



- + Powerful CPU and enhanced memory
- + Extended operational temperature range from -40 °C to +75 °C
- + 10-60 VDC operation with transient and reverse polarity voltage protection
- + Flexible port options – 3-port Switch, Ethernet and RS-232/422/485 serial ports with isolation
- + GPS and GLONASS support
- + MicroSD card holder, In/Out, USB Host
- + Low power consumption mode for solar and battery power applications
- + Optional industrial grade Wi-Fi
- + Optional PoE PSE or PoE PD on ETH0 and ETH1
- + Advanced security features

SmartFlex™ cellular router provides secure Internet connectivity for devices and LANs via the cellular networks. It can 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 Mbps and download speeds of up to 100 Mbps, SmartFlex provides ample bandwidth, even for applications that require video.

SmartFlex places intelligence 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 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 can create multiple configurations for the same router and switch from one configuration to another at any time.

Modular SmartFlex can be configured for any application. Standard configuration includes 2 Ethernet ports with 2 independent LANs/IP addresses and 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 Wi-Fi module is also available, with industrial grade operating temperature ranges from -40 to +75 °C (-20 to +60 °C LTE450 module). Further optional boards include: 3x ETH (the router can be configured with up to 5 total Ethernet ports and 3 independent LANs/IP addresses) or ETH/RS-232/485 or RS-232/485 (isolation strength up to 2.5kV) or RS-232.

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.

**SmartFlex Family**

2x ETH, 1x USB, 2x BI, 1x BO, MicroSD reader, 2x SIM reader

**BB - SR303 XXXXXX - YYYY**

|                |  |
|----------------|--|
| SWH            | No SmartWorx HUB<br>SmartWorx HUB            |
| Accessories    |  |
| 0              | No Accessories (DIN holder included)         |
| 1              | Accessories with EU power supply             |
| 5              | International Power Supply (EU, US, UK, AUS) |
| Enclosure      |  |
| 1              | Plastic enclosure                            |
| 2              | Metal enclosure                              |
| Interfaces     |  |
| 0              | No optional port                             |
| 1              | 3x ETH Switch                                |
| 3              | RS232 (5-pin TB), RS485/422 (4-pin TB)       |
| 4              | RS232 (4-pin TB), RS485 (3-pin TB), ETH      |
| PoE            |  |
| 0              | No PoE                                       |
| 8              | PoE PSE                                      |
| 9              | PoE PD                                       |
| WiFi           |  |
| 0              | No Wi  |
| 1              | WiFi (TI 2.4 & 5 GHz)                        |
| Router version |  |
| 03             | EMEA   |

**ORDERING INFORMATION**

Note: Check with your local distributor for availability, options, and HW configuration. Contact Advantech B+B SmartWorx distributors.

*Note: Antennas & Power Supply Sold Separately.*

# SmartFlex SR303

## FLEXIBLE, ADAPTABLE LTE ROUTER



### HW SPECIFICATIONS

| 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 (sold separately) | SMA connectors   |
| Wi-Fi Antenna (sold separately)          | R-SMA connector  |
| USB                                      | USB Host connector 2.0   |
| 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 - R232 - RS485             | RJ45, 4-pin terminal block, 3-pin terminal block connectors – Isolation up to 2.5 kV |
| *Optional RS232 - RS485                  | 5-pin terminal block, 4-pin terminal block connectors – Isolation up to 2.5 kV       |



| POWER                          |   |
|--------------------------------|---|
| Power Supply (sold separately) | 10 – 60 VDC (2-Way Molex connector)                           |
| Power Consumption              | Idle: 2.5 W<br>Average: 4 W<br>Peak: 11 W<br>Sleep Mode: 10mW |
| ENVIRONMENTAL                  |   |
| Temperature Range              | Operating: -40 to +75 °C<br>Storage: -40 to +85 °C            |
| Temperature Range LTE450       | Operating: -20 to +60 °C<br>Storage: -40 to +85 °C            |
| Humidity                       | Operating: 0 to 95 %<br>Storage (Non-condensing): 0 to 95 %   |
| Cold Start                     | -35 °C  |
| Operating Altitude             | 2000 m / 70 kPa   |
| Ingress Protection Rating      | IP30  |

| MECHANICAL   |              |
|--|--------------|
| Plastic or metal case with plastic or metal DIN rail |              |
| Enclosure Dimensions                                 | 55x97x125 mm |
| Weight Plastic                                       | 170 g        |
| Weight Metal   | 375 g        |

