

Pepwave MAX and Surf User Manual

A web login session will be logged out automatically when it has been idle longer than the **Web Session Timeout**. Before the session expires, you may click the **Logout** button in the web admin to exit the session.

0 hours 0 minutes signifies an unlimited session time. This setting should be used only in special situations, as it will lower the system security level if users do not log out before closing the browser. The **default** is 4 hours, 0 minutes.

For security reasons, after logging in to the web admin Interface for the first time, it is recommended to change the administrator password. Configuring the administration interface to be accessible only from the LAN can further improve system security. Administrative settings configuration is located at **System>Admin Security**.

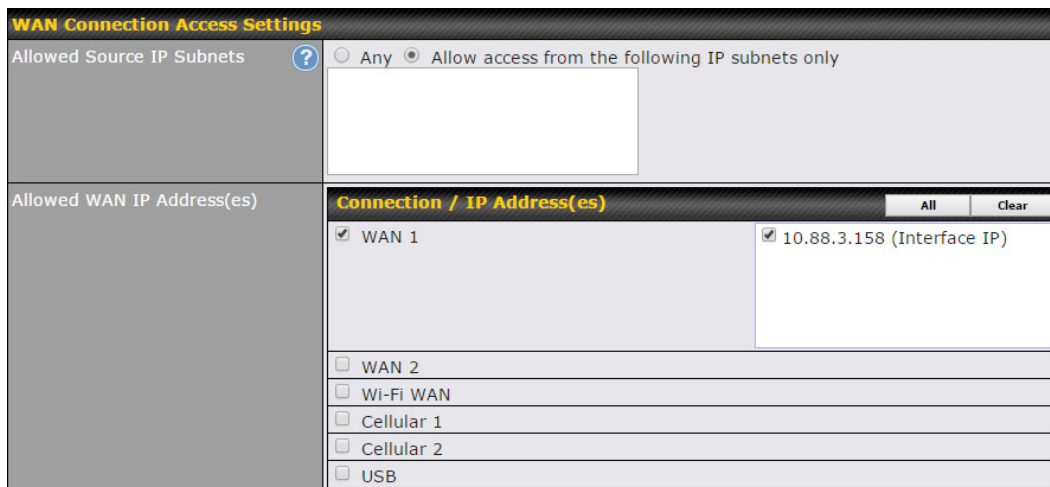
Admin Settings	
Router Name	MAX_BR1_710D hostname: max-br1-710d
Admin User Name	admin
Admin Password	••••••••
Confirm Admin Password	••••••••
Read-only User Name	user
User Password	
Confirm User Password	
Web Session Timeout	4 Hours 0 Minutes
Authentication by RADIUS	<input checked="" type="checkbox"/> Enable
Auth Protocol	MS-CHAP v2
Auth Server	Port Default
Auth Server Secret	<input checked="" type="checkbox"/> Hide Characters
Auth Timeout	3 seconds
Accounting Server	Port Default
Accounting Server Secret	<input checked="" type="checkbox"/> Hide Characters
CLI SSH	<input checked="" type="checkbox"/> Enable
CLI SSH Port	8822 Default
CLI SSH Access	LAN/WAN
Security	HTTP
Web Admin Port	80 Default
Web Admin Access	LAN Only

