peplink PEPWAVE P1MT01 Router Instructions

Contents

peplink PEPWAVE P1MT01 Router

1. Go to Network (Top tab), then Network Settings (Left-side tab), and click on Untagged LAN . This will open up the LAN settings page.
2. Change the IP address to 192.168.50.2.
3. In the DHCP Server section, uncheck the checkbox to disable DHCP Server.
4. Click Save and Apply Changes .

Step 2. Ethernet port configuration
The Ethernet port must be set to ACCESS mode for each HD Dome. To do this, dummy VLANs need to be created first.

1. Go to Network (Top tab), then Network Settings (Left-side tab), and click on New LAN . This will open the settings page to create a dummy VLAN.
2. The image below shows the values that need to be changed to create a new **VLAN:**

Note : set different IP addresses for each HD dome (e.g. 192.168.10.1 and 192.168.10.2).

3. Click Save and Apply Changes .
4. Go to Network (Top tab), then Port Settings (Left-side tab).
5. Set the Port Type to Access and set VLAN to Untagged LAN (see picture below).

6. Click Save and Apply Changes .

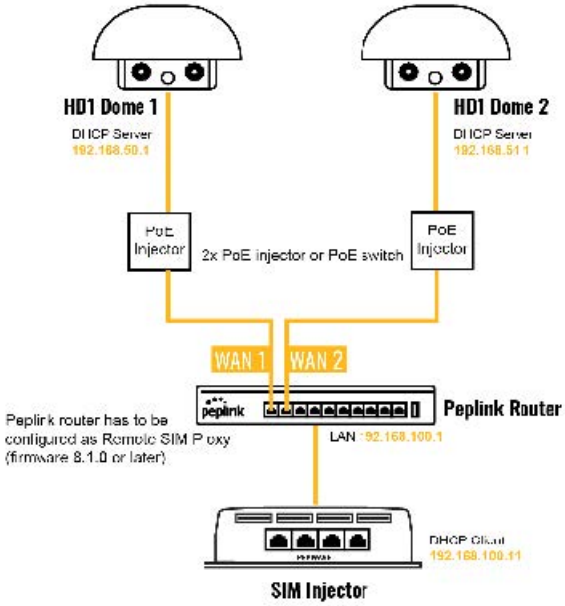
Configuration requirements for the main Router

Requirements for the main router are:

- Configure WAN 1 as a DHCP client.
- WAN 1 will automatically get the Gateway IP address from HD Dome 1.
- Configure WAN 2 as a Static IP and set it to 192.168.50.12.
- Configure WAN 2 Gateway to 192.168.50.2. Same as the HD Dome 2's IP address.

Scenario 3: SIM Injector in LAN of main Router and multiple Cellular Routers

Setup topology



In this scenario, SIMs are provided to the HD Domes via the main router. In this example, the Remote SIM Proxy functionality needs to be enabled on the main router.

Notes:

- HD Dome can be replaced with any other cellular router that supports RemoteSIM.
- It is recommended to use Peplink Balance series or X series routers as the main router.

This scenario requires the completion of the configuration steps for the cellular router and the SIM Injector as in Scenario 1. The configuration for the main router is explained below.

Main Router configuration
IMPORTANT: Main router LAN side and Cellular Routers must be configured using different subnets, e.g. 192.168. 50 .1/24 and 192.168. 100 .1/24.

Note : please make sure the Peplink router is running Firmware 8.1.0 or above.

