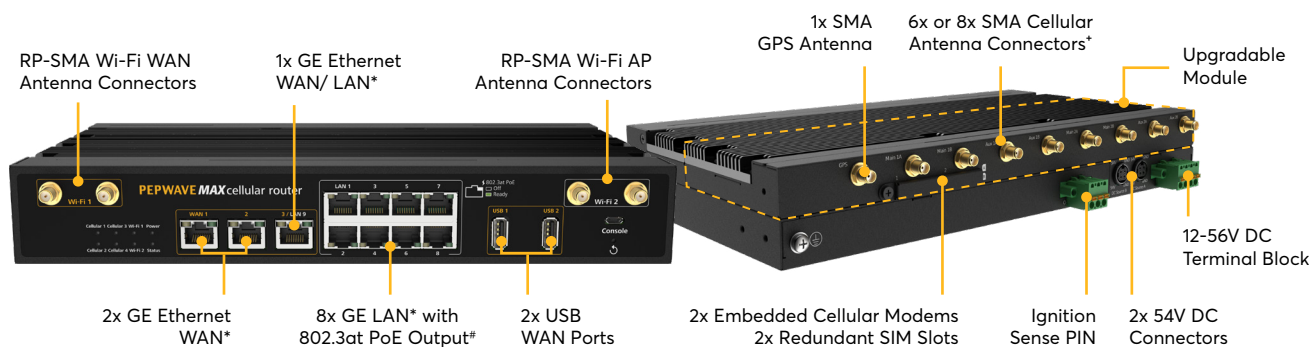


# HD2 MBX 5G<sup>+</sup>



## Specifications

<b>WAN Interface</b>	2x Embedded Cellular Modems with Redundant SIM Slots 3x GE* 2x USB 2.0 Interface	<b>Power Input</b>	DC Jack/Terminal Block: 12-56 V#
<b>LAN Interface</b>	9x GE*	<b>Power Output</b>	Up to Eight 802.3at PoE Outputs#
<b>Wi-Fi Interface</b>	802.11ac/a/b/g/n, 1166 Mbps 2x2MIMO Wi-Fi WAN and/or AP Simultaneous Dual-Band	<b>Power Consumption</b>	55 W (max.)
<b>Router Throughput</b>	2.5 Gbps	<b>Dimensions</b>	1.7 x 11.5 x 7.0 inches 43 x 292 x 177 mm
<b>PepVPN Throughput (No Encryption)</b>	600 Mbps	<b>Weight</b>	7.28 pounds 3.3 kg
<b>PepVPN Throughput (256-bit AES)</b>	500 Mbps	<b>Operating Temperature</b>	-40°– 149 °F -40°– 65 °C
<b>5G Cellular Data Rate® (Downlink/Uplink)</b>	5G: 4 Gbps / 700 Mbps LTE CAT-20: 2 Gbps / 150 Mbps	<b>Humidity</b>	15%–95% (non-condensing)
<b>LTE Cellular Data Rate® (Downlink/Uplink)</b>	CAT-18: 1.2 Gbps / 150 Mbps CAT-12: 600Mbps / 150Mbps	<b>Certifications</b>	FCC, CE, RoHS, E-Mark, PTCRB,  Shock and Vibration Resistance: EN 61373:1999 IEC 61373:1999  Railway Applications: EN 50155 Electromagnetic Compatibility: EN 61000
<b>Recommended Users</b>	50-500		
<b>Cellular and GPS Antenna Connector</b>	6x or 8x SMA Cellular Antenna Connectors 1x SMA GPS Antenna Connector 4x RP-SMA Wi-Fi Antenna Connectors		

