

## DATA SHEET

# FortiExtender™

Available in:



Appliance

## Extend Connectivity and Improve Network Availability

FortiExtender offers scalable, cost-effective, and resilient 5G and LTE solutions.

Driven by Fortinet's unique approach of Security-driven networking FortiExtender allows organizations business continuity, improved network availability while securing connectivity with wired broadband and cellular networks.



From secure point of sale (POS) systems to vehicle fleet communication, FortiExtender provides reliable broadband access to the internet and extends the value of the Fortinet Security Fabric to support fluid business operations dependent on remote device connectivity.



### Security Fabric Integration

Integration with FortiGate appliances provides a single pane of glass management of the wired and wireless WAN connections and security which reduces Total Cost of Ownership for your WAN and improves manageability of remote connections in your network.



### Designed for Optimal Signal Strength

Can be located to maximize 3G/4G/LTE/5G signal strength (via Ethernet up to 100m from the FortiGate appliance or network switch) without using lossy antenna cables or limited strength USB modems.



### Simplified Management Options

Manage your FortiExtender from the FortiGate or the cloud. FortiExtender Cloud offers hosted management of an unlimited number of FortiExtenders anywhere in the world.

## Highlights

- Enables placement of 5G and LTE wireless modem close to a window, improving signal strength
- Enables Secure network failover connectivity with SD-WAN ensuring business continuity
- Enables primary wireless WAN connectivity for retail POS, remote ATMs and remote kiosk type systems
- Accelerates cloud connectivity with on-ramp to SaaS/IaaS
- Reduces WAN TCO through a single pane of glass management integration with the FortiGate Network Security Platform
- Cloud-based management available and ideal for large-scale, geographically dispersed locations
- Four LAN ports and basic routing enable remote connectivity and networking for remote locations and PoE powered
- Supports single modem with multiple ISPs

