

Balance 20X

(with FlexModule Mini LoRaWAN)

- **Connect From Afar**

The Balance 20X (with FlexModule Mini LoRaWAN) can keep your sensor devices connected across long distances up to 10 miles with line of sight whether in remote locations, urban areas, or indoor environments.

Applications

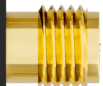
- Agriculture
- Smart Hospitals
- Smart Metering
- Oil & Gas





Pay Less For More

Reduce costs on infrastructure, operations, and battery replacement. Sensor devices can achieve long battery life with the low-power optimized Balance 20X (with FlexModule Mini LoRaWAN). Requiring only minimal energy, its battery life can last up to 10 years.



Secure Your Connections

The Balance 20X (with FlexModule Mini LoRaWAN) utilizes the LoRaWAN network's embedded end-to-end AES encryption. Application data is kept confidential, even to the network, as it transports from end to end.



Deploy the Balance 20X with Flexibility

The Balance 20X (with FlexModule Mini LoRaWAN) has a capacity of up to eight channels and can support hundreds of thousands sensor devices. Maximize the license-free spectrum for IoT applications anywhere.

* Supports most common LoRaWAN gateway packet forwarding protocols such as Semtech UDP Packet Forwarder and Semtech LoRa Basics(tm) Station.



Locate in Real Time

Without the need for GPS, you can enable tracking applications that aren't heavy on battery life and are low in cost.



Specifications

| | | | |
|---|--|------------------------------|--|
| WAN Interface | 1x GE 1x Embedded LTE Modem 1x USB Interface 1x Expansion Module (Optional) | Antenna Connectors | 2x SMA Cellular Connectors 2x RP-SMA Wi-Fi Antenna Connectors 1x SMA GPS Antenna Connector |
| LAN Interface | 4x GE | Power Input | DC Jack: 10V - 30V |
| Wi-Fi Interface | Simultaneous Dual-Band (2.4GHz / 5GHz) Wi-Fi 5 | Power Consumption | 6.83 W (nominal, with FlexModule Mini LTEA) 28 W (max.) |
| SpeedFusion Features | Hot Failover ¹ , WAN Smoothing ¹ , Bandwidth Bonding ¹ | Dimensions | 6.3 x 10.3 x 1.3 inches 160 x 262 x 33 mm |
| Number of SpeedFusion VPN Peers | 2/5 ² | Weight | 1.74 pounds / 0.67 kg |
| Router Throughput | 1Gbps | Operating Temperature | 14° - 113°F / -10° - 45°C |
| SpeedFusion VPN Throughput | | Humidity | 15% - 95% (non-condensing) |
| - No Encryption | 100Mbps | Certifications | FCC, CE, RoHS |
| - 256-bit AES | 60Mbps | Package Content | 1x Balance 20X 2x LTE Antennas (ACW-813 or ACW-234) 2x Wi-Fi Dual Band Antennas (ACW-341) 1x GPS Antenna (ACW-232) 1x 2V 3A Power Supply (ACW-602) |
| Recommended Users | 1-60 | Warranty | 1-Year Limited Warranty |
| Cellular Data Rate³ (Downlink/Uplink) | CAT-7: 300 Mbps / 150 Mbps CAT-6: 300 Mbps / 50 Mbps CAT-4: 150 Mbps / 50 Mbps | | |

¹ Requires PrimeCare Subscription, complimentary for the first year.

² 2 PepVPN Peers are enabled by default. 5 PepVPN Peers are enabled with PrimeCare Subscription, complimentary for the first year.

³ Theoretical maximum data rates.