## Ordering information

Product Code	Description	Embedded Modems	Carrier/ Categories	5G Bands	LTE Bands
MAX-HD2-MBX-5GD-K-T	HD2 MBX 5G with 1x 5G and 1x LTE CAT-12 modems	2	Cellular 1: Global/ 5G	Cellular 1: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
			Cellular 2: Global/ LTE CAT-12		Cellular 2: B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B18, B19, B20, B26, B28, B29, B30, B32, B41, B42, B43, B46, B48, B66
MAX-HD2-MBX-5GD-GLTE-G-T	HD2 MBX 5G with 1x 5G and 1x LTE CAT-18 modems	2	Cellular 1: Global/ 5G	Cellular 1: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
			Cellular 2: Global/ LTE CAT-18		Cellular 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

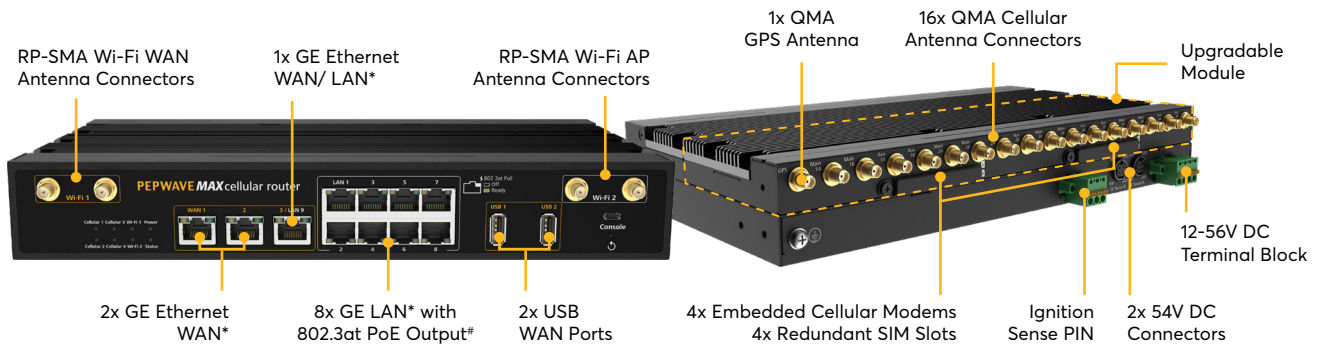
\*WAN 3 is configured as a LAN port by default, configuration is changeable on the Web Admin.

#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.

®Theoretical maximum data rates.

\*MAX-HD2-MBX-5GD-K-T features 6x SMA Cellular Antenna Connectors. MAX-HD2-MBX-5GD-GLTE-G-T features 8x SMA Cellular Antenna Connectors.

# HD4 MBX 5G<sup>®</sup>



## Specifications

<b>WAN Interface</b>	4x Embedded Cellular Modems with Redundant SIM Slots 3x GE* 2x USB 2.0 Interface	<b>Power Input</b>	DC Jack/Terminal Block: 12-56 V#
<b>LAN Interface</b>	9x GE*	<b>Power Output</b>	Up to Eight 802.3at PoE Outputs#
<b>Wi-Fi Interface</b>	802.11ac/a/b/g/n, 1166 Mbps 2x2MIMO Wi-Fi WAN and/or AP Simultaneous Dual-Band	<b>Power Consumption</b>	55 W (max.)
<b>Router Throughput</b>	2.5 Gbps	<b>Dimensions</b>	1.7 x 11.5 x 7.0 inches 43 x 292 x 177 mm
<b>PepVPN Throughput (No Encryption)</b>	600 Mbps	<b>Weight</b>	7.28 pounds 3.3 kg
<b>PepVPN Throughput (256-bit AES)</b>	500 Mbps	<b>Operating Temperature</b>	-40° - 149°F -40° - 65°C
<b>5G Cellular Data Rate® (Downlink/Uplink)</b>	5G: 4 Gbps / 700 Mbps LTE CAT-20: 2 Gbps / 150 Mbps	<b>Humidity</b>	15%–95% (non-condensing)
<b>LTE Cellular Data Rate® (Downlink/Uplink)</b>	CAT-18: 1.2 Gbps / 150 Mbps	<b>Certifications</b>	FCC, CE, RoHS, E-Mark, PTCRB,  Shock and Vibration Resistance: EN 61373:1999 IEC 61373:1999  Railway Applications: EN 50155 Electromagnetic Compatibility: EN 61000
<b>Recommended Users</b>	50-500		
<b>Cellular and GPS Antenna Connector</b>	16x QMA Antenna Connectors 1x QMA GPS Antenna Connector 4x RP-SMA Wi-Fi Antenna Connectors		