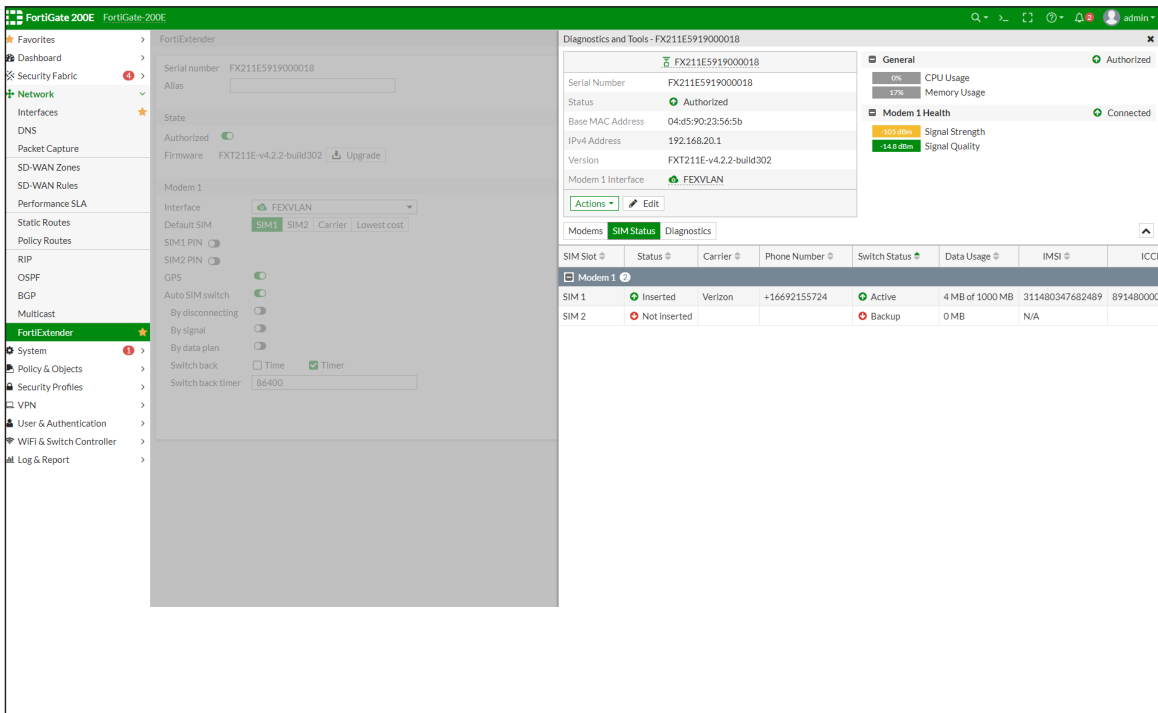
# FEATURES

## Superior Management, Security, and Control

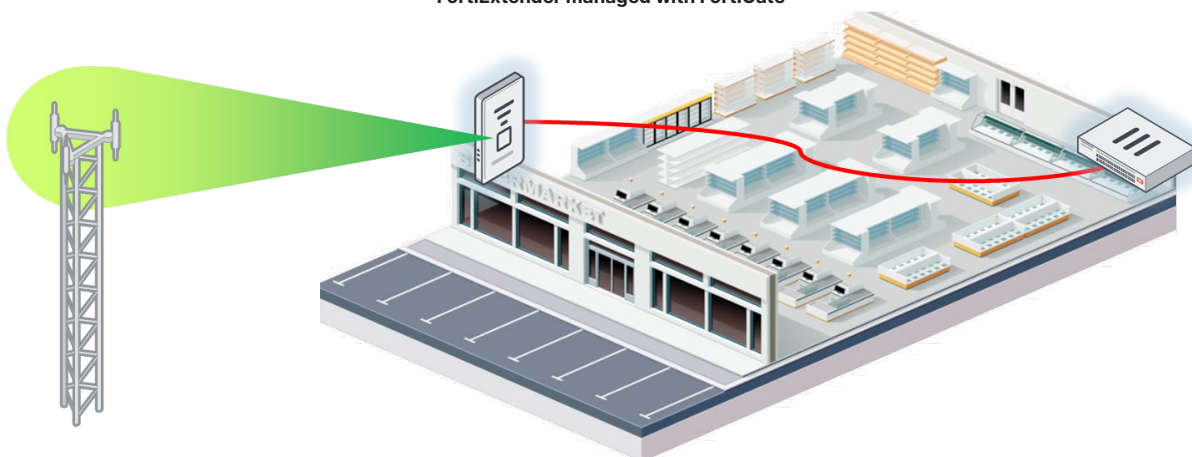
FortiExtenders are a true plug-and-play device. Once connected to the FortiGate, they appear as a regular network interface in FortiOS, providing a single pane of glass management. This enables administrators to manage the connection as well as implement complete UTM security and control, just like any other FortiGate interface. In addition, FortiOS will display data quota usage on the wireless WAN interface, providing complete visibility of the connection to ensure costly carrier data limits are not exceeded. The superior management, security, and control of the FortiExtender ultimately reduces the Total Cost of Ownership for your WAN.

## Flexible Deployment for Optimal Signal Strength

FortiExtender devices have been engineered to be installed in the best possible location to achieve the maximum 3G/4G/LTE/5G wireless signal strength. The unit is powered using Power over Ethernet, enabling the device to be located for optimal signal strength, even up to 100m away from the FortiGate or Network Switch.



