ESN Series
ESN Certified Routers for Emergency Services

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Approved for UK Public Safety

ESN
Emergency Services Network

Peplink has three routers certified for use in UK's Emergency Services Network (ESN): the HD2 MBX, the HD4 MBX and the BR1 ESN. These routers have been approved for use in the country's fleet of first responder and emergency service vehicles.
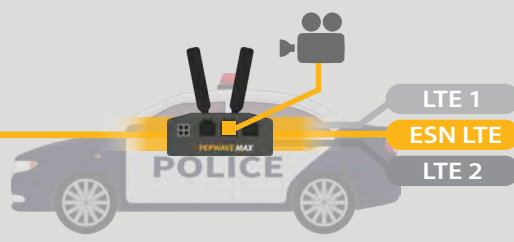
Achieve Unbreakable Connectivity

Use our patented SpeedFusion technology to combine ESN and commercial links into an unbreakable VPN connection that stays up even if a link goes down. As traffic goes from one WAN to the next, your session will continue streaming without any interruption. SpeedFusion also has greater coverage and bandwidth than that of a single cellular link.

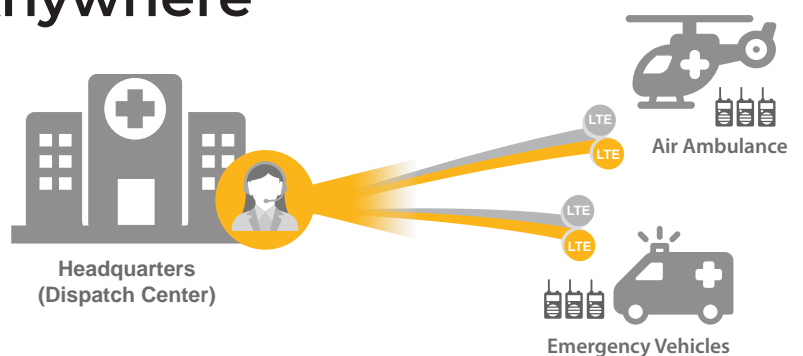## Videos/DVRs

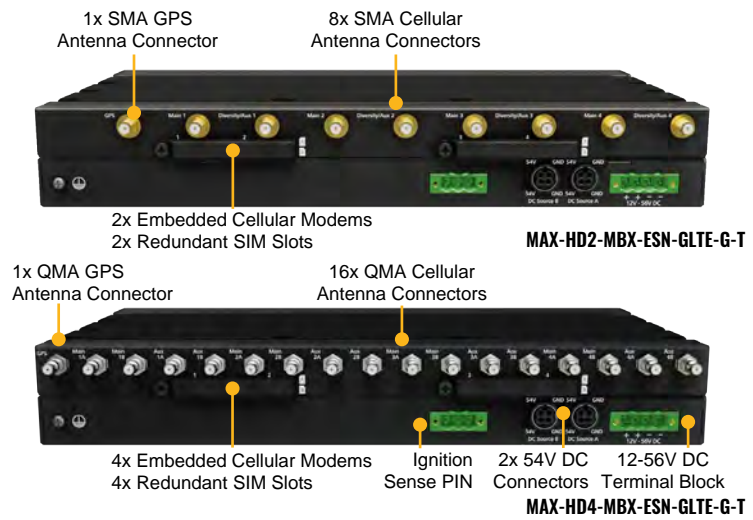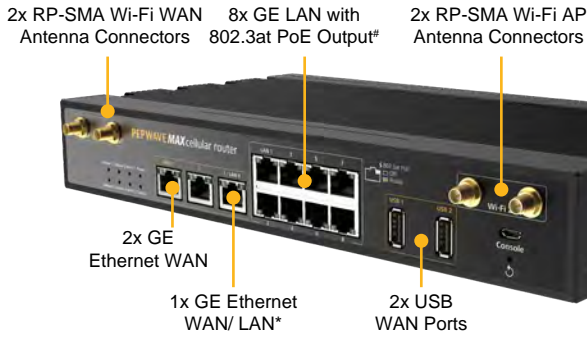Datacenter FusionHub　　　Police Car / ESN Devices

LTE 1
ESN LTE
LTE 2

Currently, first responders can only record video on site; live streaming remains a challenge. Use Speed-Fusion to bond multiple cellular links into a powerful VPN connection that can stream HD video back to headquarters. WAN Smoothing technology ensures that your video stream remains consistent and uninterrupted even as traffic moves between different WAN links.