| GNSS SPECIFICATIONS |  |
|---------------------|--|
| Antenna             | 50 Ohms – active   |
| Protocols           | NMEA 0183 v3.0   |
| Frequency GPS       | 1575.42MHz Typical   |
| Sensitivity         | Tracking: -161dBm<br>Acquisition (Assisted): -158dBm<br>Acquisition (Standalone): -145dBm        |
| Acquisition time    | Hot start: 1 s<br>Warm start: 29 s<br>Cold start: 32 s   |
| Accuracy            | Horizontal: < 2m (50 %); < 5m (90 %)<br>Altitude: < 4m (50 %); < 8m (90 %)<br>Velocity: < 0.2mps |

| WI-FI - 802.11 A/B/G/N, AP OR CLIENT MODES |   |
|--|---|
| Supported Wi-Fi band                       | 2.4 GHz, 5.4 GHz  |
| Encryption                                 | None, WEP, TKIP, AES                                    |
| 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           |
| Number of clients                          | 10  |
| Authentication                             | Open, Shared, WPA-PSK, WPA2-PSK                         |

| POE PARAMETERS   | POE PD parameters for opposite PSE | 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. Strength  | 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 |                                    |                         |

\* Tracking sensitivity is the lowest GPS signal level for which the device can still detect an in-view satellite 98% of the time when in sequential tracking mode.

\*\* Acquisition sensitivity is the lowest GPS signal level for which the device can still detect an in-view satellite 50% of the time.

# SmartFlex SR303

## FLEXIBLE, ADAPTABLE LTE ROUTER



### STANDARDS AND REGULATIONS

| INDUSTRY CERTIFICATIONS & APPROVALS        |  |
|--|--|
|  | <b>SR303</b>   |
| Radio                                      | ETSI EN 301 511 V12.5.1, ETSI EN 300 440 V2.1.1, ETSI EN 301 908-1 V11.1.1, ETSI EN 301 908-2 V11.1.1, ETSI EN 301 908-13 V11.1.1, ETSI EN 300 328 V2.1.1, ETSI EN 301 893 V2.1.1  |
| EMC  | ETSI EN 301 489-1 v1.9.2, ETSI EN 301 489-1 V2.1.1, Draft ETSI EN 301 489-19 V2.1.0, Draft ETSI EN 301 489-52 V1.1.0, ETSI EN 301 489-17 V3.1.1  |
| Safety                                     | EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 + AC:2011, EN 62311:2008<br>UL 60950-1, 2nd ed. + am1 + am2 *<br>CAN/CSA C22.2 No. 60950-1-07, 2nd ed. + am1 + am2 *<br>UL E486108 *<br>ATEX II 3 G Ex nA IIC T4 Gc, DEMKO 16 ATEX 1801X * |
| E-Mark – EMC for devices in transportation | E8 homologation number: 10R – 04 7737  |

\* Excluding versions with PoE PSE, versions with RS232-RS485-ETH interface or versions with RS232 interface (RJ45).

| CELLULAR MODULE PARAMETERS |   |                         |  |
|----------------------------|---|-------------------------|--|
|                            | SR303 - EMEA  |                         |  |
| LTE parameters             | Bit rate 100 Mbps (DL) / 50 Mbps (UL)<br>3GPP rel. 8 standard<br>Supported bandwidths: 5 MHz, 10 MHz, 20 MHz<br>Supported frequencies: 800 / 900 / 1800 / 2100 / 2600 MHz | GPRS/EDGE parameters    | Bit rate 237 kbps (DL) / 59,2 kbps (UL)<br>GPRS multislot class 10, CS 1 to 4<br>EDGE multislot class 12, CS 1 to 4, MCS 1 to 9<br>Supported frequencies: 900 / 1800 MHz |
| HSPA+ parameters           | Bit rate 42 Mbps (DL) / 5,76 Mbps (UL)<br>3GPP rel. 7 standard<br>UE CAT. 1 to 6, 8, 10, 12, 14<br>3GPP data compression<br>Supported frequencies: 900 / 1800 / 2100 MHz  | GPRS/EDGE power classes | EGSM 900: Class 4 (33 dBm)<br>GSM 1800: Class 1 (30 dBm)<br>EDGE 900: Class E2 (27 dBm)<br>EDGE 1800: Class E2 (26 dBm)  |
| UMTS parameters            | PS bit rate 384 kbps (DL) / 384 kbps (UL)<br>CS bit rate 64 kbps (DL) / 64 kbps (UL)<br>W-CDMA FDD standard<br>Supported frequencies: 900 / 1800 / 2100 MHz               |                         |  |

