

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

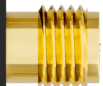
- Agriculture
- Smart Hospitals
- Smart Metering
- Oil & Gas





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.

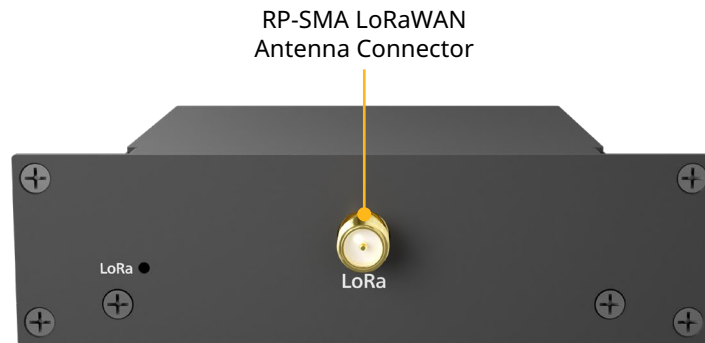
Ordering Information

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