## Ordering information

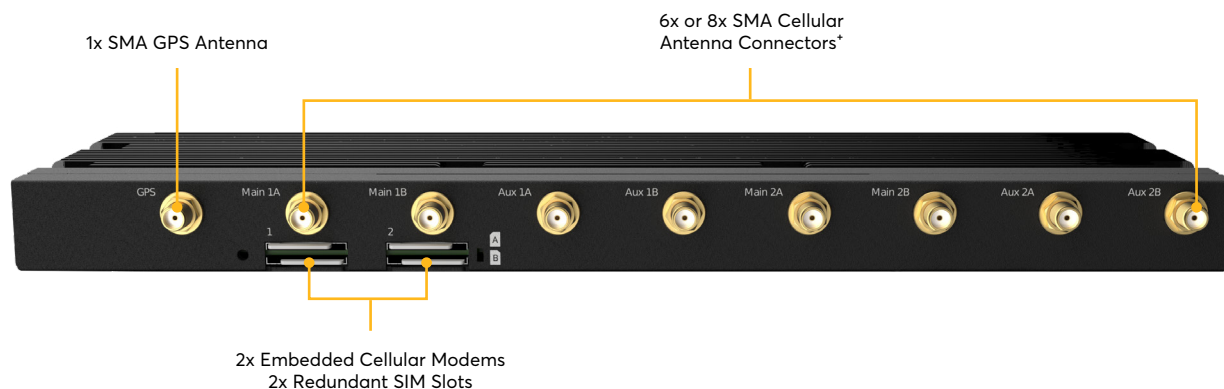
Product Code	Description	Embedded Modems	Carrier/ Categories	5G Bands	LTE Bands
MAX-HD4-MBX-5GD-3GLTE-G-T	HD4 MBX 5G with 1x 5G and 3x LTE CAT-18 modems	4	Cellular 1: Global/ 5G	Cellular 1: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
			Cellular 2-4: Global/ LTE CAT-18		Cellular 2-4: 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
MAX-HD4-MBX-5GD-2GLTE-G-T	HD4 MBX 5G with 2x 5G and 2x LTE CAT-18 modems	4	Cellular 1-2: Global/ 5G	Cellular 1-2: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1-2: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
			Cellular 3-4: Global/ LTE CAT-18		Cellular 3-4: 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
MAX-HD4-MBX-5GH-T	HD4 MBX 5G with 4x 5G modems	4	Global/5G	<b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71

\*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.

®Theoretical maximum data rates

# Expansion Module for HD2 MBX



## Specifications

<b>Interface</b>	2x Embedded Cellular Modems with Redundant SIM Slots
<b>Antenna Connectors</b>	6x or 8x SMA Antenna Connectors, 1x SMA GPS Antenna Connector
<b>5G Cellular Data Rate® (Downlink/Uplink)</b>	5G: 4 Gbps / 700 Mbps LTE CAT-20: 2 Gbps / 150 Mbps
<b>LTE Cellular Data Rate® (Downlink/Uplink)</b>	CAT-18: 1.2 Gbps / 150 Mbps