Extend 2-Way Radios Anywhere

Previously, 2-way radios such as LMR, P.25, TETRA, NXDN, and DMR only worked with other radios connected to the same repeater. With SpeedFusion, they become a single unbreakable network. This extends the reach of existing 2-way radio networks to anywhere an LTE or other IP network is available.

Headquarters
(Dispatch Center)

Air Ambulance

Emergency Vehicles

HD2/HD4 MBX

2x RP-SMA Wi-Fi WAN Antenna Connectors
8x GE LAN with 802.3at PoE Output#
2x RP-SMA Wi-Fi AP Antenna Connectors

1x SMA GPS Antenna Connector
8x SMA Cellular Antenna Connectors

2x Embedded Cellular Modems
2x Redundant SIM Slots

MAX-HD2-MBX-ESN-GLTE-G-T

2x GE Ethernet WAN
1x GE Ethernet WAN/ LAN*
2x USB WAN Ports

1x QMA GPS Antenna Connector
16x QMA Cellular Antenna Connectors

4x Embedded Cellular Modems
4x Redundant SIM Slots
Ignition Sense PIN
2x 54V DC Connectors
12-56V DC Terminal Block

MAX-HD4-MBX-ESN-GLTE-G-T

Specifications

WAN Interface	2x USB Interface 3x GE* HD2 MBX: 2x Embedded LTE-A Pro Modems with Redundant SIM Slots HD4 MBX: 4x Embedded LTE-A Pro Modems with Redundant SIM Slots	**Dimensions**	2.0 x 11.5 x 7.0 inches / 50 x 292 x 177 mm
		Weight	3.3 kg / 7.28 pounds
		Operating Temperature	-40°– 149 °F / -40°– 65°C
LAN Interface	9x GE*	**Humidity**	15%–95% (non-condensing)
Wi-Fi Interface	802.11ac/a/b/g/n, 1166 Mbps 2x2 MIMO Wi-Fi WAN and/or AP Simultaneous Dual-Band	**Certifications**	FCC, CE, RoHS, E-Mark, PTCRB, Shock and Vibration Resistance: EN 61373:1999 IEC 61373:1999 Railway Applications: EN 50155 Electromagnetic Compatibility: EN 61000 ESN (Emergency Services Network)
Router Throughput	2.5 Gbps		
PepVPN Throughput (No Encryption)	600 Mbps	**Warranty**	1-Year Limited Warranty
PepVPN Throughput (256-bit AES)	500 Mbps	**Package Content MAX HD2 MBX (CAT-18)**	MAX HD2 MBX 1x PSU 180W (ACW-630) 4x Wi-Fi Dual Band Antenna (ACW-341) 1x GPS Antenna (ACW-232) 8x LTE/5G Antennas (ACW-234) 1 Pair of Mounting Brackets (ACW-513) 3pin Terminal Block Connector (Ignition sense) 4pin Terminal Block Connector (Power supply) Grounding cable Rubber Foot Pad set
LTE Cellular Data Rate (Downlink / Uplink)	1.2 Gbps / 150 Mbps		
Recommended Users	50-500		
Antenna Connectors	HD2 MBX: 8x SMA Antenna Connectors + 1x SMA GPS Antenna Connector HD4 MBX: 16x QMA Antenna Connectors + 1x QMA GPS Antenna Connector 4x RP-SMA Wi-Fi Antenna Connectors	**Package Content MAX HD4 MBX (CAT-18)**	MAX HD4 MBX 1x PSU 180W (ACW-630) 1x QMA to SMA Adaptor (for GPS) 1x GPS Antenna (ACW-232) 1 Pair of Mounting Brackets (ACW-513) 4x Wi-Fi Dual Band Antenna (ACW-341) 3pin Terminal Block Connector (Ignition sense) 4pin Terminal Block Connector (Power supply) Grounding cable Rubber Foot Pad set
Power Input	DC Jack / Terminal Block: 12-56 V#		
Power Output	Up to Eight 802.3at PoE Outputs#		
Power Consumption	HD2 MBX: Max.: 45W(w/o PoE), Nominal: 17W HD4 MBX: Max.: 55W(w/o PoE), Nominal: 19W		

* WAN 3 is configured as a LAN port by default, configuration is changeable on the Web Admin.
# 2x 54V DC input is needed for all 8x LAN ports to have 802.3at PoE. Plugging in 1x 54V DC input will result in 4x LAN ports having 802.3at PoE

