SmartFlex™

LTE ROUTER ... more power, more features, more ideas

PRODUCT FEATURES

- Powerful CPU and enhanced memory to support high demand customer applications
- Extended operational temperature range from -40 °C to +75 °C
- 10-60 VDC operated with transient and reverse polarity voltage protection
- Flexible Port options, such as 3-port Switch, Ethernet and RS232/422/485 serial ports with isolation
- GPS and GLONASS support
- MicroSD card holder
- Low power consumption mode for solar and battery power applications
- Optional industrial grade WiFi
- PoE PD, PoE PSE, In/Out, USB Host
- Advanced security features

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B+B SMARTWORX

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ADVANTECH B+B SMARTWORX

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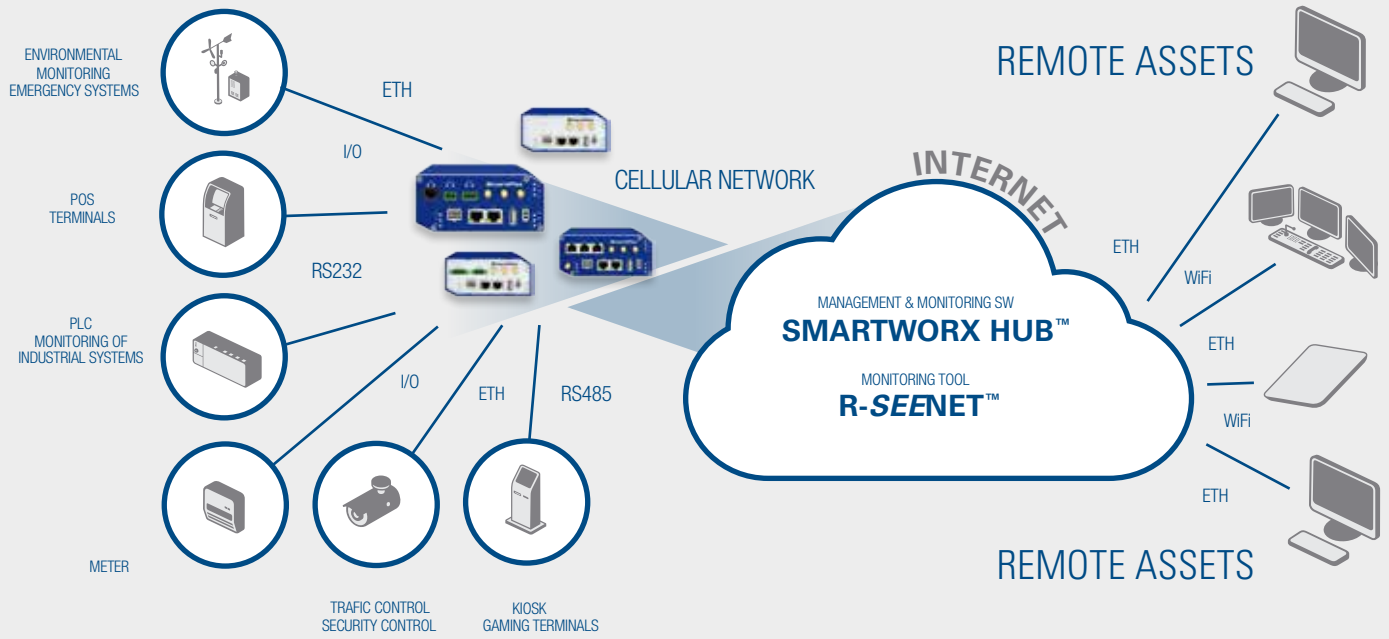
The **SmartFlex™** cellular router provides secure Internet connectivity for devices and LANs via the cellular networks. It can be used to provide automatic wireless failover for wired networks, wireless connectivity for devices in remote locations where cable connections are impractical, and wireless connectivity for mobile assets. With upload speeds of up to 50 Mbit/s and download speeds of up to 100 Mbps, the **SmartFlex™** provides ample bandwidth, even for applications that require video.

APPLICATIONS



LEADING THE INDUSTRY

The **SmartFlex™** is designed and manufactured for use in tough environmental conditions. Specifications include wide operating temperature ranges from -40 to +75 °C (-20 to +60 °C LTE450 module). It accepts input voltage ranges from **10 V DC** to **60 V DC** and is equipped with sleep mode for reducing electrical consumption

IThe **SmartFlex™** places intelligence out at the network edge with an extremely powerful Cortex A8 CPU at 1GHz, 256 MB flash memory, 512 MB RAM and 128kB M-RAM, providing full support for LTE (long Term Evolution) speeds and applications. A secure Web interface allows users to configure and manage the **SmartFlex™** 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 **SmartFlex™** can be configured to suit any application. The standard configuration includes 2 Ethernet ports with 2 independent LANs/IP addresses. The standard configuration also includes 1 USB host port, 1 microSD card holder, 2 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). Further optional boards available: 3x ETH (the router can be configured with up to 5 total Ethernet ports and 3 independent LANs/IP addresses) or ETH - RS232 - RS485 (isolation strenght up to 2.5kV) or RS232 - RS485 (isolation strenght up to 2.5kV) or RS232.