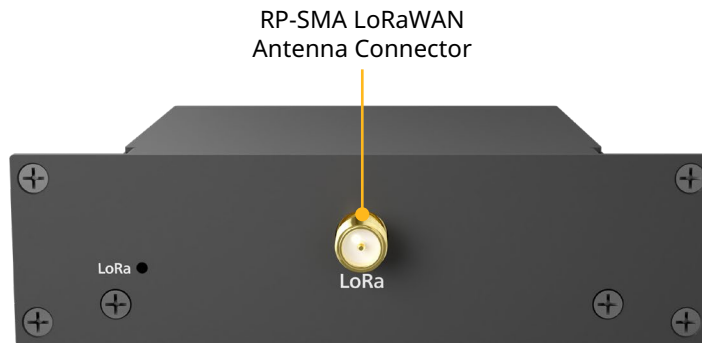
Ordering Information

| Product Code | Regions | LTE Bands | 3G Bands |
|--|--|--|---|
| BPL-021X-LTEA-US-T-PRM Embedded Modem(s): 1x CAT-7 | North America* *US Carrier Certifications: AT&T, T-Mobile, Verizon | B2, B4, B5, B7, B12, B13, B14, B25, B26, B41, B42, B43, B48, B66, B71 | HSPA+: B2, B4, B5 |
| BPL-021X-LTEA-B-T-PRM Embedded Modem(s): 1x CAT-6 | APAC & EMEA | B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B38, B39, B40, B41, B42, B43, B48, B66, B71 | HSPA+/WCDMA: B1, B2, B4, B5, B6, B8, B9, B19 |
| BPL-021X-LTE-E-T-PRM Embedded Modem(s): 1x CAT-4 | Europe/International | B1, B3, B5, B7, B8, B20, B38, B40, B41 | WCDMA/HSPA+/DC-HSPA+: B1, B5, B8 |
| BPL-021X-LTE-US-T-PRM Embedded Modem(s): 1x CAT-4 | North America* *US Carrier Certifications: AT&T, T-Mobile, Verizon, US Cellular, FirstNet | B12, B14, B4, B2, B5, B13, B66, B71 | B2, B4, B5 |
| BPL-021X-LTE-MX-T-PRM Embedded Modem(s): 1x CAT-4 | Latin America/Australia | B1, B2, B3, B4, B5, B7, B8, B28, B40 | WCDMA/HSPA+/DC-HSPA+: B1, B2, B5, B8 |

Featured Add-on

| Product Code | Description |
|--------------|---|
| PRM-A-1Y | 1 Year PrimeCare Subscription for Balance 20X |
| PRM-A-2Y | 2 Year PrimeCare Subscription for Balance 20X |
| PRM-A-4Y | 4 Year PrimeCare Subscription for Balance 20X |
| PCP-A-1Y | 1 Year PrimeCare Subscription for Balance 20X |
| PCP-A-2Y | 2 Year PrimeCare Subscription for Balance 20X |
| PCP-A-4Y | 4-Year PrimeCare Subscription for Balance 20X |
| LIC-VWAN | 1x Virtual WAN Activation License |
| LIC-2VWAN | 2x Virtual WAN Activation License |
| LIC-3VWAN | 3x Virtual WAN Activation License |

FlexModule Mini LoRaWAN



Specifications

| | | | |
|---------------------------|---|------------------------------|--------------------------------------|
| Interface | 1x Embedded LoRa | Operating temperature | 0° – 149°F / 0° – 65°C |
| Antenna connectors | 1x RP-SMA female antenna connector (LoRa) | Humidity | 15% – 95% (non-condensing) |
| Weight | 0.40 pounds / 180 g | Package contents | 1x LoRa Module 1x LoRaWAN Antenna |
| | | Certifications | FCC, CE (in progress) |
| | | Warranty | 1-Year Limited Warranty |

LoRa details

| | | | |
|----------------------------------|--------------------------|----------------------------------|---|
| Channel Capacity | 8-channels (half-duplex) | LoRa demodulator | 125 /250 / 500 kHz |
| LoRa Maximum Output Power | Up to +27 dBm | Typical sensitivity level | 141 dBm at SF12 BW 125 kHz 127 dBm at SF7 BW 125 kHz 111 dBm at FSK 50 kbps |

Ordering Information

| | |
|---------------------|-----------------------------------|
| Product Code | Frequency Bands |
| EXM-MINI-LORA-EU | EU868, IN865, RU864 |
| EXM-MINI-LORA | US915, AU915, AS923, AS925, KR920 |