1. Open the main router WEB interface and change:

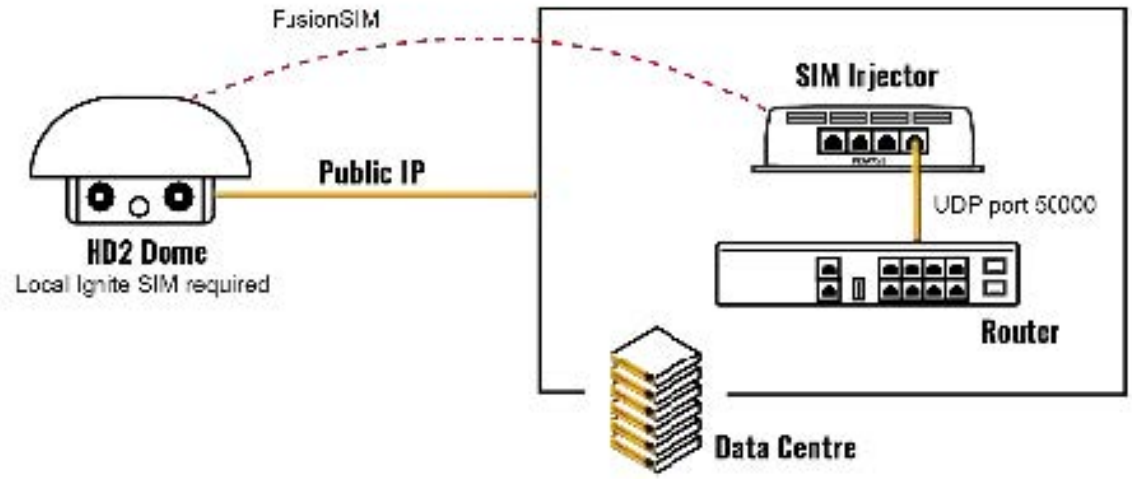
   From <IP address>/cgi-bin/MANGA/ index.cgi to <IP address>/cgi-bin/MANGA/ support.cgi .

   This will open the support.cgi page.

2. Scroll down to find Remote SIM Proxy and click on [click to configure] that is located next to it.
3. Check the Enable checkbox.
4. Click on Save .
5. Go back to the index.cgi page and click on Apply Changes .

Scenario 4: SIM Injector in a remote location

Setup topology



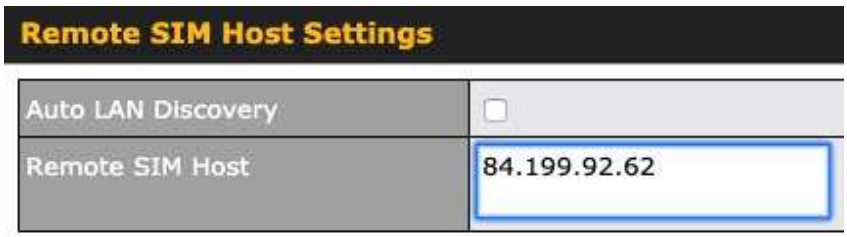
Requirements for installing a SIM Injector in a remote location:

- Cellular router communicates with the SIM Injector via UDP port 50000. Therefore this port must be reachable via public IP over the Internet.
- The one way latency between the cellular router and the SIM Injector should be up to 250 ms. A higher latency may lead to stability issues.
- The cellular router must have Internet connection to connect to the SIM Injector. It can be another Internet connection via Ethernet or Fiber if possible, or a secondary cellular interface with a local SIM (Ignite SIM).
- Due to its high latency, it is not recommended to use satellite WAN for connecting to a SIM Injector in remote locations.

SIM Injector configuration is the same as in Scenario 1.

Cellular Router configuration
Step 1. Enable the SIM Injector communication protocol.

1. a. For a Balance cellular router, go to the Network (Top tab).
   b. For a MAX cellular router, go to the Advanced (Top tab).
2. Under Misc. settings (Left-side tab), find Remote SIM Management .
3. In Remote SIM Management , click on the edit icon next to Remote SIM is Disabled.
4. Enter the public IP of the SIM Injector and click Save and Apply Changes .



Notes:

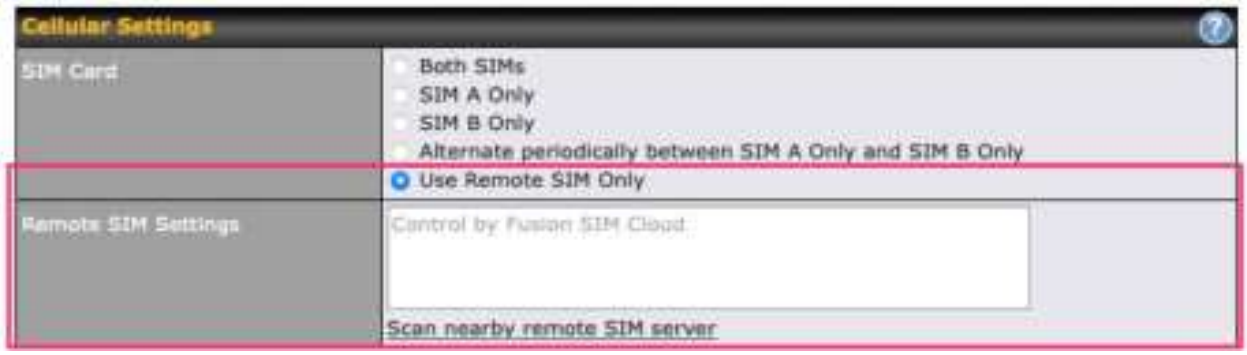
- Do NOT check Auto LAN Discovery.
- Do NOT add a SIM Injector serial number to the Remote SIM Host field.