Ordering information

Product Code	Carrier/ Categories	Embedded Modems	LTE Bands	3G Bands
MAX-HD2-MBX-ESN-GLTE-G-T	Global / ESN / CAT-18	2	B1, B3, B25(B2), B66(B4), B26(B5/B18/B19), B7, B8, B12(17), B13, B14 , B20, B28, B29, B30, B32, B71, B38, B39, B40, B41, B42, B43, B46, B48	B1, B2, B4, B5(B19), B8
MAX-HD4-MBX-ESN-GLTE-G-T		4		

Accessories / Feature Add-on

Product Code	Description
ACW-630	Includes 1x 54V, 3.34A Power Supply Enable 4x LAN with 802.3at PoE output (PoE License automatically applied after kit purchase)
ACW-633	Includes 2x 54V, 3.34A Power Supply Enables 8x LAN with 802.3at PoE output (PoE License automatically applied after kit purchase)
MAX-HD-020-SPF	Supports up to 20 PepVPN / SpeedFusion Peers
SIM-BK8-4E-56V	SIM Injector, 8x SIM cards capacity, 4x 10/100/1000 LAN ports, 56V DC

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MAX BR1 ESN

2x SMA Cellular
Antenna Connectors

10/100M Ethernet LAN/ WAN   10/100M Ethernet LAN

Power Port
with Ignition Sensing

10/100M Ethernet LAN/ Serial Port

1x SMA GPS
Antenna Connector

Redundant
SIM Slots

1x RP-SMA Wi-Fi
Antenna Connector

Specifications

Cellular WAN Interfaces	Single LTE Modem	Power Input	Passive PoE Input (WAN Port, 12V – 28V DC) / Power + GPIO
Redundant SIM Slot	Yes	Power Consumption	12W (max.)
SpeedFusion Hot Failover	Yes ^	Dimensions	4.1 x 4.3 x 1.2 inches / 105 x 110 x 30 mm
WAN Interface	1x 10/100M Ethernet Port #	Weight	0.54 pound / 244 grams
LAN Interface	3x 10/100M Ethernet Port # (1x WAN Port shared with LAN Interface) (1x Serial Port shared with LAN Interface)	Operating Temperature	-40° – 149°F / -40° – 65°C
Load Balancing/Failover	Yes	Humidity	15% – 95% (non-condensing)
Stateful Firewall Throughput	100 Mbps	Warranty	1-Year Limited Warranty
Wi-Fi Interface	802.11b/g/n Wi-Fi WAN or AP Simultaneous Dual-Band	Certifications	CE, ROHS, ESN
LTE Cellular Data Rate (Downlink / Uplink)	600 Mbps / 150 Mbps	Package Content	MAX BR1 ESN 12V2A Power Supply (ACW-632) 1x Wi-Fi 2.4G Antenna (ACW-304) 1x GPS Antenna (ACW-232) 2x LTE/5G Antennas (ACW-234)
Recommended Users	60		
Antenna Connectors	2x SMA Antenna Connectors 1x SMA GPS Antenna Connector 1x RP-SMA Wi-Fi Antenna Connector		

^ Failover software license is required to activate SpeedFusion Failover feature and enable Ethernet and Wi-Fi WAN.
# 2 PepVPN Peers are enabled by default. Can be increased to 5 Peers using license PVN-LC-05.
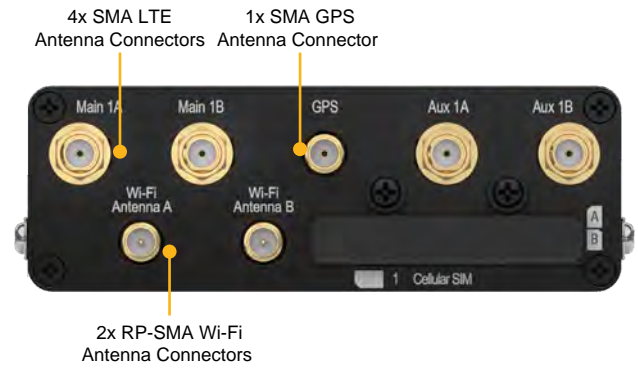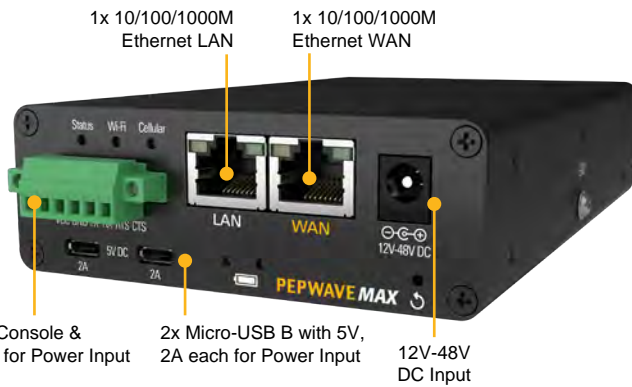
Ordering information

Product Code	Carrier/ Categories	Embedded Modems	LTE Bands	3G Bands
MAX-BR1-ESN-LTEA-K-T	Global* / ESN / CAT-12	1	B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B18, B19, B20, B26, B28, B29, B30, B32, B41, B42, B43, B46, B48, B66	HSPA+: B1, B2, B4, B5, B6, B8, B9, B19

* China & HK TD LTE are excluded.

