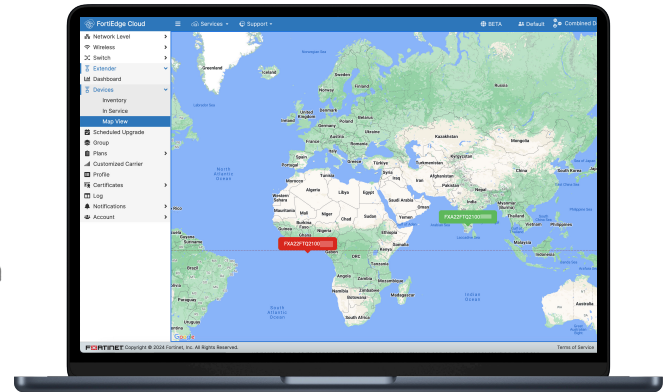


FortiExtender™ Ruggedized 5G/LTE Gateways

Available in



Appliance



Highlights

- Extends network edge into vehicle and harsh site deployments
- Unifies LTE and Wi-Fi in a single device
- Dust and splash tight (IP64)
- Ruggedized against extreme temperatures, shock, vibration, and humidity
- Certified for a variety of deployment scenarios
- Enables secure network fabrics with VxLAN extension
- Cloud management and on-premises management options
- Rich interface for multiple LAN, WAN, OT/IoT, and console connections
- Small form-factor for easy deployment and optimal cellular signal

Industrial strength for secure networks

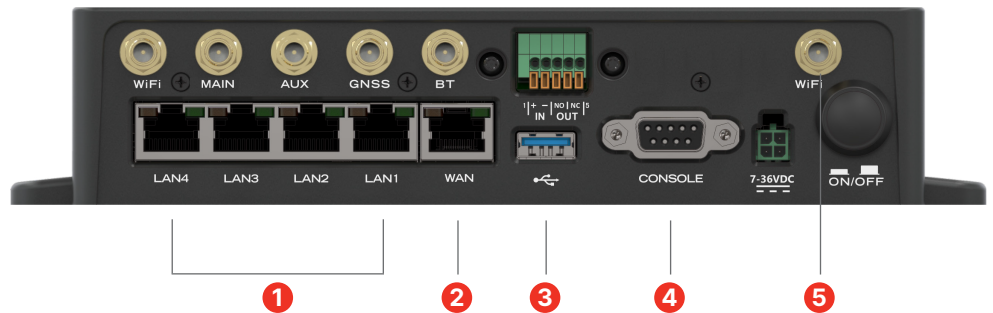
FortiExtender ruggedized 5G/LTE gateways offer scalable, secure, and resilient connectivity for operational technology networks and enterprise networks with harsh deployment environments. Driven by Fortinet's unique approach of Secure Networking, FortiExtender allows organizations business continuity, improved network availability while securing connectivity with wired broadband and cellular networks.

From remote sites in harsh conditions, to factories, healthcare facilities, and fleet vehicles—FortiExtender ruggedized 5G/LTE gateways provide 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.

Hardware

FortiExtender Vehicle 211F

The FortiExtender Vehicle 211F interface includes 4 LAN ports and 1 WAN port, featuring an industrial digital I/O port for external device control, as well as Console and USB 2.0 ports for out of band management (OOB).