Step 2. Remote SIM and custom SIM card settings configurations are the same as in Scenario 1.

How to check if a Pepwave Cellular Router supports Remote SIM

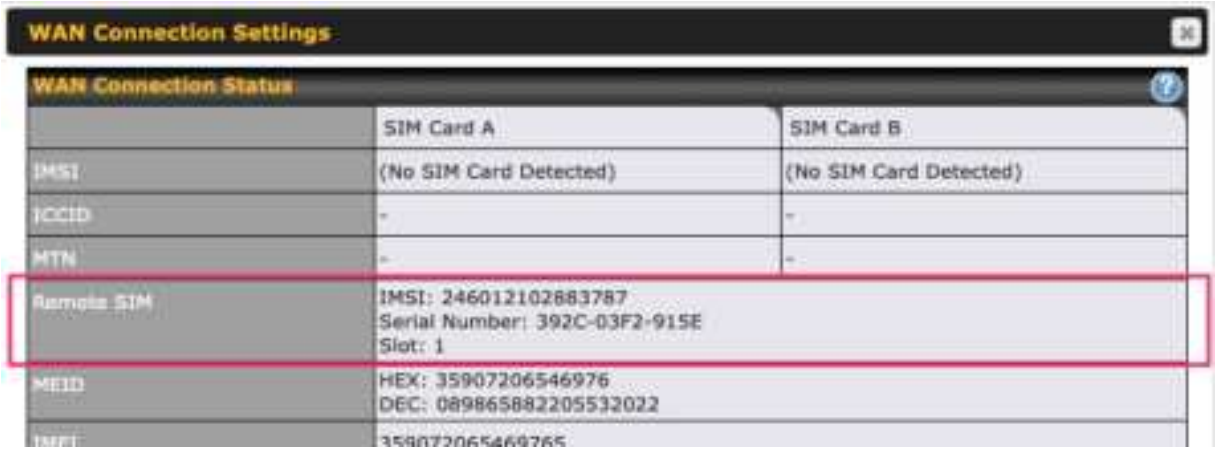
1. Go to Network (Top tab), then WAN (Left-side tab), and click Details on any cellular WAN. This will open the WAN Connection Settings page.
2. Scroll down to Cellular settings .

If you can see the Remote SIM Settings section, then the cellular router supports Remote SIMs.



Monitor the status of the Remote SIM

1. Go to Network (Top tab), then WAN (Left-side tab), and click Details on the cellular WAN which was configured to use RemoteSIM.
2. Check the WAN Connection Status section. Within the cell WAN details, there is a section for Remote SIM (SIM card IMSI, SIM Injector serial number and SIM slot).



Appendix C: Overview of ports used by Peplink SD-WAN routers and other Peplink services

Default Port Number	Usage	Service	Inbound/Outbound	Default Status
UDP 5246	Data flow	InControl	Outbound	Enabled
TCP 443	HTTPS service	InControl	Outbound	Enabled

TCP 5246	Optional, used when TCP 443 is not responding	InControl	Outbound	Enabled
TCP 5246	Remote Web Admin	InControl Virtual Appliance	Outbound	Enabled
TCP 4500	VPN Data (TCP Mode)	PepVPN / SpeedFusion	Inbound / Outbound*	Disabled
TCP 32015	VPN handshake	PepVPN / SpeedFusion	Inbound / Outbound*	Disabled
UDP 4500	VPN Data	PepVPN / SpeedFusion	Inbound / Outbound*	Disabled
UDP 32015º	VPN Data (alternative)	PepVPN / SpeedFusion	Inbound / Outbound*	Disabled
TCP/UDP 4500+N-1^	VPN Sub-Tunnels Data	PepVPN / SpeedFusion	Inbound / Outbound*	Disabled
UDP 32015+N-1^	VPN Sub-Tunnels Data (alternative)	PepVPN / SpeedFusion	Inbound / Outbound*	Disabled
UDP 4500	VPN Data	IPsec	Inbound / Outbound*	Disabled
UDP 500	VPN initiation	IPsec	Inbound / Outbound*	Disabled
UDP 500	L2TP	Remote User Access	Inbound	Disabled
UDP 1701	L2TP	Remote User Access	Inbound	Disabled

