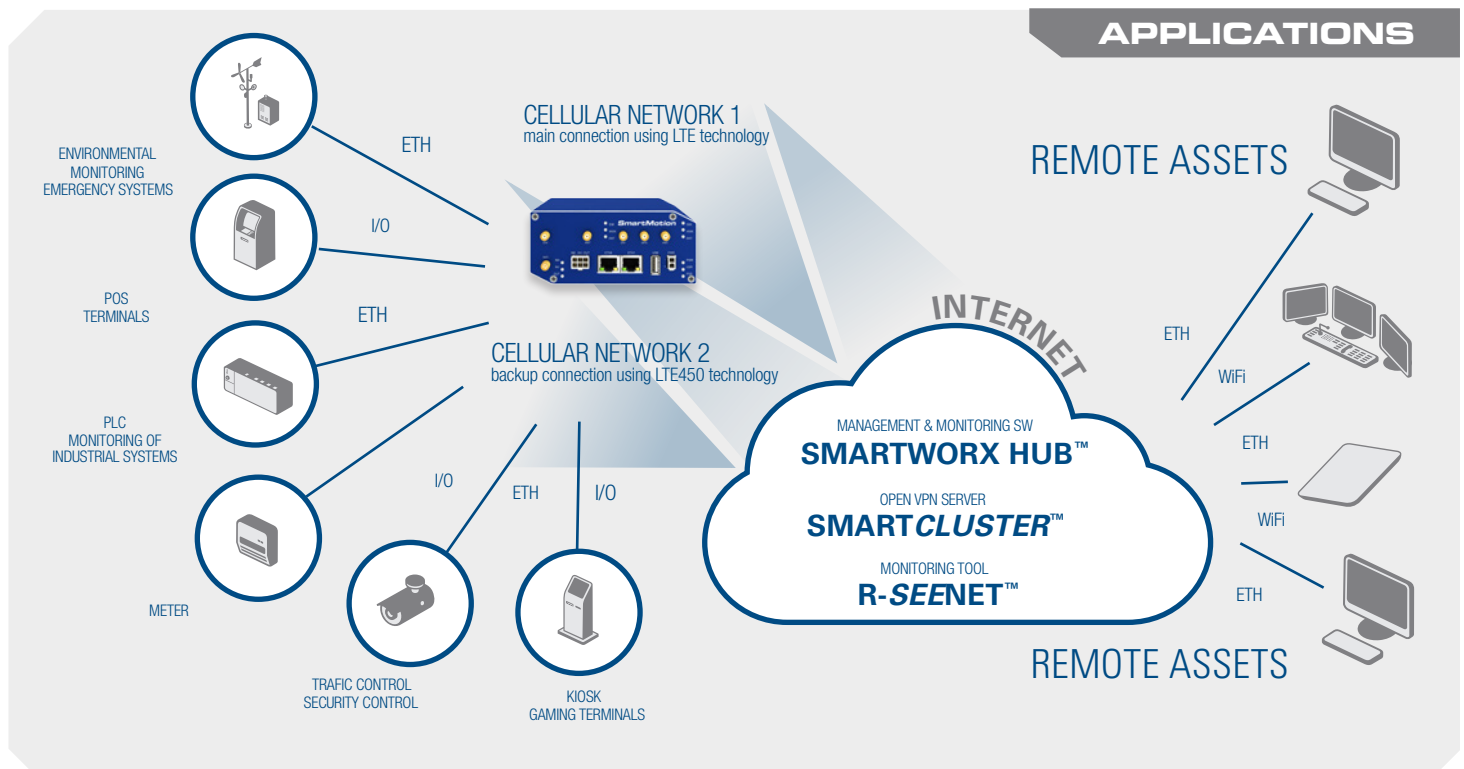
ADVANTECH



SmartMotion™

TWIN MODULE CELLULAR ROUTER FOR REDUNDANT RELIABILITY

The **SmartMotion™** cellular router provides a reliable, secure network, with failover protection for devices and LANs. Two interdependent cellular modules with 2 SIMs slots each to support multiple cellular carriers. Business continuity is never a problem with this advanced fail over architecture and Load Balancing feature which simultaneously receives Cellular, WiFi and Ethernet data.



APPLICATIONS

SmartMotion™ automatic wireless failover protects against loss of communications in wired or wireless networks by using dual LTE/4G cellular module technology that accommodates multiple cellular carriers. Smartmotion provides transfer speeds up to 50 Mbit/s and download speeds of up to 100 Mbit/s meeting the high demand required for video transfer.

