MBX 5G

Unbreakable Mobile Powerhouse
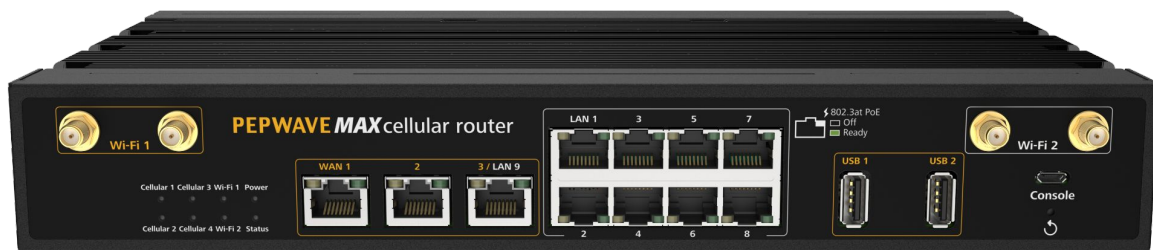
PEPWAVE MAX cellular router

Wi-Fi 1

Cellular 1 Cellular 3 Wi-Fi 1 Power
Cellular 2 Cellular 4 Wi-Fi 2 Status

WAN 1   2   3 / LAN 9

LAN 1   3   5   7

2   4   6   8

802.3at PoE
Off
Ready

USB 1   USB 2

Wi-Fi 2

Console

FAQ

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What is the MBX 5G?

What is the MBX 5G?

The MBX 5G is a 5G Multi-Cellular Mobile Powerhouse with redundant SIM slots and multi-radio capabilities. Combining the best of 5G and LTE, the MBX 5G is the best of both speed and reliability.

How fast is this device?

The MBX 5G has a rated throughput of 2.5Gb/sec. It supports a 4Gb/sec downlink data rate and a 700Mb/sec uplink data rate per modem. If the MBX 5G cannot receive a 5G network, it can receive LTE CAT-20 network with a 2Gb/sec downlink data rate and 150Mb/sec uplink data rate per modem.

You can find a complete spec sheet [here](#).

What certifications does the MBX 5G have?

The MBX 5G has certifications on:

- FCC, CE, RoHS, E-Mark, PTCRB

- Shock and Vibration Resistance: EN 61373:1999 IEC 61373:1999

- Railway Application: EN 50155

- Electromagnetic Compatibility: EN 61000

The compact form and certifications allow you to deploy the MBX 5G in a wide variety of situations such as vehicles, vessels, and branch networks.

The MBX 5G also has US Carrier certifications from AT&T, T-Mobile, and US carriers. Verizon's US Carrier certification is pending.

What is the best use case for the MBX 5G?

The answer isn't set in stone. From [mobile healthcare](#), [dead zones in connectivity](#) to [maritime application in Drillship](#), the MBX 5G has you covered. Together, we can work out a cost-effective solution with the best overall performance. Click [here](#) to get started.

How many ways can the MBX 5G connect to the Internet?

The HD2 MBX 5G comes with 2 x cellulars, 3 x Ethernet WANs, 2 x USB WANs, and Wi-Fi-as-WAN;

The HD4 MBX 5G comes with 4 x cellulars, 3 x Ethernet WANs, 2 x USB WANs, and Wi-Fi-as-WAN.

What does the MBX 5G include?

What is in the box?

	MAX HD2 MBX 5G	MAX HD4 MBX 5G
PSU 180W ([ACW-630](ACW-630))	1	1
QMA to SMA Adaptor (for GPS)	0	1
Wi-Fi Dual-Band Antenna ([ACW-341](ACW-341))	4	4
GPS Antenna ([ACW-232](ACW-232))	1	1
LTE/5G Antenna ([ACW-235](ACW-235))	8	0*
Pair of Mounting Brackets ([ACW-513](ACW-513))	1	1
3pin Terminal Block Connector (Ignition Sense)	1	1
4pin Terminal Block Connector (Power Supply)	1	1
Grounding cable	1	1
Rubber Foot Pad set	1	1

*Cellular antennas not included. To enhance the MBX 5G, we recommend Mobility and Maritime antennas.

