



- + For data applications
- + Ethernet, serial RS-232 and I/O for connecting a wide array of field assets with DIN rail or wall mounting
- + Low power consumption for solar and battery power applications
- + Exceptionally resilient wireless and wired connection
- + Enhanced memory to host custom software applications and a wide variety of protocols
- + Easy deployment, mass maintenance and troubleshooting with B+B SmartWorx remote management and monitoring tools
- + Loaded with advanced features to secure your data

The SmartStart™ LTE family of cellular routers and gateways are the perfect way to connect RS-232 and Ethernet devices to a cellular network. Industrial M2M and IoT applications include Ethernet lottery machines, ATM stations, kiosks, gaming terminals along with RS-232 traffic controllers, meters, UPS systems, PLCs and much more.

The processor is powerful enough to handle the full range of LTE communications capabilities, including video streams. The internal memory provides ample storage for custom scripts, software applications and a wide variety of protocols. In addition to its Ethernet and RS-232 ports, SmartStart™ has built-in digital I/O connectivity. Competing routers in the same price range generally provide only Ethernet or RS-232. StartSmart™ provides all three.









SmartStart™ combines best-in-class power consumption with LTE performance and is optimized for solar and battery powered applications. Low Power Mode extends battery life by dropping power consumption to 40 mW, and can be triggered by timers, low voltage detection or I/O. SmartStart™ is the industry's only cellular gateway with power

consumption equivalent to 2G devices. It is DIN rail and panel mountable. The router supports VPN tunnel creation using various protocols to ensure safe communications. The router provides diagnostic functions which include automatic monitoring of the wireless and wired connections, automatic restart in case of connection losses, and a hardware watchdog that monitors the router status.

SmartStart™ is an excellent fit for applications that are migrating to LTE technology. SmartStart™ provides fallback to 3G/2G technologies to ensure that connectivity is reliable in areas where LTE is still under development. This futureproofs your existing installations and protects your investment. You can upgrade your systems according to your own schedule, as SmartStart™ will continue to connect your legacy devices, even after the cellular providers sunset their 2G and 3G cellular networks.

SmartStart™ is easy to install using SmartWorx HUB™, a full featured configuration and monitoring tool. Our VPN configuration tool, SmartCluster™, makes it easy to configure multiple routers via the same VPN tunnel.

**ORDERING INFORMATION - Antennas & Power Supplies Sold Separately**

| MODEL NO. - ORDER CODES   | NAM*<br>LTE CAT.1 | EMEA &<br>LATAM<br>LTE CAT.4 | 1X<br>ETHERNET | RS232 | I/O | 2X SIM | WI-FI | SMARTWORX<br>HUB |
|---|-------------------|------------------------------|----------------|-------|-----|--------|-------|------------------|
|  SL30200110-X    | ✓                 |                              | ✓              | ✓     | ✓   | ✓      |       |                  |
|  SL30210110-X    | ✓                 |                              | ✓              | ✓     | ✓   | ✓      | ✓     |                  |
|  SL30200110-XSWH | ✓                 |                              | ✓              | ✓     | ✓   | ✓      |       | ✓                |
|  SL30210110-XSWH | ✓                 |                              | ✓              | ✓     | ✓   | ✓      | ✓     | ✓                |
|  SL30400110      |                   | ✓                            | ✓              | ✓     | ✓   | ✓      |       |                  |
|  SL30410110      |                   | ✓                            | ✓              | ✓     | ✓   | ✓      | ✓     |                  |
|  SL30400110-SWH  |                   | ✓                            | ✓              | ✓     | ✓   | ✓      |       | ✓                |
|  SL30410110-SWH  |                   | ✓                            | ✓              | ✓     | ✓   | ✓      | ✓     | ✓                |

\* North America



### ACCESSORIES - INCLUDED

| ORDER CODE    | DESCRIPTION                       |
|---------------|-----------------------------------|
| BB-KN-MO4-1.5 | SmartStart PS cable 4-wire, 1.35m |
| BB-SBD25      | SmartStart DIN Clip               |
|               | Quick Start Guide                 |

### ACCESSORIES - SOLD SEPARATELY

| ORDER CODE         | DESCRIPTION                        |
|--------------------|------------------------------------|
| BB-GA.110.101111   | Antenna LTE, Magnet Mount          |
| BB-TG.30.8113      | Antenna LTE, Terminal              |
| BB-AW-A2458G-FSRPK | Antenna Wi-Fi 2.4 & 5.8 GHz        |
| BB-RPS-MO4-M       | PS, SmartStart, 12V/1A             |
| BB-KD-2            | Data cable RJ45 - DB9 RS232 - 1.5m |

### SPECIFICATIONS

| NETWORKING                 |  |
|----------------------------|--|
| Network and Routing        | DHCP Server, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, DMVPN, NTP Client/ Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup Routers, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging |
| Security                   | HTTPS, SSH, VPN tunnels, SFTP, DMZ, Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)  |
| VPN Tunnelling             | Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, 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 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 60days  |
| Log                        | System Log, Reboot Log, Kernel Log   |
| Controlling and Diagnostic | SMS, SNMP v1/v2c/v3, Statuses  |
| Event Engine               | StartUp script & Up/Down script (Bash, Python), Digital Input, Network Parameters, Data Usage, Timer, Power, Device Temperature. Report Types: SMS, email, SNMP Trap   |
| Other                      | Support of IPv6  |

| PORTS, LED, ANTENNAS     |   |
|--------------------------|---|
| Ethernet                 | RJ45, 10/100 Mbps, 1.5kV RMS  |
| SIM NAM/EMEA             | 1/2 Mini SIMs (2FF)   |
| LED indicators           | PWR, DAT, WAN, ETH  |
| 2x ANT                   | SMA connectors  |
| WiFi antenna - *optional | R-SMA connector   |
| RS232                    | DB9 Female  |
| I/O                      | 1x Digital Input On Voltage: 2.7V to 36VDC (4-Way Molex mini-fit connector) |