UDP 4500	L2TP	Remote User Access	Inbound	Disabled
UDP 1194	OpenVPN	Remote User Access	Inbound	Disabled
IP 47	PPTP (GRE)	Remote User Access	Inbound	Disabled
TCP 2222	Remote Assistance Direct connection	Peplink Troubleshooting Assistance	Outbound	Enabled
TCP 80	HTTP traffic	Web Admin	Inbound	Enabled
		Interface access		
TCP 443	HTTPS traffic	Web Admin Interface access (secure)	Inbound	Enabled
TCP 8822	SSH	SSH	Inbound	Disabled
UDP 161	SNMP Get	SNMP monitoring	Inbound	Disabled
UDP 162	SNMP Trap	SNMP monitoring	Outbound	Disabled
TCP, UDP 1812	Radius Authentication	Radius	Outbound	Disabled
TCP, UDP 1813	Radius Accounting	Radius	Outbound	Disabled
UDP 123	Network Time Protocol	NTP	Inbound Outbound	Disabled Enabled
TCP 60660	Real-time location data in NMEA format	GPS	Outbound	Disabled

Disclaimer:

- By default, only TCP 32015 and UDP 4500 are needed for PepVPN / SpeedFusion.
- Inbound / Outbound* – Inbound = For Server mode; Outbound = For Client mode
- UDP 32015 º – If IPsec VPN or L2TP/IPsec RUA is enabled, the UDP 4500 is occupied, so PepVPN / SpeedFusion will automatically switch to UPD 32015 as VPN data port .
- UDP 32015+N-1^ / TCP/UDP 4500+N-1^ – When using Sub-Tunnels, multiple ports are in use (1 for each Sub-Tunnel profile).
- The default UDP data ports used when using (N number of Sub-Tunnel profiles) are: 4500…4500+N-1, or (when port 4500 is in use by IPsec or L2TP/IPsec) 32015… 32015+N-1″.

Appendix D: Declaration

FCC Requirements for Operation in the United States
Federal Communications Commission (FCC) Compliance Notice:

For MAX BR1 Mini
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

FCC Radiation Exposure Statement (for MAX BR1 mini)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CE Statement for Pepwave Routers (MAX BR1 Mini for EC25-E)

DECLARATION OF CONFORMITY

We affirm the electrical equipment manufactured by us fulfils the requirements of the Radio Equipment Directive 2014/53/EU.

Name of manufacturer	PISMO LABS TECHNOLOGY LIMITED
Contact information of the manufacturer	A8, 5/F, HK Spinners Industrial. Building., Phase 6, 481 Castle Peak Road, Cheung Sha Wan,Kowloon, Hong Kong tel. (852) 2990 7600, fax. (852) 3007 0588 e-mail: cs@peplink.com
Description of the appliance	PEPWAVE / PEPLINK Wireless Product
Model name of the appliance	MAX BR1 Mini MAX BR1 Mini LTE Pismo930 Lite
Trade name of the appliance	PEPWAVE / PEPLINK

The construction of the appliance is in accordance with the following standards:

EN 301 908-1 V13.1.1
EN 300 328 V2.2.2
EN 303 413 V1.1.1
EN 50385 : 2017
EN 301 489-1 V2.2.3
EN 301 489-17 V3.1.1
EN 301 489-19 V2.1.1
Draft EN 301 489-52 V1.1.0
EN 55032: 2015 + AC:2016
EN 55035: 2017
EN IEC 61000-3-2: 2019
EN 61000-3-3:2013 + A1:2019
EN 62368-1:2014 + A11:2017 (Second Edition)

Yours sincerely,

Antony Chong
Director of Hardware Engineering
Peplink International Limited

AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE
IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK(NI)

2.4GHz (2412 – 2472 MHz) : 16.38 dBm
WWAN : Refer 3GPP TS 36.521 -1 (UE Power class)

Output Power	Class 3 (23dBm±2dB) for LTE FDD Class 3 (23dBm±2dB) for LTE TDD Class 3 (24dBm +1/-3dB) for TD-SCDMA Class 3 (24dBm +1/-3dB) for UMTS Class E2 (27dBm ±3dB) for EDGE 850/900MHz Class E2 (26dBm +3/-4dB) for EDGE 1800/1900MHz Class 4 (33dBm ±2dB) for GSM 850/900MHz Class 1 (30dBm ±2dB) for GSM 1800/1900MHz

This equipment complies with CE radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body.

contact as: **https://www.peplink.com**/

CE Statement for Pepwave Routers (MAX BR1 Mini for MC7455)

DECLARATION OF CONFORMITY

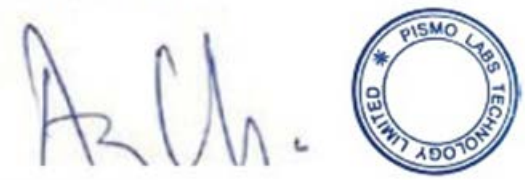
We affirm the electrical equipment manufactured by us fulfils the requirements of the Radio Equipment Directive 2014/53/EU.