The **SmartFlex™** 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 SmartCluster VPN Server and R-SeeNet.

TECHNICAL SPECIFICATION

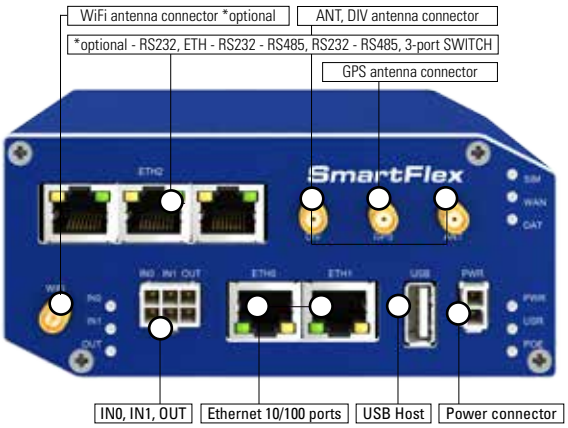
Power, Consumption, Environmental, IP cover	
Power supply	10 – 60 VDC (2–Way Molex connector)
Power consumption – Idle / Average / Peak / Sleep Mode	2.5 W / 4W / 11 W / 10 mW
Temperature range – Operating / Storage	-40 to +75 °C / -40 to +85 °C
Temperature range LTE450 – Operating / Storage	-20 to +60 °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

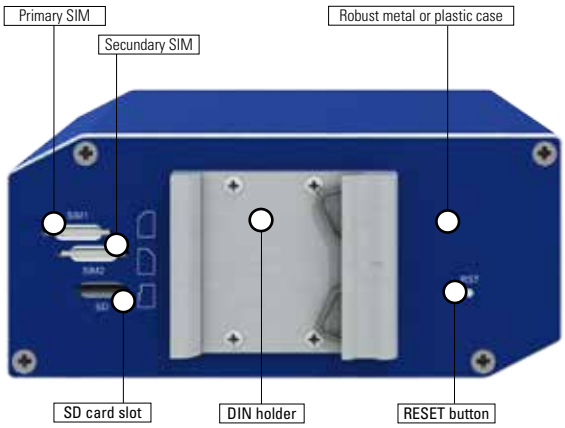
Cellular module parameters			
	SR303 - EMEA Region	SR306 - APAC & LATAM	SR307 - LTE450
LTE	Bit rate 100 Mbps (DL) / 50 Mbps (UL) 3GPP release 8 compliant Supported frequencies: 800/900/1800/2100/2600 MHz	Bit rate 100 Mbps (DL) / 50 Mbps (UL) 3GPP release 9 compliant Supported frequencies: 800/900/1800/2100/2600 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: 900/2100 MHz	Bit rate 42.0 Mbps (DL) / 5.76 Mbps (UL) Supported frequencies: 850/900/1900/2100 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: 900/1800/1900 MHz	Bit rate 236 kbps (DL) / 59.2 kbps (UL) Supported frequencies: 850/900/1800/1900 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	
Plastic or metal case with plastic or metal DIN rail	
Enclosure Dimensions	87x30x127mm (150mm including wall month sides)
Weight Plast/Metal	170 g/375 g





Router SmartFlex is compatible with: **R-SEENET 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 Firmware Management	Web server, SSH, Four configuration switchable profiles, Automatic configuration update from server Backup configuration, Restore configuration 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
Controling 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	
Up to 5x ETH ports	RJ45, 10/100 Mbps
SIM	2 Mini SIMs (2FF) (rear panel)
LED Indicators	PWR, DAT, WAN, ETH, SIM, USR, POE, IN0, IN1, OUT
3x ANT - ANT, DIV, GPS (no for LTE450 model)	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 (rear panel)
*optional 3-port SWITCH	3x RJ45, 10/100 Mbps
*optional ETH - RS232 - RS485	RJ45, 4pin terminal block, 3pin terminal block connectors – Isolation up to 2.5 kV
*optional RS232 - RS485	5pin terminal block, 4pin terminal block connectors – Isolation up to 2.5 kV
*optional RS232	RJ45

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.

ADVANTECH B+B SMARTWORX

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