Is a warranty included with the MBX 5G?

Yes, the MBX 5G comes with a 1-year warranty which is extendable on a year-to-year basis. You can purchase an extension from our Certified Partners or directly from the Peplink store at the time of the sale or thereafter.

	MAX HD2 MBX 5G	MAX HD4 MBX 5G
Essential Care	1 Year | 2 Year	1 Year | 2 Year
Smart Care	1 Year | 3 Year	1 Year | 3 Year

What is the difference between EssentialCare and SmartCare?

EssentialCare is a subscription that bundles InControl, Warranty, and SpeedFusion Connect Protect usage into a single package. Click here to learn more about EssentialCare.

SmartCare is similar to EssentialCare. SmartCare also bundles InControl, Warranty, and SpeedFusion Connect Protect usage in a single package. Different from EssentialCare, SmartCare provides advanced hardware placement for Return Material Authorization (RMA).

What is SpeedFusion Connect Protect?

SpeedFusion Connect Protect is Peplink's global network of SpeedFusion endpoints. With an active CarePlan or SpeedFusion Connect Protect data plan, you can utilize SpeedFusion wherever you are, eliminating the need for any additional hardware. Unsure of what you need? Check out this helpful post.

Does the MBX 5G employ Peplink's SpeedFusion technology or SpeedFusion VPN?

All Peplink products can use SpeedFusion VPN. In addition, the MBX 5G supports SpeedFusion Hot Failover, WAN Smoothing, Bandwidth Bonding, etc.

What is SpeedFusion technology?

Peplink's patented SpeedFusion technology is a powerful VPN tunnel equipped with various technologies, including Hot Failover, WAN Smoothing, Bandwidth Bonding, and much more. This functionality gives you the flexibility and tools required to achieve unbreakable connectivity in any vertical or scenario that they might find themselves in. Click here to learn more about SpeedFusion.

How can I purchase a license for SpeedFusion Connect Protect with higher traffic speed and additional usage?

Easy. Look here!

5G FAQ?

If you have questions about the MBX 5G like:

Q. Do Peplink 5G devices support Sub-6 or mmWave?

Q. Are Peplink Mobility or Maritime antennas compatible with the MBX 5G?

Q. How does SpeedFusion work with the 5G network?

You can find all the answers in -> 5G Q&A.

Using the MBX 5G

What size should the SIMs be?

Both the **HD2 MBX 5G** and **HD4 MBX 5G** use Mini-SIM (2FF).

I see the unit has multiple SIM slots. Can they be used simultaneously?

The **HD2 MBX 5G** has 2 x 5G modems, while the **HD4 MBX 5G** has 4 x 5G modems. Each 5G modem has 2 x SIM slots. You can load 2 SIMs and switch between them, but you can only use 1 at a time. You can use 5G modems simultaneously.

Why would I use SpeedFusion VPN?

SpeedFusion VPN is a capability built into the MBX 5G. It allows you to construct a VPN tunnel between Peplink devices. You can set up an unencrypted tunnel or utilize AES-256 encryption. For example, if you have an MBX 5G at the office and a Peplink Balance Series Router at another location, you can establish a connection between the 2 locations, allowing the flow of resources from 1 location to the other. (You can construct either a Layer 2 or Layer 3 tunnel.)

Does the MBX 5G provide GPS tracking?

The MBX 5G technology goes way beyond GPS tracking. It provides Dead Reckoning, an upgrade feature to standard GPS tracking.

Dead Reckoning will automatically estimate your current route and fill in the gaps in your course based on your speed, direction, distance, and last position. Dead Reckoning provides accuracy, stability, and secure GPS tracking, putting you back to control.

FAQ - MBX 5G

Is there a way to protect batteries from drainage by the MBX 5G?