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Admin Settings	
Router Name	This field allows you to define a name for this Pepwave router. By default, Router Name is set as MAX_XXXX or Surf_SOHO_XXXX , where XXXX refers to the last 4 digits of the unit's serial number.
Admin User Name	Admin User Name is set as <i>admin</i> by default, but can be changed, if desired.
Admin Password	This field allows you to specify a new administrator password.
Confirm Admin Password	This field allows you to verify and confirm the new administrator password.
Read-only User Name	Read-only User Name is set as <i>user</i> by default, but can be changed, if desired.
User Password	This field allows you to specify a new user password. Once the user password is set, the read-only user feature will be enabled.
Confirm User Password	This field allows you to verify and confirm the new user password.
Web Session Timeout	This field specifies the number of hours and minutes that a web session can remain idle before the Pepwave router terminates its access to the web admin interface. By default, it is set to 4 hours .
Authentication by RADIUS	With this box is checked, the web admin will authenticate using an external RADIUS server. Authenticated users are treated as either "admin" with full read-write permission or "user" with read-only access. Local admin and user accounts will be disabled. When the device is not able to communicate with the external RADIUS server, local accounts will be enabled again for emergency access. Additional authentication options will be available once this box is checked.
Auth Protocol	This specifies the authentication protocol used. Available options are MS-CHAP v2 and PAP .
Auth Server	This specifies the access address and port of the external RADIUS server.
Auth Server Secret	This field is for entering the secret key for accessing the RADIUS server.
Auth Timeout	This option specifies the time value for authentication timeout.
Accounting Server	This specifies the access address and port of the external accounting server.
Accounting Server Secret	This field is for entering the secret key for accessing the accounting server.
Network Connection	This option is for specifying the network connection to be used for authentication. Users can choose from LAN, WAN, and VPN connections.
CLI SSH	The CLI (command line interface) can be accessed via SSH. This field enables CLI

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	support. For additional information regarding CLI, please refer to Section 21.16 .
CLI SSH Port	This field determines the port on which clients can access CLI SSH.
CLI SSH Access	This menu allows you to choose between granting access to LAN and WAN clients, or to LAN clients only.
Security	<p>This option is for specifying the protocol(s) through which the web admin interface can be accessed:</p> <ul style="list-style-type: none"> • HTTP • HTTPS • HTTP/HTTPS
Web Admin Port	This field is for specifying the port number on which the web admin interface can be accessed.
Web Admin Access	<p>This option is for specifying the network interfaces through which the web admin interface can be accessed:</p> <ul style="list-style-type: none"> • LAN only • LAN/WAN <p>If LAN/WAN is chosen, the WAN Connection Access Settings form will be displayed.</p>



WAN Connection Access Settings

Allowed Source IP Subnets

This field allows you to restrict web admin access only from defined IP subnets.

- **Any** - Allow web admin accesses to be from anywhere, without IP address restriction.
- **Allow access from the following IP subnets only** - Restrict web admin access only from the defined IP subnets. When this is chosen, a text input area will be displayed beneath:

The allowed IP subnet addresses should be entered into this text area. Each IP subnet must be in form of *w.x.y.z/m*, where *w.x.y.z* is an IP address (e.g., *192.168.0.0*), and *m* is the subnet mask in CIDR format, which is between 0 and 32 inclusively (For example, *192.168.0.0/24*).

To define multiple subnets, separate each IP subnet one in a line. For example:

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- 192.168.0.0/24
- 10.8.0.0/16

**Allowed WAN
IP Address(es)**

This is to choose which WAN IP address(es) the web server should listen on.

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21.2 Firmware

Pepwave router firmware is upgradeable through the web admin interface. Firmware upgrade functionality is located at **System>Firmware**.

The screenshot shows two sections of the web interface. The first section, 'Firmware Upgrade', has a dark header with a question mark icon. Below the header, it shows 'Current firmware version: 6.2.1' and 'Firmware check pending'. A 'Check for Firmware' button is centered below this section. The second section, 'Manual Firmware Upgrade', also has a dark header with a question mark icon. It contains a 'Firmware Image' label, a 'Choose File' button, and a text field with 'No file chosen'. A 'Manual Upgrade' button is centered below this section.

There are two ways to upgrade the unit. The first method is through an online download. The second method is to upload a firmware file manually.

To perform an online download, click on the **Check for Firmware** button. The Pepwave router will check online for new firmware. If new firmware is available, the Pepwave router will automatically download the firmware. The rest of the upgrade process will be automatically initiated.