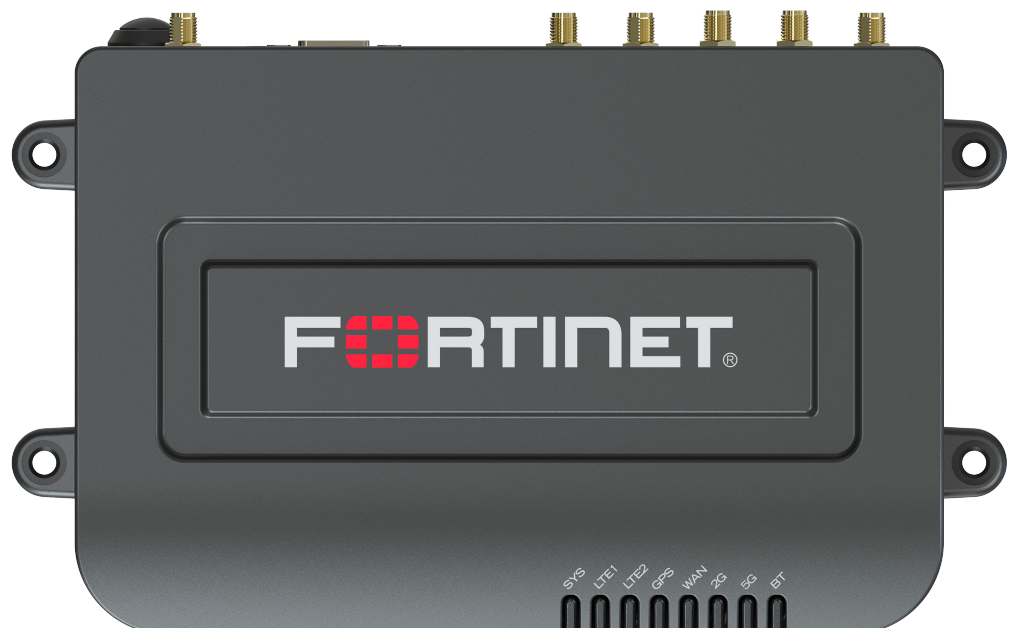


Interfaces

1. 4 x GE RJ45 Ethernet Ports
2. 1 x GE RJ45 WAN Port
3. 1 x Digital I/O Connector
1 x USB 2.0 Port
4. 1 x Console Port
5. 6 x Antenna Ports

For interface details, please see the Quick Start Guide online:

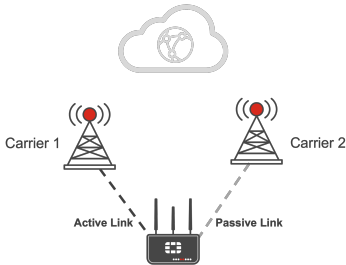
<https://docs.fortinet.com/product/fortiextender/>



Features

Superior Management, Security, and Control

FortiExtender Rugged is a plug-and-play device. Once deployed in a vehicle or at a harsh site remotely over VxLAN, FortiExtender appears as a regular network interface in FortiOS management. IT administrators can manage the connection and implement advanced protection from FortiGuard, just like any other FortiGate interface.



Ruggedized for Any Deployment Scenario

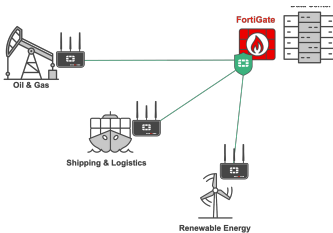
FortiExtender rugged devices allow you to deploy the device in a vehicle or at a harsh site. The devices are protected against temperature extremes, shock, vibration, humidity, and provide ingress protection against dust and splash. In addition, FortiExtender ruggedized devices are certified for deployment in unique scenarios, such as rail deployments.

5G/LTE Wireless WAN

FortiExtender ruggedized devices support dual-SIM and dual-modem options, enabling up to four different ISPs for ultra-reliable connectivity. Dual-SIM models enable active/passive cellular for failover based on data plan, disconnects, signal strength, and link health, allowing you to balance connectivity quality and cost. Dual-Modem provides active/active cellular links for high-availability, traffic isolation, and load-balancing use cases.

LAN Connectivity

FortiExtender offers multiple LAN Ethernet ports to enable multiple connections at the Wireless WAN site. 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.



VxLAN Extension

You don't need a FortiGate on site to deploy AI-powered security with your FortiExtender. Enhanced LAN Extension in FortiExtender creates a network fabric using VxLAN technology where you can extend the Layer 2 broadcast domain of a remote FortiGate to the standalone FortiExtender with no extra license needed. Depending on the FortiGate model*, Enhanced LAN Extension supports over 1000 FortiExtenders per firewall.

*Contact your Sales Engineer for specific details.