Yes, the MBX 5G includes a power port with ignition sensing that enables unique features. Ignition Sensing is an electronic device's ability to connect to a vehicle's ignition for sensing whether it is on or off. This feature can synchronize and automate turning on electronic devices in vehicles such as dash-cams and radios.

What is the MBX 5G's maximum power consumption?

The maximum power consumption of the MBX 5G is 55W.

What voltage does the MBX 5G require?

The MBX 5G can be furnished with 2 x 12-56 V DC Jack, 1 x 12-56V 4pin DC Terminal Block, and 1 x 3pin Ignition Sense PIN.

Does the MBX 5G support PoE Output features?

Yes. All 8 LAN ports (excluding the LAN port 9) in the MBX 5G support 802.3at PoE Output. LAN ports with PoE output features can power your IP phones, cameras, and access points, which leads to better flexibility in your deployment.

Please note that if you want to activate all 8 LAN ports for PoE output, 2 54V DC input is required. Single 54V DC input will result in only 4 LAN ports having 802.3at PoE output.

Does the MBX 5G employ WAN as LAN features?

Yes. By default, the WAN port 3 (also LAN port 9) is configured as a LAN port. Configuration is also changeable on the Web Admin.

Does the MBX 5G provide a Captive Portal?

Yes. Captive Portal is a configuration under InControl 2. With Captive Portals, you can easily offer the Internet to your guests and easily control the connection time and speed while also instituting data usage limits. By doing so, you can set up a social Wi-Fi Hotspot to receive valuable demographic data from your users.

The MBX 5G & Public Safety

Can the MBX 5G use Band 71?

Yes. The MBX 5G can use Band 71. Band 71 is a band frequency provided by T-Mobile, operates at a 600MHz frequency that travels twice as far, and works 4 times better in buildings than conventional LTE bands. You can insert your T-Mobile SIM into any cellular slot of the MBX 5G to use Band 71.

What is FirstNet Ready? Does the MBX 5G support FirstNet?

FirstNet is the only network where Public Safety can take advantage of the highest power class signaling available across the United States with FirstNet MegaRange, the High Power User Equipment solution exclusively available on Band 14.

The **HD4 MBX 5G** is FirstNet Ready, providing additional coverage as the situation demands.

Click here to learn more about how Peplink technology works with FirstNet.

What is ESN? Does the MBX 5G support ESN?

ESN is the UK's new Emergency Services Network critical communications system. ESN can deliver secure and resilient mission-critical communications, a modern voice and data platform that improves front-line operations, and a common platform for emergency services to work closely together.

Both the **HD2 MBX 5G** and **HD4 MBX 5G** are certified by ESN.

Click here to learn more about how Peplink technology works with ESN.

Licenses and Accessories

What is an Expansion Module?

An Expansion Module has several 5G Cellular Modems that provide 5G Cellular connections. The MBX 5G can combine the Expansion Module's cellular links into an unbreakable, high-speed SD-WAN connection.

You can find the Module Upgrade installation guide here.

Can I purchase an HD2 MBX 5G module and upgrade my MAX HD4 MBX LTE-A Pro device?

Yes. You can upgrade your MAX HD4 MBX LTE-A Pro device to 5G by installing an HD2 MBX 5G module.

Click here to watch an installation video guide or here for the Module Upgrade Installation Guide.

What is the difference between the Expansion Module for HD2 MBX 5G and HD4 MBX 5G?

	HD2 MBX Expansion Module 5G (EXM-MBX-T2-5GD)	HD4 MBX Expansion Module 5G (EXM-MBX-T4-5GD)
Cellular Modems with Redundant SIM Slots	2	4
Number of Antenna Connectors	5	9
Type of Antenna Connectors	SMA	QMA

In addition, you can purchase a Care Plan for your Expansion Module as well.

	HD2 MBX Expansion Module 5G ([EXM-MBX-T2-5GD](#))	HD4 MBX Expansion Module 5G ([EXM-MBX-T4-5GD](#))
Essential Care	[1 Year](#) | [2 Year](#)	[1 Year](#) | [2 Year](#)
Smart Care	[1 Year](#) | [3 Year](#)	Not Available

Can the MBX 5G overcome spotty coverage issues?