You may also download a firmware image from the Peplink website and update the unit manually. To update using a firmware image, click **Choose File** to select the firmware file from the local computer, and then click **Manual Upgrade** to send the firmware to the Pepwave router. It will then automatically initiate the firmware upgrade process.

Please note that all Peplink devices can store two different firmware versions in two different partitions. A firmware upgrade will always replace the inactive partition. If you want to keep the inactive firmware, you can simply reboot your device with the inactive firmware and then perform the firmware upgrade.

Important Note

The firmware upgrade process may not necessarily preserve the previous configuration, and the behavior varies on a case-by-case basis. Consult the release notes for the particular firmware version before installing. Do not disconnect the power during firmware upgrade process. Do not attempt to upload a non-firmware file or a firmware file that is not supported by Peplink. Upgrading the Pepwave router with an invalid firmware file will damage the unit and may void the warranty.

Important Note

If the firmware is rolled back from 5.x to 4.x, the configurations will be lost.

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21.3 Time

Time Settings enables the system clock of the Pepwave router to be synchronized with a specified time server. Time settings are located at **System>Time**.



Time Settings	
Time Zone	(GMT+07:00) Krasnoyarsk <input type="checkbox"/> Show all
Time Server	0.peplink.pool.ntp.org Default

Save

Time Settings	
Time Zone	This specifies the time zone (along with the corresponding Daylight Savings Time scheme). The Time Zone value affects the time stamps in the Pepwave router's event log and e-mail notifications. Check Show all to show all time zone options.
Time Server	This setting specifies the NTP network time server to be utilized by the Pepwave router.

21.4 Schedule

Enable and disable different functions (such as WAN connections, outbound policy, and firewalls at different times, based on a user-scheduled configuration profile. The settings for this are located at **System > Schedule**

Schedule			
Enabled			
Name	Time	Used by	
Weekdays Only	Weekdays only	-	

New Schedule

Enable scheduling, and then click on your schedule name or on the **New Schedule** button to begin.

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Edit schedule profile ✕

Schedule Settings

Enable	<input checked="" type="checkbox"/> The schedule function of those associated features will be lost if profile is disabled.
Name	<input type="text" value="Weekdays Only"/>
Schedule	<input type="text" value="Weekdays only"/>
Used by	You may go to supported feature settings page and set this profile as scheduler.

Schedule Map

	Midnight	4am	8am	Noon	4pm	8pm
Sunday	x	x	x	x	x	x
Monday	✓	✓	✓	✓	✓	✓
Tuesday	✓	✓	✓	✓	✓	✓
Wednesday	✓	✓	✓	✓	✓	✓
Thursday	✓	✓	✓	✓	✓	✓
Friday	✓	✓	✓	✓	✓	✓
Saturday	x	x	x	x	x	x

Edit Schedule Profile	
Enabling	Click this checkbox to enable this schedule profile. Note that if this is disabled, then any associated features will also have their scheduling disabled.
Name	Enter your desired name for this particular schedule profile.
Schedule	Click the drop-down menu to choose pre-defined schedules as your starting point. Please note that upon selection, previous changes on the schedule map will be deleted.
Schedule Map	Click on the desired times to enable features at that time period. You can hold your mouse for faster entry.

21.5 Email Notification

Email notification functionality provides a system administrator with up-to-date information on network status. The settings for configuring email notifications are found at **System>Email Notification**.

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Email Notification Setup	
Email Notification	<input checked="" type="checkbox"/> Enable
SMTP Server	smtp.mycompany.com <input checked="" type="checkbox"/> Require authentication
SSL Encryption	<input checked="" type="checkbox"/> (Note: any server certificate will be accepted)
SMTP Port	465 <input type="button" value="Default"/>
SMTP User Name	smtpuser
SMTP Password	•••••
Confirm SMTP Password	•••••
Sender's Email Address	idmin@mycompany.com
Recipient's Email Address	system@mycompany.com staff@mycompany.com