FortiExtender managed with FortiGate



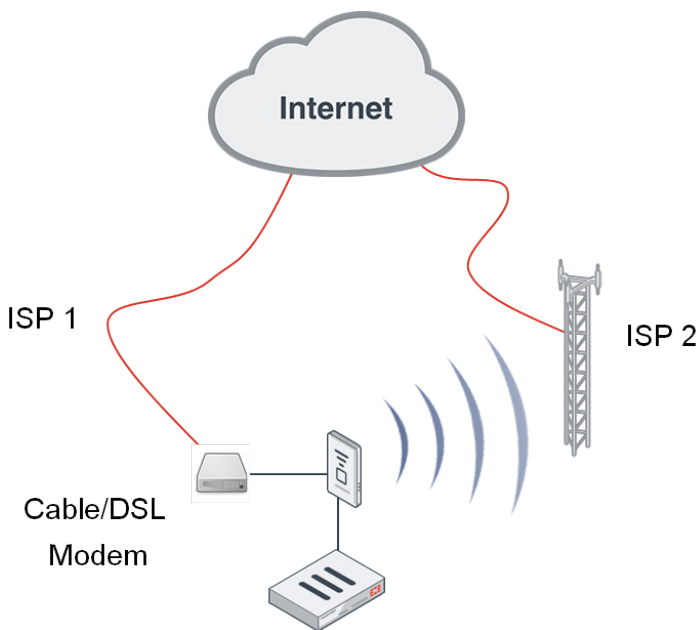
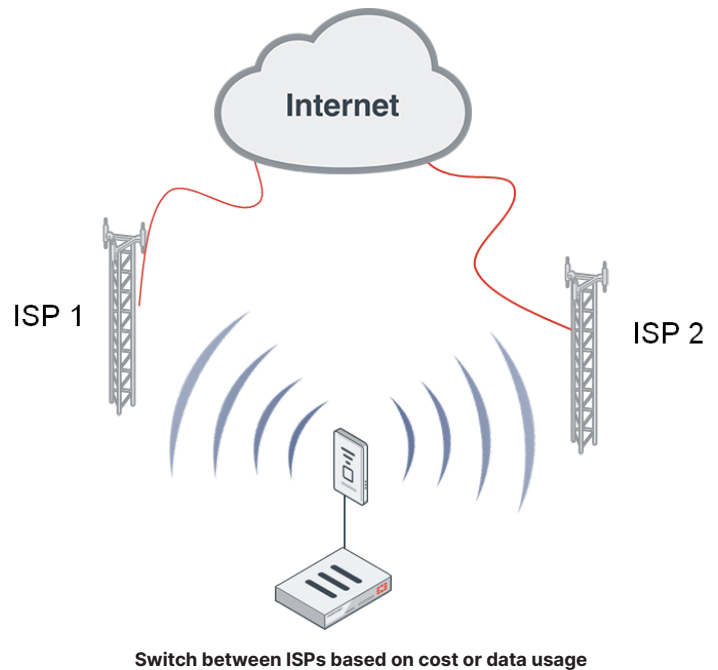
FortiExtender can be placed near a window for optimal signal strength.



## FEATURES

### Flexible LTE Connectivity

The FortiExtender family of LTE appliances all support dual SIM cards per radio enabling the option of using two different ISPs for LTE connectivity. While only one SIM card can be active on any radio, the dual SIM option enables you to switch between ISPs to optimize your connectivity and minimize your costs. For example, you can configure the FortiExtender to utilize the link from ISP A until a certain data usage threshold is reached. At that point, FortiExtender can automatically shift over to ISP B and use that LTE connection. Additional conditions can be set to shift the connection between the two SIM cards, all to enable the optimal balance of connectivity and cost.