Yes. The **HD2 MBX 5G** supports up to 4 x SIM cards, and the **HD4 MBX 5G** supports up to 8 x SIM cards. In addition, the MBX 5G is compatible with the optional SIM Injector, which has room for another 8 SIM slots. With up to 16 cellular providers to connect to, spotty coverage will simply not be a problem.

Click [here](#) to learn more about how SIM Injector provides more SIM and range to your MBX 5G.

Is there any recommendation for antennas deployment?

	HD2 MBX 5G	HD4 MBX 5G
Cellular Antenna Connectors	8 (SMA)	16 (QMA)
LTE/5G Antennas within the package content	8 (ACW-235)	0
GPS Antenna Connectors	1 (SMA)	1 (QMA)
GPS Antenna with the package content	1 (ACW-232)	1 (ACW-232) (Connect with QMA to SMA Adapter within the package content)
Wi-Fi Antenna Connectors	4 (RF-SMA)	4 (RF-SMA)
Wi-Fi Dual-Band Antennas within the package content	4 (ACW-341)	4 (ACW-341)

To enhance the MBX 5G performance, we recommend you use Mobility or Maritime antennas. For example, you can deploy your HD4 MBX 5G with 2 Mobility 40G with QMA connectors and 2 Mobility 42G with QMA connectors.

You can also purchase QMA-to-SMA adapters in our eStore (ACW-816). This adapter is a QMA-Male to SMA-Female adapter and includes 4 adapters.

Is it a must to connect all the antenna connectors to the antennas?

The **HD2 MBX 5G** (EXM-MBX-T2-5GD) has 2 x 5G modems with 8 x RF connections for connecting antennas, while the **HD4 MBX 5G** (EXM-MBX-T4-5GD) has 4 x 5G modems with 16 x RF connections for connecting antennas. The connectors of each 5G modem are labelled as A, B, C, and D.

For the best performance and reliability, we highly recommend connecting all RF connectors to antennas of the same type and performance.

In the case of certain circumstances where there are only two antennas available for a single 5G modem, please connect the antennas to Connectors A and C.

How can I subscribe to the InControl 2 service?

The MBX 5G comes with a 1-year subscription to EssentialCare, which includes InControl 2. Both an EssentialCare extension and a SmartCare subscription include the InControl 2 function.

Can it connect to an OpenVPN server from a commercial VPN provider (ExpressVPN, ProtonVPN, etc.)?

Yes. An optional license (LIC-OPN-WAN) will enable the OpenVPN WAN functionality.

What if I need more than 2 SpeedFusion VPNs?

By default, the MBX 5G is capable of handling 2 SpeedFusion VPNs. However, you can expand this capability to 20 or 50 SpeedFusion VPN Peers.

A SpeedFusion Bonding License Key will expand SpeedFusion VPN capability to 20 SpeedFusion VPN Peers;

Another SpeedFusion Bonding License Key will expand SpeedFusion VPN capability to 50 SpeedFusion VPN Peers.

It seems like there are a lot of options here. This could become very expensive!

We intend to allow users to acquire the router at a very reasonable cost and only add the options - if any - that are necessary to meet your requirements.

What can I do if I need support?

Does Peplink offer support for this product? What if I have difficulties setting it up?

First, Peplink Partners are proud to always support you, our users, so always reach out to the place of purchase first.

For those who prefer self-service, Peplink has a very active [forum](#). Among the regular forum, users are Peplink Partners, Peplink employees, and many very knowledgeable users.

In the unlikely event of a suspected hardware or firmware issue, you can directly enter a [support ticket](#) with Peplink. You will then receive attention from some of the next engineers! Peplink supports its owners like no other.

I can't access the Internet via the MBX 5G. So, what can I do?

Visit [this link](#) (troubleshooting section) for a basic software walkthrough and troubleshooting guide. If you need further assistance, please reach out to us on our [forum](#), and the team will get you online.