Email Notification Settings	
Email Notification	This setting specifies whether or not to enable email notification. If Enable is checked, the Pepwave router will send email messages to system administrators when the WAN status changes or when new firmware is available. If Enable is not checked, email notification is disabled and the Pepwave router will not send email messages.
SMTP Server	This setting specifies the SMTP server to be used for sending email. If the server requires authentication, check Require authentication .
SSL Encryption	Check the box to enable SMTPS. When the box is checked, SMTP Port will be changed to 465 automatically.
SMTP Port	This field is for specifying the SMTP port number. By default, this is set to 25 ; when SSL Encryption is checked, the default port number will be set to 465 . You may customize the port number by editing this field. Click Default to restore the number to its default setting.
SMTP User Name / Password	This setting specifies the SMTP username and password while sending email. These options are shown only if Require authentication is checked in the SMTP Server setting.
Confirm SMTP Password	This field allows you to verify and confirm the new administrator password.
Sender's Email Address	This setting specifies the email address the Pepwave router will use to send reports.
Recipient's Email Address	This setting specifies the email address(es) to which the Pepwave router will send email notifications. For multiple recipients, separate each email addresses using the enter key.

After you have finished setting up email notifications, you can click the **Test Email Notification** button to test the settings before saving. After **Test Email Notification** is

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clicked, you will see this screen to confirm the settings:

Test Email Notification	
SMTP Server	smtp.mycompany.com
SMTP Port	465
SMTP UserName	smtpuser
Sender's Email Address	admin@mycompany.com
Recipient's Email Address	system@mycompany.com staff@mycompany.com

Click **Send Test Notification** to confirm. In a few seconds, you will see a message with detailed test results.

Test email sent. Email notification settings are not saved, it will be saved after clicked the 'Save' button.

Test Result

```
[INFO] Try email through connection #3
[<-] 220 ESMTTP
[->] EHLO balance
[<-] 250-smtp Hello balance [210.210.210.210]
250-SIZE 100000000
250-8BITMIME
250-PIPELINING
250-AUTH PLAIN LOGIN
250-STARTTLS
```

21.6 Event Log

Event log functionality enables event logging at a specified remote syslog server. The settings for configuring the remote system log can be found at **System>Event Log**.

Send Events to Remote Syslog Server	
Remote Syslog	<input checked="" type="checkbox"/>
Remote Syslog Host	<input type="text"/>

Push Events to Mobile Devices	
Push Events	<input checked="" type="checkbox"/>

Event Log Settings

Remote Syslog This setting specifies whether or not to log events at the specified remote syslog server.

Remote Syslog Host This setting specifies the IP address or hostname of the remote syslog server.

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The Pepwave router can also send push notifications to mobile devices that have our Mobile Router Utility installed. Check the box to activate this feature.

Push Events



For more information on the Router Utility, go to:
www.peplink.com/products/router-utility

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21.7 SNMP

SNMP or simple network management protocol is an open standard that can be used to collect information about the Pepwave router. SNMP configuration is located at **System>SNMP**.

SNMP Settings	
SNMP Device Name	MAX_HD2_8D1C
SNMP Port	161 <input type="button" value="Default"/>
SNMPv1	<input type="checkbox"/> Enable
SNMPv2c	<input type="checkbox"/> Enable
SNMPv3	<input type="checkbox"/> Enable
<input type="button" value="Save"/>	

Community Name	Allowed Source Network	Access Mode
No SNMPv1 / SNMPv2c Communities Defined		
<input type="button" value="Add SNMP Community"/>		

SNMPv3 User Name	Authentication / Privacy	Access Mode
No SNMPv3 Users Defined		
<input type="button" value="Add SNMP User"/>		

SNMP Settings	
SNMP Device Name	This field shows the router name defined at System>Admin Security .
SNMP Port	This option specifies the port which SNMP will use. The default port is 161 .
SNMPv1	This option allows you to enable SNMP version 1.
SNMPv2	This option allows you to enable SNMP version 2.
SNMPv3	This option allows you to enable SNMP version 3.