| MECHANICAL                       |  |
|----------------------------------|--|
| Plastic case with metal DIN rail | Plastic  |
| Enclosure Dimensions             | 87x30x127mm (150mm including wall month sides) |
| Weight                           | 187 g  |

| SUPPORT AND WARRANTY                                      |
|---|
| Limited lifetime warranty, Free device software upgrades. |

| CELLULAR MODULE PARAMETERS |   |   |
|----------------------------|---|---|
|                            | SL304 Cat. 4 - EMEA & LATAM   | SL302 Cat. 1 - NAM - AT&T, Verizon  |
| LTE parameters             | Bit rate 150 Mbps (DL) / 50 Mbps (UL)<br>LTE FDD Cat.4, 3GPP release 9 compliant<br>Supported frequencies: 800 / 900 / 1800 / 2100 / 2600 MHz | Bit rate 10 Mbps (DL) / 5 Mbps (UL)<br>LTE FDD Cat.1, 3GPP release 9 compliant<br>Supported bandwidths: 5 Mhz, 10 Mhz, 20 Mhz<br>Supported frequencies: Supported frequencies: 700 MHz (Bd12/Bd13), 850 MHz (Bd5), AWS 1700 MHz (Bd4), 1900 MHz (Bd2) |
| WCDMA                      | Bit rate 42.0 Mbps (DL) / 5.76 Mbps (UL)<br>Supported frequencies: 900 / 2100 MHz   | Bit rate 42.0 Mbps (DL) / 5.76 Mbps (UL)<br>Supported frequencies: 850 / 1900 MHz   |
| GPRS/EDGE parameters       | Bit rate 236 kbps (DL) / 236 kbps (UL)<br>Supported frequencies: 900 / 1800 MHz   | -   |

# SmartStart SL30

## INTELLIGENT 4G LTE ROUTER & GATEWAY



### SPECIFICATIONS - CONTINUED

| POWER, CONSUMPTION, ENVIRONMENTAL, IP COVER                   |  |
|---|--|
| Power Supply  | 9–36VDC (4-Way Molex mini-fit connector) |
| Power Consumption with WiFi - Average/Peak/Sleep Mode         | 2,7 / 5,5 W / 40 mW                      |
| Power Consumption without WiFi - Idle/Average/Peak/Sleep Mode | 2,1 / 4,8 W / 40 mW                      |
| Current with WiFi   | 0.65 A Max                               |
| Current without WiFi  | 0.55 A Max                               |
| Temperature Range with WiFi – Operating / Storage             | -25 to +55 °C / -40 to +85 °C            |
| Temperature Range without WiFi – Operating / Storage          | -40 to +75 °C / -40 to +85 °C            |
| Humidity – Operating / Storage (noncondensing)                | 0 to 95 % / 0 to 95 %                    |
| Cold Start  | -40 °C                                   |
| Operating Altitude  | 2000 m / 70 kPa                          |
| Enclosure Rating  | IP30                                     |

| WI-FI                      |  |
|----------------------------|--|
| Antenna Connector          | R-SMA – 50 Ohms  |
| Supported WiFi Band        | 2.4 GHz - Number of clients: 55                                  |
| Standards                  | 802.11b, 802.11g, 802.11n  |
| Encryption                 | None, WEP, TKIP, AES   |
| Authentication             | Open, Shared, WPA–PSK, WPA2–PSK, WPA2-Enterprise, 802.1 - RADIUS |
| 2.4 GHz Supported Channels | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11                                |
| Type of Device             | Access point, Client   |

| WiFi  |                     |                          |
|---|---------------------|--------------------------|
| WiFi 802.11 b/g/n, AP or Client operating, Supported WiFi band - 2.4 GHz, Number of clients: 55 |                     |                          |
| WiFi - Authentication/Cipher  | Channel Width [MHz] | Throughput of TCP [Mbps] |
| WPA2-PSK/AES, WPA-PSK/AES, none/none  | 20                  | 40                       |
|   | 40                  | 60                       |

| INDUSTRY CERTIFICATIONS & APPROVALS |   |
|-------------------------------------|---|
| Emissions/ Immunity                 | EN 55022, EN 61000-6-2, ETSI EN 301 489-1 V1.9.2, FCC part 15 class B (all pending)                             |
| Safety                              | Hazardous Locations: EN 60950<br>Power: EN 61131-2<br>Vehicle Usage: E-Mark<br>Environmental: RoHS, REACH, WEEE |

| STANDARDS AND REGULATIONS FOR EMEA ROUTERS - SL304XXXXX |  |
|---|--|
| EMC   | ETSI EN 301 489-1 V1.9.2, ETSI EN 301 489-1 V2.1.1, 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, United States and Canada, UL File No.: E486108 |
| E-Mark – EMC for devices in transportation              | E-Mark E8 homologation number: 10R – 04 8634   |
| REACH, RoHS and WEEE compliant                          |  |

| STANDARDS AND REGULATIONS FOR NAM ROUTERS - SL302XXXXX |   |
|--|---|
| Industrial   | FCC 15.107 Class B, FCC 15.109 Class B, FCC ID 2A1QR-SL302, Contains: FCC ID R17LE910NAV2. WiFi version contains: FCC ID VRA-SG9011059B. PTCRB IEC 61000-6-2:2005 |
| Safety   | EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013, EN 62311:2008<br>UL 60950-1, United States and Canada, UL File No.: E486108                            |
| Carrier Approvals                                      | AT&T, Verizon   |
| REACH, RoHS and WEEE compliant                         |   |