Name of manufacturer	PISMO LABS TECHNOLOGY LIMITED
Contact information of the manufacturer	A8, 5/F, HK Spinners Industrial. Building., Phase 6, 481 Castle Peak Road, Cheung Sha Wan,Kowloon, Hong Kong tel. (852) 2990 7600, fax. (852) 3007 0588 e-mail: cs@peplink.com
Description of the appliance	PEPWAVE / PEPLINK Wireless Product
Model name of the appliance	MAX BR1 Mini MAX BR1 Mini LTEA Pepwave MAX BR1 Mini Pepwave MAX BR1 Mini LTEA Peplink MAX BR1 Mini Peplink MAX BR1 Mini LTEA MAX-BR1-MINI-LTEA-W-T Pismo930 Lite
Trade name of the appliance	PEPWAVE / PEPLINK

The construction of the appliance is in accordance with the following standards:

EN 301 908-1 V11.1.1
EN 300 328 V2.2.2
EN 303 413 V1.1.1
EN 62311 : 2008
EN 301 489-1 V2.2.3
EN 301 489-17 V3.1.1
EN 301 489-19 V2.1.1
Draft EN 301 489-52 V1.1.0
EN 55032: 2015 + AC:2016
EN 55035: 2017
EN 61000-3-2: 2014
EN 61000-3-3: 2013
EN 62368-1:2014 + A11:2017 (Second Edition)

Yours sincerely,



Antony Chong
Director of Hardware Engineering
Peplink International Limited

AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	
IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK(NI)	

2.4GHz (2412 – 2472 MHz) : 16.38 dBm

WWAN : Refer 3GPP TS 36.521 -1 (UE Power class)

Table 4-6: Conducted Tx (Transmit) Power Tolerances

Parameter	Conducted transmit power	Notes
LTE		
LTE Band 1,3,8,20	+23 dBm ± 1 dB	
LTE Band 7	+22 dBm ± 1 dB	
UMTS		
Band 1 (IMT 2100 12.2 kbps) Band 8 (UMTS 900 12.2 kbps)	+23 dBm ± 1 dB	Connectorized (Class 3)

This equipment complies with CE radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. contact as: **https://www.peplink.com**/

Industry Canada Statement (for MAX BR1 Mini)
This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.
This device complies with the ISED radiation exposure limit set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiator & your body.

FCC & IC Requirements for Operation in the United States and Canada (for MAX BR1 Mini)
FCC ID : U8G-P1930LITER6
FCC 15.21: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
RF exposure warning: This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

IC Warning:
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions

1. This device may not cause interference.

2. This device must accept any interference, including interference that may cause undesired operation of the device.

This radio transmitter IC 20682-P1930LITER6 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

antenna type Omni-directional
antenna gain 5.33

FCC Requirements for Operation in the United States

Federal Communications Commission (FCC) Compliance Notice:
For MAX BR1 MK2
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 24cm between the radiator & your body.

Industry Canada Statement (For MAX BR1 MK2)

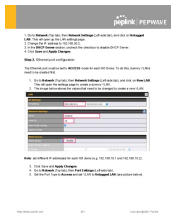
This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

- The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and

The high-power radars are allocated as primary users (i.e. priority users) of the band 5725-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Documents / Resources

	peplink PEPWAVE P1MT01 Router [pdf] Instructions P1MT01, U8G-P1MT01, U8GP1MT01, PEPWAVE Router, PEPWAVE P1MT01 Router, PEPWAVE P1MT01, PEPWAVE, P1MT01, P1MT01 Router, Router

References

- Peplink - Unbreakable Connectivity - Peplink
- Peplink - Unbreakable Connectivity - Peplink
- Peplink - Unbreakable Connectivity - Peplink
- Balance Series - Built-In Survival Mechanism. No more connectivity failure.
- X Series - Powerful. Modular. Futureproof.