To add a community for either SNMPv1 or SNMPv2, click the **Add SNMP Community** button in the **Community Name** table, upon which the following screen is displayed:

SNMP Community	
Community Name	My Company
Allowed Network	192.168.1.25 / 255.255.255.0 (/24) ▼
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

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SNMP Community Settings	
Community Name	This setting specifies the SNMP community name.
Allowed Source Subnet Address	This setting specifies a subnet from which access to the SNMP server is allowed. Enter subnet address here (e.g., 192.168.1.0) and select the appropriate subnet mask.

To define a user name for SNMPv3, click **Add SNMP User** in the **SNMPv3 User Name**

SNMPv3 User	
User Name	SNMPUser
Authentication	SHA password
Privacy	DES privacypassword


Save Cancel

table, upon which the following screen is displayed:

SNMPv3 User Settings	
User Name	This setting specifies a user name to be used in SNMPv3.
Authentication Protocol	<p>This setting specifies via a drop-down menu one of the following valid authentication protocols:</p> <ul style="list-style-type: none">• NONE• MD5• SHA <p>When MD5 or SHA is selected, an entry field will appear for the password.</p>
Privacy Protocol	<p>This setting specifies via a drop-down menu one of the following valid privacy protocols:</p> <ul style="list-style-type: none">• NONE• DES <p>When DES is selected, an entry field will appear for the password.</p>

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21.8 InControl

InControl Management	
InControl Management 	<input checked="" type="checkbox"/> Allow InControl Management
Privately Host InControl	<input checked="" type="checkbox"/>
InControl Host	<input type="text"/> <input type="text"/>

InControl is a cloud-based service which allows you to manage all of your Peplink and Pepwave devices with one unified system. With it, you can generate reports, gather statistics, and configure your devices automatically. All of this is now possible with InControl.

When this check box is checked, the device's status information will be sent to the Peplink InControl system. This device's usage data and configuration will be sent to the system if you enable the features in the system.

Alternately, you could also privately host InControl. Simply check the box beside the "Privately Host InControl" option, and enter the IP Address of your InControl Host.

You can sign up for an InControl account at <https://incontrol2.peplink.com/>. You can register your devices under the account, monitor their status, see their usage reports, and receive offline notifications.

21.9 Configuration

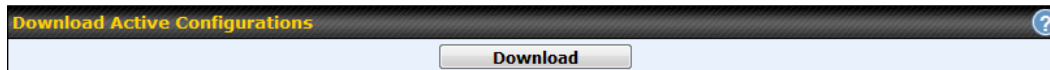
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Backing up Pepwave router settings immediately after successful completion of initial setup is strongly recommended. The functionality to download and upload Pepwave router settings is found at **System>Configuration**. Note that available options vary by model.



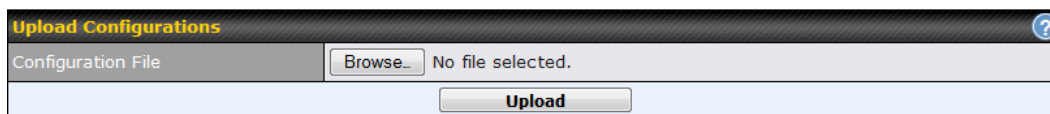
Restore Configuration to Factory Settings ?

Restore Factory Settings



Download Active Configurations ?

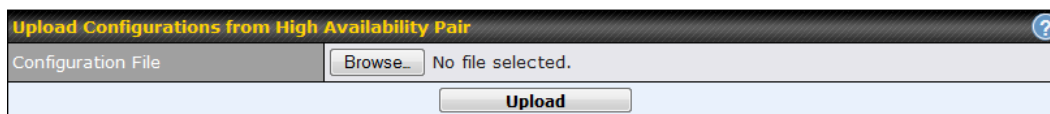
Download



Upload Configurations ?

Configuration File No file selected.

Upload



Upload Configurations from High Availability Pair ?

Configuration File No file selected.