The **SmartMotion™** is designed and tested to meet the requirements of industrial, mobile, security and other harsh environment application where standard commercial designs fail. Specifications include wide operating temperature ranges from -40 to +75 °C (-20 to +60 °C LTE450 module), input voltage range 10 V DC to 60 V DC, and advanced sleep mode feature to allow low power consumption for solar and battery power applications.

The **SmartMotion™** places intelligence out at the network edge with an extremely powerful CPU and enhanced embedded memory capacity providing full support for LTE/4G (long Term Evolution) speeds and applications. A secure Web interface allows users to configure and manage the **SmartMotion™** from remote locations.

The router can also 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 multiple configurations for the same router. Users may switch from one configuration to another at any time.

The flexible **SmartMotion™** concept includes 2 Ethernet ports with 2 independent LANs/IP addresses. The standard configuration also includes 1 USB host port, 1 microSD card holder, 4 SIM card holders for automatic failover to an alternate service provider, 2 binary inputs(I/O) , 1 binary output (I/O) and onboard GPS. An optional built-in WiFi module is also available, with industrial grade operating temperature ranges from -40 to +75 °C (-20 to +60 °C LTE450 module).

The **SmartMotion™** supports real time data encryption and 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 SmartWorx HUB, SmartCluster VPN Server and R-SeeNet.

LEADING THE INDUSTRY

TECHNICAL SPECIFICATION

Power, Consumption, Environmental, IP cover

Power supply	10 – 60 VDC (2-Way Molex connector)
Power consumption – Idle / Average / Peak / Sleep Mode	2.5 W / 4W / 11 W / 10 mW
Temperature range – Operating / Storage	-40 to +75 °C / -40 to +85 °C
Temperature range LTE450 – Operating / Storage	-20 to +60 °C / -40 to +85 °C
Humidity – Operating / Storage (non condensing)	0 to 95 % / 0 to 95 %
Cold Start	-35 °C
Operating Altitude	2000 m / 70 kPa
Ingress Protection Rating	IP30

Cellular module parameters

		Cellular Module #1	Cellular Module #2
Order code	SR352xxxx	Pentaband LTE	Pentaband LTE
Order code	SR355xxxx	Pentaband LTE	LTE450
Pentaband LTE Specifications		LTE450 Specification	
LTE	Bit rate 100 Mbps (DL) / 50 Mbps (UL) 3GPP release 8 compliant Supported frequencies: 800 / 900 / 1800 / 2100 / 2600 MHz	Bit rate 100 Mbps (DL) / 50 Mbps (UL) 3GPP release 9 compliant Supported frequencies: 450 / 800 / 1800 / 2600 MHz	
WCDMA	Bit rate 42.0 Mbps (DL) / 5.76 Mbps (UL) Supported frequencies: 900 / 1800 / 2100 MHz	Bit rate 42.0 Mbps (DL) / 5.76 Mbps (UL) Supported frequencies: 900 / 2100 MHz	
GPRS/EDGE	Bit rate 237 kbps (DL) / 59.2 kbps (UL) Supported frequencies: 900 / 1800 MHz	Bit rate 236 kbps (DL) / 59.2 kbps (UL) Supported frequencies: 900 / 1800 MHz	

WiFi - 802.11 a/b/g/n, AP or Client modes

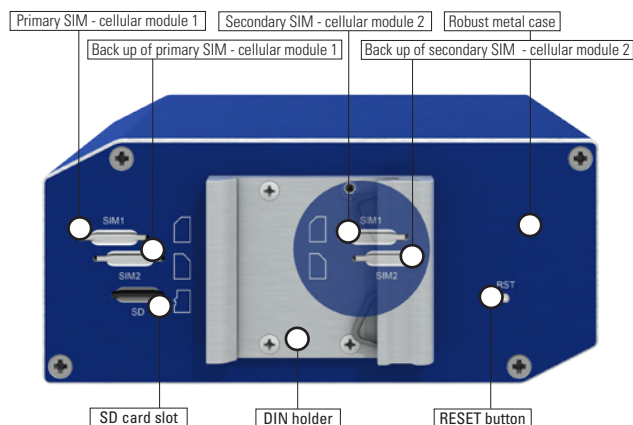
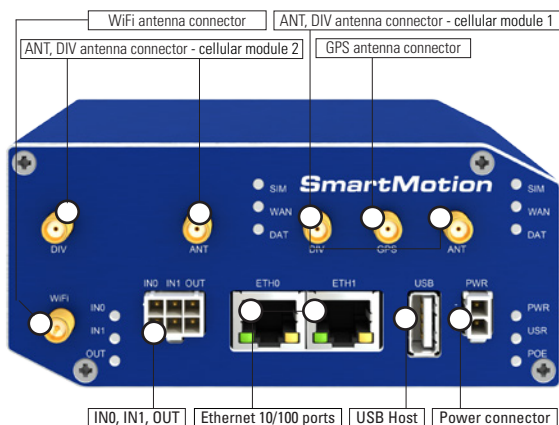
Supported WiFi band 2.4 GHz, 5.4 GHz	Number of clients: 10
Encryption: None, WEP, TKIP, AES	Authentication: Open, Shared, WPA-PSK, WPA2-PSK
5 GHz supported channels – 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165	
2.4 GHz supported channels – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	