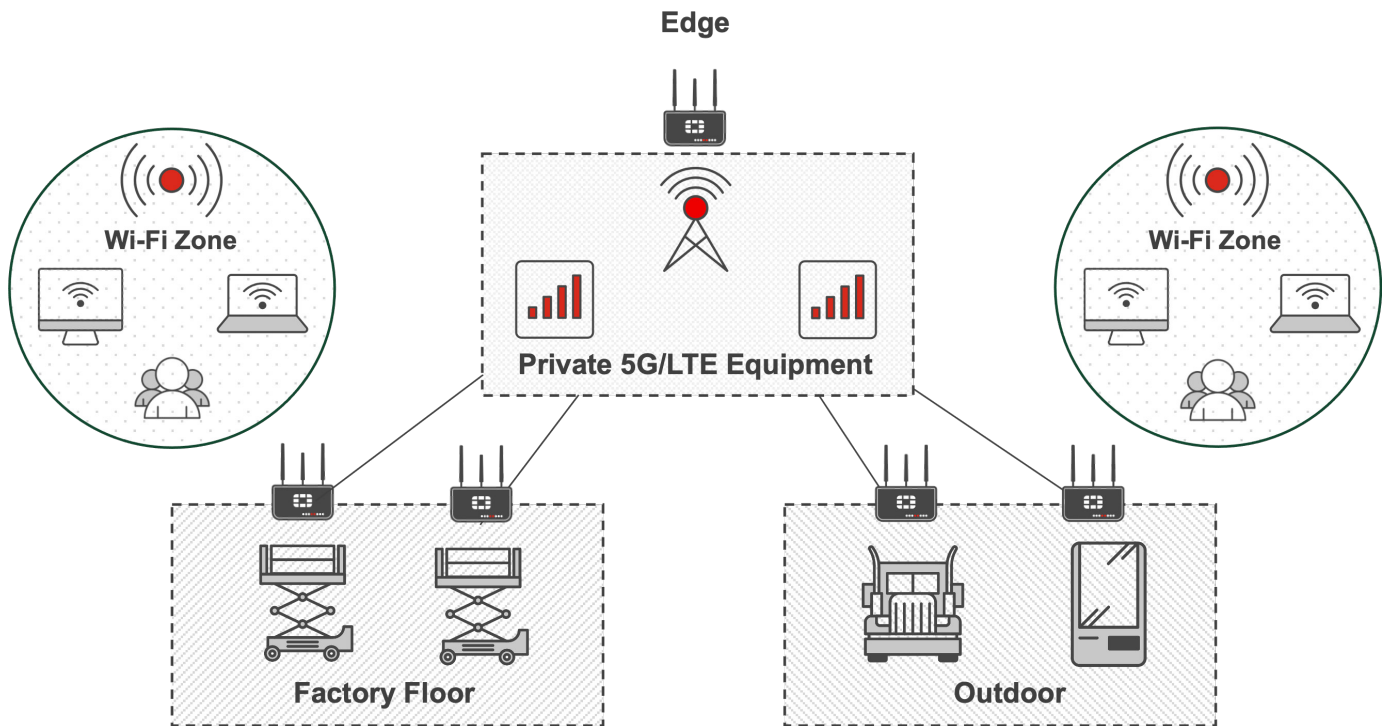
Private 5G/LTE (CBRS)

All FortiExtender 5G/LTE models support CBRS in either the form of LTE Band 48 or 5G N48. This allows FortiExtender to play a critical role in Private 5G/LTE deployments as a rapid secure uplink at the edge. When equipped with a Private 5G/LTE SIM card, FortiExtenders can also receive CBRS signal from Private 5G/LTE Access Points to deployed on Automated Guided Vehicles (AGVs), Autonomous Mobile Robots (AMRs), or as virtual LAN mobile zones in parking lots, pop-up tents, and more.