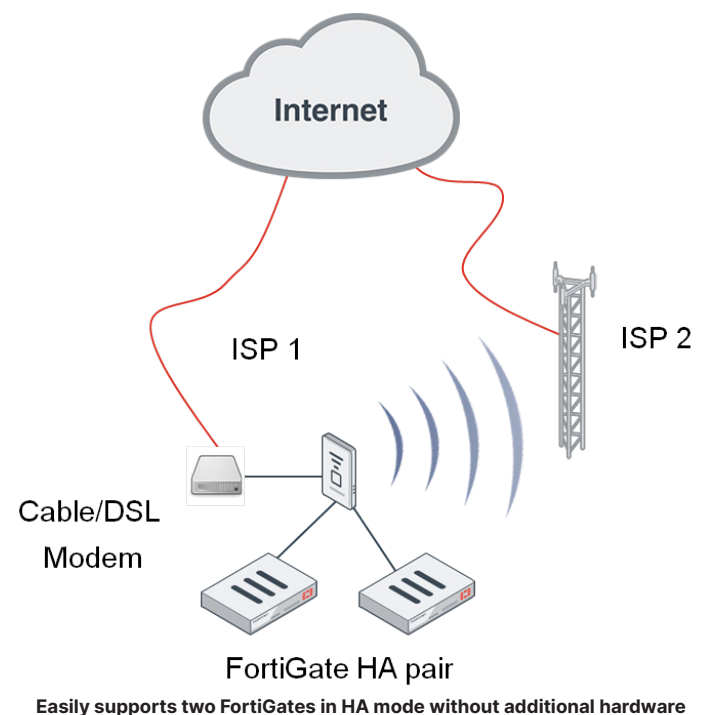


### Flexible WAN Connectivity

FortiExtender offers new WAN connectivity options with an Ethernet WAN port, in addition to the LTE WAN links. With this WAN port, you can connect to a DSL, cable, or another modem for additional WAN connectivity options. Load-balancing and failover options enable your FortiExtender to manage your WAN connections across several options to ensure connectivity at the best cost point.

### Hybrid WAN-LAN Connectivity

FortiExtender offers four LAN Ethernet ports to enable multiple connections to the LTE connection. Ideal for High Availability (HA) pairs of FortiGates, each FortiGate can be directly connected to the FortiExtender. Either FortiGate can run in load-balancing or failover modes and receive WAN connectivity from the FortiExtender.



## HARDWARE SPECIFICATIONS

	FEX-201E	FEX-211E	FEX-511F
<b>Hardware and System</b>			
<b>Modem Support</b>		Internal (1x Modem)	
<b>Number of Antennas</b>	3 SMA External	3 SMA External	4 × 5G/LTE/GNSS All-in-One Antennas
<b>Power over Ethernet (PoE) Powered</b>	IEEE 802.3af (15.4 W)	IEEE 802.3af (15.4 W)	IEEE 802.3at (25.5 W)
<b>Ethernet Ports</b>	5 GE RJ45 Ports (WAN + LAN)	5 GE RJ45 Ports (WAN + LAN)	5 GE RJ45 Ports, 1 GE SFP Port
<b>Bluetooth</b>		Maximum Transmit Power 10 dBm Frequency 2.4 GHz	
<b>GPS Antenna Port</b>		Yes	
<b>Mounting Options</b>		Wall Mount / Desktop	
<b>Type</b>		Indoor	
<b>Dimensions</b>			
<b>Height x Width x Length (inches)</b>	1.57 × 6.3 × 6.3 (not including antenna length)	1.57 × 6.3 × 6.3 (not including antenna length)	1.77 × 7.09 × 7.09 (not including antenna length)
<b>Height x Width x Length (mm)</b>	40 × 160 × 160 (not including antenna length)	40 × 160 × 160 (not including antenna length)	45 × 180 × 180 (not including antenna length)
<b>Weight</b>	1.2 lbs (0.55 kg)	1.2 lbs (0.55 kg)	1.1 lb (0.5 kg)
<b>Environment</b>			
<b>Power Required</b>	12V/2A External Adapter/PoE(af)	12V/2A External Adapter/PoE(af)	12V/2.5A External Adapter/PoE(af/at)
<b>Power Consumption (Average)</b>	9.38 W	9.38 W	8 W
<b>Power Consumption (Maximum)</b>	10.99 W	10.99 W	10 W
<b>Operating Temperature</b>		32–104°F (0–40°C)	
<b>Storage Temperature</b>		-4–158°F (-20–70°C)	
<b>Humidity</b>		5–95%	
<b>Certifications</b>			
<b>FCC</b>	FCC Part 15B, 15C, 2.1091	FCC Part 15B, 15C, 2.1091	FCC Part 15B, 15C, 2.1091
<b>IC</b>	ICES-003, RSS-247, RSS-102	ICES-003, RSS-247, RSS-102	ICES-003, RSS-247, RSS-102
<b>CE</b>	EMC 2014/30/EU (EN 55032, EN 55024, EN 55035, EN 61000-3-2/-3; EN 301 489-1/-17/-19, Draft EN 301 489-52)  RED 2014/53/EU (EN 300 328, EN 303 413, EN 301 908-1/-2/-13, EN 62311, EN 50382, EN 50665, EN 50663, EN 62479)  LVD 2014/35/EU (EN 60950-1, EN 62368-1)	EMC 2014/30/EU (EN 55032, EN 55024, EN 55035, EN 61000-3-2/-3; EN 301 489-1/-17/-19, Draft EN 301 489-52)  RED 2014/53/EU (EN 300 328, EN 303 413, EN 301 908-1/-2/-13, EN 62311, EN 50382, EN 50665, EN 50663, EN 62479)  LVD 2014/35/EU (EN 60950-1, EN 62368-1)	EMC 2014/30/EU (EN 55032, EN 55024, EN 55035, EN 61000-3-2/-3; EN 301 489-1/-17/-19, Draft EN 301 489-52)  RED 2014/53/EU (EN 300 328, EN 303 413, EN 301 908-1/-2/-13, EN 62311, EN 50382, EN 50665, EN 50663, EN 62479)  LVD 2014/35/EU (EN 60950-1, EN 62368-1)
<b>UL</b>	UL/CSA 60950-1, UL/CSA 62368-1	UL/CSA 60950-1, UL/CSA 62368-1	(UL/CSA 60950-1, UL/CSA 62368-1)
<b>CB</b>	IEC/EN 60950-1, IEC/EN 62368-1	IEC/EN 60950-1, IEC/EN 62368-1	(IEC/EN 60950-1, IEC/EN 62368-1)