Accessories / Feature Add-on

Product Code	Description
MAX-BR1-ADV	Advanced Feature Package includes a software license key for X.509 Certificate Support (SpeedFusion and IPsec)
PVN-LC-05	PepVPN License Key, enables up to 5 PepVPN peers
MAX-LC-DIM	Activate the Drop-in Mode for the MAX BR1 Series
MAX-BR1-MINI-LC-FS	Failover software license and related feature set for BR1MINI and BR1 ESN, enables Ethernet and Wi-Fi WAN

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Transit

1x 10/100/1000M Ethernet LAN

1x 10/100/1000M Ethernet WAN

4x SMA LTE Antenna Connectors

1x SMA GPS Antenna Connector

Serial Console & 12V-48V DC for Power Input

2x Micro-USB B with 5V, 2A each for Power Input

12V-48V DC Input

2x RP-SMA Wi-Fi Antenna Connectors

Specifications

Cellular WAN Interface	Single LTE-A Pro Modem	Transmit Power (2.4GHz / 5GHz)	19 dBm / 21 dBm
SpeedFusion Hot Failover	Yes ^	Antenna Connectors	4x SMA Cellular Connectors 1x SMA GPS Antenna Connector 2x RP-SMA Wi-Fi Antenna Connectors
SpeedFusion WAN Smoothing	Yes ^		
SpeedFusion Bandwidth Bonding	Yes ^	Power Input	Device: 12V – 48V DC AC Adapter: AC Input 100V–240V / DC Output 12V Terminal Block: 12V – 48V DC
Number of PepVPN SpeedFusion Peers	2 / 5 #		
WAN Interface	1x 10/100/1000M Ethernet +	Power Output	Power over Ethernet 802.3at
LAN Interface	1x 10/100/1000M Ethernet	Power Consumption	Max.: 18W, Nominal: 6.5W
USB LAN Port	Micro-USB B	Dimensions	6.3 x 3.8 x 1.3 inches / 160 x 97 x 33.5 mm
Load Balancing/Failover	Yes	Weight	1.3 pounds / 590 grams
Router Throughput	400 Mbps	Operating Temperature	-40° – 149°F / -40° – 65°C
SpeedFusion Throughput (No Encryption)	100 Mbps	Humidity	15% – 95% (non-condensing)
SpeedFusion Throughput (256-bit AES)	60 Mbps	Warranty	1-Year Limited Warranty
Recommended Users	150	Package Content	MAX Transit 12V2A Power Supply (ACW-601) 2x Dual Band Wi-Fi Antennas (ACW-341) 1x GPS Active Antenna (ACW-232) 4x LTE Antennas (ACW-813 or ACW-234) 1 Pair of Mounting Brackets (ACW-724) 6pin Terminal Block Connector
LTE Cellular Data Rate (Downlink / Uplink)	1.2 Gbps / 150 Mbps		
Wi-Fi Interface	AP Simultaneous Dual-Band (2.4GHz / 5GHz) Wi-Fi 5, 2X2 MIMO		

^ Requires PrimeCare Subscription, complementary for the first year.
# 2 PepVPN Peers are enabled by default. 5 PepVPN Peers are enabled for PrimeCare models which requires PrimeCare Subscription, complementary for the first year.
+ The WAN port can act as a LAN port if needed.

Ordering information

Product Code	Embedded Modems	Carrier/ Categories	LTE Bands	3G Bands
MAX-TST-ESN-GLTE-G-T-PRM	1	Global / ESN / CAT-18	B1, B3, B25(B2), B66(B4), B26(B5/B18/B19), B7, B8, B12(17), B13, B14 , B20, B28, B29, B30, B32, B71, B38, B39, B40, B41, B42, B43, B46, B48	B1, B2, B4, B5(B19), B8

Accessories / Feature Add-on

Product Code	Description
ACW-DIN-TST	DIN Rail Mount

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