Industry Certifications & Approvals

Radio for general LTE	ETSI EN 301 511 v9.0.2, ETSI EN 301 908-1 v5.2.1, ETSI EN 301 908-2 v5.2.1, ETSI EN 301 908-13 v5.2.1
Radio for LTE450	ETSI EN 301 908-1 v6.2.1, ETSI EN 301 908-13 v6.2.1, ETSI EN 301 489-24 v1.5.1
Emissions/ Immunity	IEC 61000-6-2:2005, ETSI EN 301 489-1 v1.9.2, EN 55022:2010
Safety	EN 60950-1:06 ed.2 (not Hazardous Locations), EN 62311:2008
Vehicle	E8
Environmental	RoHS, RoHS2, REACH, WEEE

Mechanical

Metal case with metal DIN rail	SIMs for secondary module are covered
Enclosure Dimensions	55x97x125 mm (150 mm including wall month sides)
Weight	420 g



Router SmartMotion is compatible with:

R-SEENET

SMARTCLUSTER

SMARTWORX HUB™

Features	
Network and Routing	DHCP Server, , DHCP Client, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, NTP Client/ Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup routes, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging
Security	HTTPS, SSH, VPN tunnels, SFTP Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)
VPN tunnelling	Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, DMVPN IPSec with IKEv1 and IKEv2
Configuration	Web server, SSH, Four configuration switchable profiles, Automatic configuration update from server Backup configuration, Restore configuration
Firmware Management	Automatic firmware update from server, Locally via LAN and USB or remotely OTA (HTTP, HTTPS), Over-the-Air software updates, Over-the-Air cellular module update from FW
Diagnostic	One CLICK report – current configuration / factory identification / system log / kernel log / reboot log / routing table, Remote diagnostics possible via SSH
Status	Network Status, DHCP Status, IPSec Status, Statistics history for last 60 days
Log	System Log, Reboot Log, Kernel Log
Controlling and diagnostic	SMS, SNMP v1/v2c/v3, Statuses, Log
Event Engine	StartUp script & Up/Down script (Bash), Digital Input, Network Parameters, Data Usage, Timer, Power, Device Temperature. Report Types: RAP, SMS, email, SNMP Trap, TCP (csv, xml, binary)
Support and Warranty	3 years warranty, Free device software upgrades, Optional warranty extension
Other	Support of IPv6

Ports, LED, Antennas	
2x ETH	RJ45, 10/100 Mbps, 1.5 kV RMS
SIM	4 Mini SIMs (2FF) (rear panel)
LED Indicators	PWR, DAT, WAN, ETH, SIM, USR, POE, IN0, IN1, OUT
5x ANT - 2x ANT, 2x DIV, GPS	SMA connectors
WiFi antenna - *optional	R-SMA connector
USB	USB Host connector 2.0
I/O	6-Way Molex connector - 2x binary input, 1x binary output
SD Card	1x Micro SD Card slot (rear panel)
RST	RESET button

PoE Parameters	PoE PD	PoE PSE
Input voltage range	42.5 – 57 V	44 – 57 V, 65 W
Power available	25.50 W	2x 25.50 W (ETH0, ETH1)
Maximum current	600 mA	
Insul. Strenght	1.5 kV from the router	none
Standards IEEE 802.3at-2009 (PoE+) and IEEE 802.3af-2003 (PoE) supported. Cabling needed is Category 5, up to 12.5 Ω. It is possible to use a passive PoE injector.		



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