### Certification notes:

The built-in modem offers quad-band connectivity to HSPA+ networks worldwide and expected to work in 3G mode worldwide, subject to carrier support.

There are exceptions however, as some carriers control the access to their network to specific carrier certified devices. These carriers allow only certified modem IMEI numbers on their network and have the ability to disable the LTE connection after a period of time.

The following carriers are known to require additional testing to obtain certification. Please reach out to the Fortinet sales team and to evaluate your specific regional requirements: Brazil (VIVO), USA (Sprint), New Zealand, Arabian Peninsula (all carriers), UK (All carriers).



## 3G/4G/LTE/5G SPECIFICATIONS

	FEX-201E	FEX-211E	FEX-511F
<b>Regional Compatibility</b>	North and South America and EMEA Carriers, and some APAC Carriers	Global Carriers	Global Carriers
<b>Internal Modem Specifications</b>			
<b>Modem Model</b>	Sierra Wireless EM7455	Sierra Wireless EM7565	Quectel RM-502Q-AE
<b>5G NR SA and NSA</b>	—	—	5G Sub-6 Bands: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/ n41/n48/n66/n71/n77/n78/n79
<b>4G: LTE</b>	CAT-6 Bands: 1, 2, 3, 4, 5, 7, 8, 12, 13, 20, 25, 26, 29, 30, 41	CAT-12 Bands: 1,2,3,4,5,7,8,9,12,13,18,19,20,26,28,29,30,32,41,42, 43,46,48,66 (Bands 42, 43, 46 are supported on Rev: P24254-02 and later)	CAT-20 FDD Bands: B1/B2/B3/B4/B5/B7/B8/B12(B17)/B13/B14/B18/ B19/B20/B25/B26/B28/B29/B30/B32/B66/B71 TDD Bands: B34/B38/B39/B40/B41/B42/B43/B48
<b>3G: UMTS/HSPA+</b>	Bands: 1, 2, 3, 4, 5, 8	Bands:1,2,4,5,6,8,9,19	Bands: B1/B2/B3/B4/B5/B6/B8/B19
<b>3G: WCDMA</b>	Bands: 1, 2, 3, 4, 5, 8	Bands:1,2,4,5,6,8,9,19	Bands: B1/B2/B3/B4/B5/B6/B8/B19
<b>Additional Ports</b>	GPS antenna port	GPS antenna port	MIMO1, MIMO2
<b>Connector Type</b>	SMA (MAIN, AUX, GPS)	SMA (MAIN, AUX, GPS)	4x SMA (MAIN, MIMO1, MIMO2, Diversity/GPS)
<b>Module Certifications</b>	FCC, IC, CE	FCC, IC, CE	GCF (Global), CE (Europe), PTCRB (North America), FCC (America), IC (Canada), JATE/TELEC (Japan), RCM (Australia/New Zealand)
<b>Diversity</b>		Yes	
<b>MIMO</b>		Yes	
<b>GNSS Bias</b>		Yes	
<b>XLTE (band bonding)</b>		Yes	