Deployment

Industrial Site



Hardware Specifications

	FEV-211F-AM / FEV-211F	FEV-212F/FEV-212F-AM
Hardware and System		
Modem Support	Internal (1x Modem)	Internal (2x Modems)
Number of Antennas	Vehicle LTE Antenna sold separately. 2x Wi-Fi/1x BT antenna included.	Vehicle LTE Antenna sold separately. 2x Wi-Fi/1x BT antenna included.
Power over Ethernet (PoE) Powered	No	No
Ethernet Ports	5 GE RJ45 Ports (WAN + LAN)	5 GE RJ45 Ports (WAN + LAN)
USB Ports	1 x USB 2.0 Type A	1 x USB 2.0 Type A
Bluetooth	Maximum Transmit Power 10 dBm Frequency 2.4 GHz	Maximum Transmit Power 10 dBm Frequency 2.4 GHz
GPS Antenna Port	Yes	Yes
WiFi	2x2 2.4/5GHz 802.11 a/b/g/n/ac wave2 WiFi	2x2 2.4/5GHz 802.11 a/b/g/n/ac wave2 WiFi
Mounting Options	Wall mount for Vehicle/Desktop	Wall mount for Vehicle/Desktop
Type	Indoor/In-Vehicle	Indoor/In-Vehicle
Dimensions		
Height x Width x Length (inches)	1.77 x 5.11 x 7.16 (not including antenna length)	1.77 x 5.11 x 7.16 (not including antenna length)
Height x Width x Length (mm)	45 x 130 x 182 (not including antenna length)	45 x 130 x 182 (not including antenna length)
Weight	2.1 lbs (0.97kg)	2.1 lbs (0.97kg)
Environment		
Power Required	7-36V DC for 12V/24V vehicle battery system	7-36V DC for 12V/24V vehicle battery system
Power Consumption (Average)	17.88W	17.88W
Power Consumption (Maximum)	22.74W	22.74W
Operating Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95%	5% to 95%
Certifications		
FCC	FCC Part 15B, 15C, 2.1091	FCC Part 15B, 15C, 2.1091
IC	ICES-003, RSS-247, RSS-102	ICES-003, RSS-247, RSS-102
CE	CE (4.1) RR&TTE Directive 1999 / 5 / EC (4.2) EN 300 328 / EN 301 489 / EN 301 893 / EN 50385 (4.3) EU Directive 2004 / 108 / EC EMC (4.4) EU Directive 2006 /95 / EC LVD (4.5) EN 55022 / EN 55024 / EN 61000	CE (4.1) RR&TTE Directive 1999 / 5 / EC (4.2) EN 300 328 / EN 301 489 / EN 301 893 / EN 50385 (4.3) EU Directive 2004 / 108 / EC EMC (4.4) EU Directive 2006 /95 / EC LVD (4.5) EN 55022 / EN 55024 / EN 61000
UL	Pending	Pending
CB	IEC/EN 62368-1	IEC/EN 62368-1
Ingress Protection	IP64 (dust tight and splashing water)	IP64 (dust tight and splashing water)
Rail	EN 50155 Class S1	EN 50155 Class S1
Shock/Vibration/Humidity	MIL STD 810H, SAE J1455	MIL STD 810H, SAE J1455

* Applies to AM model only.

** Applies to EA model only.

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

FEV-211F-AM FEV-212F-AM		FEV-211F FEV-212F
Regional Compatibility		
	North America Carriers	Global Carriers
Internal Modem Specifications		
Modem Model	Sierra Wireless EM7511 (1x Modem)	Sierra Wireless EM7511 (2x Modem)
5G NR SA and NSA	—	—
4G: LTE	CAT-12 Bands: 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 18, 19, 20, 26, 29, 30, 32, 41, 42, 43, 46, 48, 66	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
3G: UMTS/HSPA+	Bands: 1, 2, 4, 5, 6, 8, 9, 19	Bands: 1, 2, 4, 5, 6, 8, 9, 19
3G: WCDMA	Bands: 1, 2, 4, 5, 6, 8, 9, 19	Bands: 1, 2, 4, 5, 6, 8, 9, 19
Additional Ports	GPS antenna port	GPS antenna port
Connector Type	SMA LTE (MAIN, AUX, GPS)	SMA LTE (MAIN, AUX, GPS)
Module Certifications	FCC, IC, GCF, PTCRB	(1) CB IEC 60950-1:2005 (2) UL UL 60950-1, CSA C22.2 No. 60950-1-07 (3) FCC FCC Part 15, Class B and Subpart C and EICES-003 (4) CE (4.1) RR&TTE Directive 1999 / 5 / EC (4.2) EN 300 328 / EN 301 489 / EN 301 893 / EN 50385 (4.3) EU Directive 2004 / 108 / EC EMC (4.4) EU Directive 2006 /95 / EC LVD (4.5) EN 55022 / EN 55024 / EN 61000 (5) IC (5.1) Canada RSS-210 Issue 7 / Canada RSS-Gen Issue 2 (5.2) RSS102, Issue 4 (6) Directives Low Voltage Directive RoHS
Diversity	✓	✓
MIMO	✓	✓
GNSS Bias	✓	✓



