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.
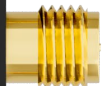
Applications

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

![peplink]

Pay Less For More

10 YEARS

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.

AES

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.

LoRa WAN

Balance 20X

1x FlexModule Mini Slot

1x LTE embedded modem

Wi-Fi Antenna A   10V-30V DC   GPS   LAN 1   2   3   4   WAN   Wi-Fi Antenna B

Cellular Main   Status Wi-Fi Cellular   **peplink**   Cellular Diversity / Aux

USB WAN Port

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		
Cellular Data Rate[3] (Downlink/Uplink)	CAT-7: 300 Mbps / 150 Mbps CAT-6: 300 Mbps / 50 Mbps CAT-4: 150 Mbps / 50 Mbps	**Warranty**	1-Year Limited Warranty

[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.
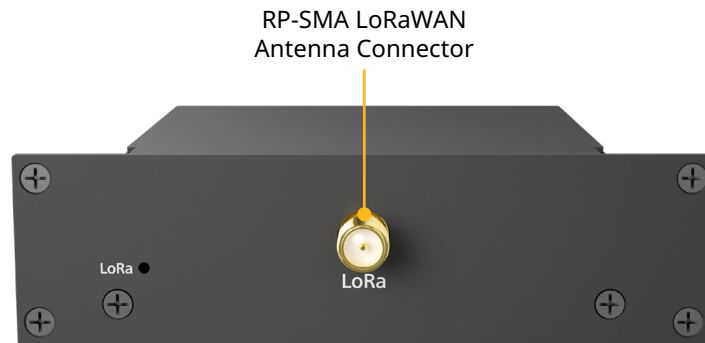[3] Theoretical maximum data rates.

LoRa WAN

Balance 20X

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-BPL-021X-LTE-1Y	1 Year PrimeCare Subscription for Balance 20X LTE
PRM-BPL-021X-LTE-2Y	2 Year PrimeCare Subscription for Balance 20X LTE
PRM-BPL-021X-LTE-4Y	4 Year PrimeCare Subscription for Balance 20X LTE
PRM-BPL-021X-LTEA-1Y	1 Year PrimeCare Subscription for Balance 20X LTEA
PRM-BPL-021X-LTEA-2Y	2 Year PrimeCare Subscription for Balance 20X LTEA
PRM-BPL-021X-LTEA-4Y	4-Year PrimeCare Subscription for Balance 20X LTEA
BPL-021X-LC-VWAN	Balance 20X Virtual WAN Activation License

FlexModule Mini LoRaWAN

RP-SMA LoRaWAN
Antenna Connector

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