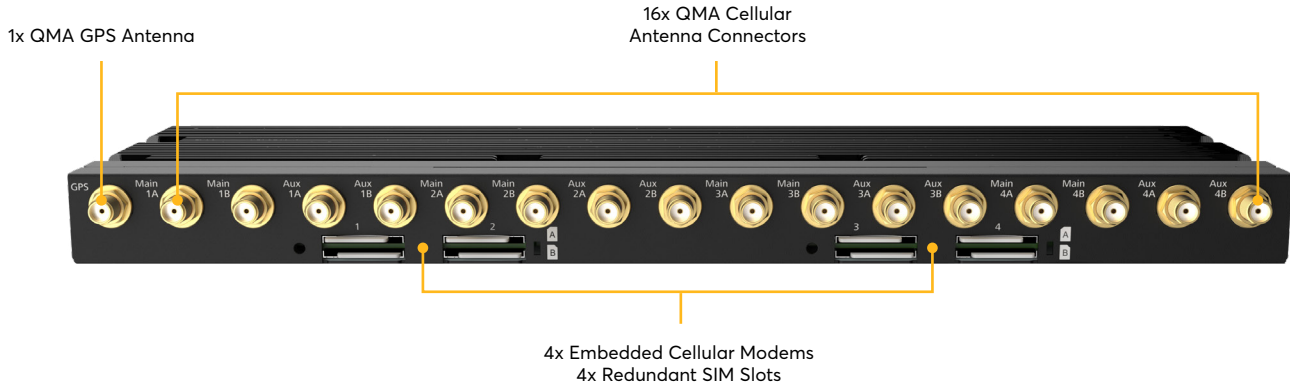
## Ordering information

Product Code	Description	Embedded Modems	Carrier/ Categories	5G Bands	LTE Bands
EXM-MBX-T2-5GD-GLTE-G	Expansion Module for HD2 MBX 5G with 1x LTE CAT-18 modem	2	Cellular 1: Global/ 5G	Cellular 1: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
			Cellular 2: Global/ LTE CAT-18		Cellular 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
EXM-MBX-T2-5GD	Expansion Module for HD2 MBX 5G with 2x 5G modems	2	Global/ 5G	<b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71

®Theoretical maximum data rates

\*MAX-HD2-MBX-5GD-K-T features 6x SMA Cellular Antenna Connectors. MAX-HD2-MBX-5GD-GLTE-G-T features 8x SMA Cellular Antenna Connectors.

# Expansion Module for HD4 MBX



## Specifications

<b>Interface</b>	4x Embedded Cellular Modems with Redundant SIM Slots
<b>Antenna Connectors</b>	16x QMA Antenna Connectors, 1x QMA GPS Antenna Connector
<b>5G Cellular Data Rate® (Downlink/Uplink)</b>	5G: 4 Gbps / 700 Mbps LTE CAT-20: 2 Gbps / 150 Mbps
<b>LTE Cellular Data Rate® (Downlink/Uplink)</b>	CAT-18: 1.2 Gbps / 150 Mbps

## Ordering information

Product Code	Description	Embedded Modems	Carrier/ Categories	5G Bands	LTE Bands
EXM-MBX-T4-5GD-GLTE-G	Expansion Module for HD4 MBX 5G with 1x 5G and 3x LTE CAT-18 modems	4	Cellular 1: Global/ 5G  Cellular 2-4: Global/ LTE CAT-18	Cellular 1: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71  Cellular 2-4: 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
EXM-MBX-T4-5GD-2GLTE-G	Expansion Module for HD4 MBX 5G with 2x 5G and 2x LTE CAT-18 modems	4	Cellular 1-2: Global/ 5G  Cellular 3-4: Global/ LTE CAT-18	Cellular 1-2: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1-2: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71  Cellular 3-4: 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
EXM-MBX-T4-5GD-3GLTE-G	Expansion Module for HD4 MBX 5G with 3x 5G and 1x LTE CAT-18 modems	4	Cellular 1-3: Global/ 5G  Cellular 4: Global/ LTE CAT-18	Cellular 1-3: <b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	Cellular 1-3: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71  Cellular 4: 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
EXM-MBX-T4-5GH	Expansion Module for HD4 MBX 5G with 4x 5G modems	4	Global/5G	<b>5G (NSA) Sub 6Ghz:</b> n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n41, n66, n71, n77, n78, n79	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71

®Theoretical maximum data rates