Features

	FEV-211F-AM FEV-211F	FEV-212F-AM FEV-212F
Advanced Radio Technology		
2×2 MIMO — enables industry leading data speeds	✓	✓
4×4 MIMO — enables industry leading data speeds	—	—
5G Downlink 4×4 MIMO bands: 1, 2, 3, 7, 25, 38, 40, 41, 48, 66, 77, 78, 79	—	—
5G Uplink 2 × 2 MIMO Band: 41	—	—
LTE Downlink 4 × 4 MIMO bands: 1, 2, 3, 4, 7, 25, 30, 32, 34, 38, 39, 40, 41, 42, 43, 48, 66	—	—
LTE Downlink 4 × 4 MIMO bands: 1, 2, 3, 4, 7, 25, 30, 32, 38, 39, 40, 41, 66	—	—
Receiver Equalization — improves performance in noisy and highly mobile environments	✓	✓
Receiver Diversity — improves performance at cell edges and in buildings	✓	✓
Dual Modem	—	✓
2×2 2.4/5GHz 802.11 a/b/g/n/ac Wave2 WiFi Support	✓	✓
2×2 2.4G/5GHz concurrent WiFi6 (802.11ax)	—	—
Advanced Software Features		
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 Tunnel Mode via VLAN or CAPWAP for fast and flexible deployments	✓	✓
Single Pane of Glass Management via FortiGate and FortiManager	✓	✓
SIM Features		
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	✓	✓
Carrier Certifications		
Verizon	!	!
ATT	✓	✓
PTCRB	✓	✓
T-Mobile	—	—
Public Safety Network	FirstNet Capable (LTE Only)	FirstNet Capable (LTE Only)

* Applies to AM model only.

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! Certifications are in progress. 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), and UK (all carriers).