# FEATURES

	FEX-201E	FEX-211E	FEX-511F
<b>Advanced Radio Technology</b>			
2x2 MIMO — enables industry leading data speeds	✓	✓	✓
4x4 MIMO — enables industry leading data speeds	—	—	✓
5G Downlink 4x4 MIMO bands: n1/n2/n3/n7/n25/n38/n40/n41/n48/n66/n77/n78/n79	—	—	✓
5G Uplink 2 x 2 MIMO Band: 41	—	—	✓
LTE Downlink 4 x 4 MIMO bands: B1/B2/B3/B4/B7/B25/B30/B32/B34/B38/B39/B40/B41/B42/B43/B48/B66	—	—	✓
Receiver Equalization — improves performance in noisy and highly mobile environments	✓	✓	✓
Receiver Diversity — improves performance at cell edges and in buildings	✓	✓	✓
<b>Advanced Software Features</b>			
Connection Status	✓	✓	✓
Auto-connect	✓	✓	✓
Auto-select Network	✓	✓	✓
Data Byte Count	✓	✓	✓
Network Profile	✓	✓	✓
Self-diagnostics	✓	✓	✓
Power Management — standby and hibernate selective suspend	✓	✓	✓
DIAG and AT Commands	✓	✓	✓
Private IP SIM Support	✓	✓	✓
L2 and L3 Tunnel Modes via VLAN, VxLAN, and CAPWAP for fast and flexible deployments	✓	✓	✓
Single Pane of Glass Management via FortiGate and FortiManager	✓	✓	✓
<b>SIM Features</b>			
Dual-SIM Support with intelligent fail-over algorithms	✓	✓	✓
SIM Size: Micro-SIM type 3FF	✓	✓	✓
SIM Security Cover	✓	✓	✓
IMEI printed at bottom of enclosure for ease of activation	✓	✓	✓
<b>Carrier Certifications</b>			
Verizon	✓	✓	!
ATT	✓	✓	!
PTCRB	✓	✓	✓
T-Mobile	—	—	!

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## ORDER INFORMATION

Product	SKU	Description
FortiExtender 201E	FEX-201E	Indoor Broadband Wireless WAN Extender with 1x Dual SIM 3G/4G/LTE/5G CAT6 modem for North/South America and Europe Carriers, and some APAC Carriers. 5x GE WAN/LAN configurable RJ45 ports including 1x 802.3af/at POE PD port and GPS port.
FortiExtender 211E	FEX-211E	Indoor Broadband Wireless WAN Extender with 1 x Dual SIM 3G/4G/LTE/5G CAT12 global modem, 5 x GE WAN/LAN configurable RJ45 ports including 1x 802.3af/at POE PD port and GPS port.
FortiExtender 511F	FEX-511F	Indoor Broadband Wireless WAN Router with 1x "Dual SIM 5G Sub-6GHz" radio for Global Carriers, with Cat20 LTE support. 5x GE WAN/LAN configurable RJ45 ports including 1x 802.3at POE PD port (25.5W) and 1x SFP port.
FortiCare Support	FC-10-F201E-247-02-DD	24x7 FortiCare Contract for FEX-201E.
	FC-10-F211E-247-02-DD	24x7 FortiCare Contract for FEX-211E.
	FC-10-X511F-247-02-DD	24x7 FortiCare Contract for FEX-511F.
Power Adapter	SP-FAP400-PA	AC power adapter for use with FEX-201E, FEX-211E, and FEX-511F models.



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