Ordering Information

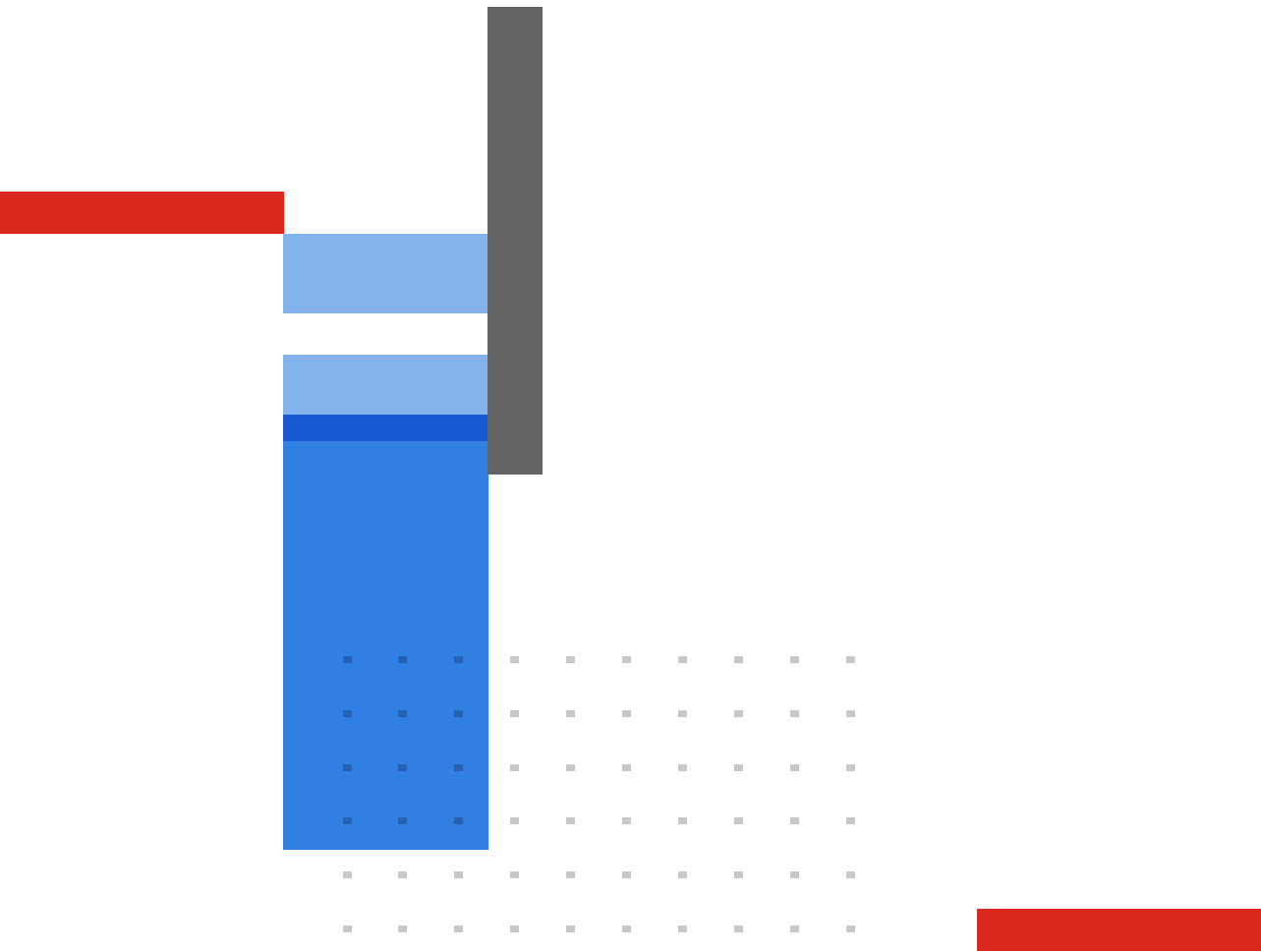
PRODUCT	SKU	DESCRIPTION
3G/4G-LTE/5G Models		
FortiExtenderVehicle 211F-AM	FEV-211F-AM	Rugged Broadband Wireless WAN Router for Vehicle and OT applications with 1x Dual SIM 3G/4G LTE CAT-12 M.2 Module (DL/UL=600M/150Mbps) for North America Carriers. 1x GE WAN + 4x GE LAN RJ45 ports including 802.11ac Wi-Fi and GPS/GNSS Service. External LTE antenna required. Wi-Fi Region A.
FortiExtenderVehicle 211F	FEV-211F	Rugged Broadband Wireless WAN Router for Vehicle and OT applications with 1x Dual SIM 3G/4G LTE CAT-12 M.2 Module (DL/UL=600M/150Mbps) for EU/APEC/LATAM Carriers. 1x GE WAN + 4x GE LAN RJ45 ports including 2x2 2.4/5GHz 802.11ac Wi-Fi and GPS/GNSS systems. External LTE antenna required (not included). Band28 Supported, but not Band14.
FortiExtenderVehicle 212F-AM	FEV-212F-AM	Rugged Broadband Wireless WAN Router for Vehicle and OT applications with 2x Dual SIM 3G/4G LTE CAT-12 M.2 Module (DL/UL=600M/150Mbps) for North America Carriers. 1x GE WAN + 4x GE LAN RJ45 ports including 802.11ac Wi-Fi and GPS/GNSS Service. External LTE antenna required. Wi-Fi Region A.
FortiExtenderVehicle 212F	FEV-212F	Rugged Broadband Wireless WAN Router for Vehicle and OT applications with 2x Dual SIM 3G/4G LTE CAT-12 M.2 Module (DL/UL=600M/150Mbps) for EU/APEC/LATAM Carriers. 1x GE WAN + 4x GE LAN RJ45 ports including 2x2 2.4/5GHz 802.11ac Wi-Fi and GPS/GNSS systems. External LTE antenna required (not included). Band28 Supported, but not Band14.
FortiCare		
FortiCare Support	FC-10-FV21F-247-02-DD	24x7 FortiCare for FEV-211F and FEV-211F-AM.
	FC-10-FG21F-247-02-DD	FortiCare Premium Support.
	FC-10-FG21F-210-02-DD	Next Calendar Day Delivery Priority RMA Service (Requires FortiCare Premium or FortiCare Elite).
Accessories		
Vehicle Mount LTE Antenna	FANT-3IN1-TG-5M-FEV	Three-in-one permanent vehicle roof mount antenna for FEV-211F and FEV-211F-AM. Outdoor waterproof antenna with 2x 5G/LTE + 1x active GNSS and 5 meter antenna cable with SMA male connectors.
PoE Injector	GPI-115	IEEE 802.3af-compliant single-port, mid-span, with 15.4 Watt Gigabit Ethernet (GE) PoE.
PoE Injector	GPI-130	IEEE 802.3af-compliant single-port, mid-span, with 30 Watt Gigabit Ethernet (GE) PoE.

Visit <https://www.fortinet.com/resources/ordering-guides> for related ordering guides.



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