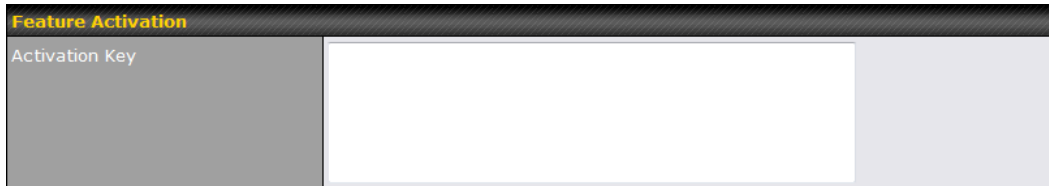
Upload

Configuration	
Restore Configuration to Factory Settings	The Restore Factory Settings button is to reset the configuration to factory default settings. After clicking the button, you will need to click the Apply Changes button on the top right corner to make the settings effective.
Download Active Configurations	Click Download to backup the current active settings.
Upload Configurations	To restore or change settings based on a configuration file, click Choose File to locate the configuration file on the local computer, and then click Upload . The new settings can then be applied by clicking the Apply Changes button on the page header, or you can cancel the procedure by pressing discard on the main page of the web admin interface.
Upload Configurations from High Availability Pair	In a high availability (HA) configuration, a Pepwave router can quickly load the configuration of its HA counterpart. To do so, click the Upload button. After loading the settings, configure the LAN IP address of the Pepwave router so that it is different from the HA counterpart.

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21.10 Feature Add-ons

Some Pepwave routers have features that can be activated upon purchase. Once the purchase is complete, you will receive an activation key. Enter the key in the **Activation Key** field, click **Activate**, and then click **Apply Changes**.

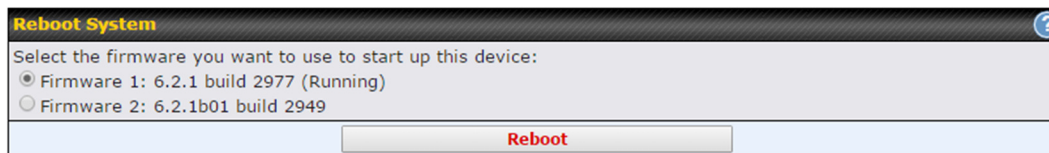


The screenshot shows a web interface titled "Feature Activation". It contains a label "Activation Key" next to a large, empty text input field. The interface has a dark header bar with the title and a light gray background for the main content area.

21.11 Reboot

This page provides a reboot button for restarting the system. For maximum reliability, the Pepwave router can equip with two copies of firmware. Each copy can be a different version. You can select the firmware version you would like to reboot the device with. The firmware marked with **(Running)** is the current system boot up firmware.

Please note that a firmware upgrade will always replace the inactive firmware partition.



The screenshot shows a web interface titled "Reboot System" with a help icon in the top right corner. Below the title, it says "Select the firmware you want to use to start up this device:". There are two radio button options: "Firmware 1: 6.2.1 build 2977 (Running)" which is selected, and "Firmware 2: 6.2.1b01 build 2949". At the bottom of the form is a button labeled "Reboot".

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21.12 Ping

The ping test tool sends pings through a specified Ethernet interface or a SpeedFusion™ VPN connection. You can specify the number of pings in the field **Number of times**, to a maximum number of 10 times. **Packet Size** can be set to a maximum of 1472 bytes. The ping utility is located at **System>Tools>Ping**, illustrated below:

The screenshot displays the 'Ping' utility interface. The configuration section includes a 'Connection' dropdown set to 'WAN 1', a 'Destination' text box containing '10.10.10.1', a 'Packet Size' text box set to '56', and a 'Number of times' slider set to '5'. Below the configuration are 'Start' and 'Stop' buttons. The 'Results' section shows the output of the ping test, including a 'Clear Log' button in the top right corner.

Ping	
Connection	WAN 1
Destination	10.10.10.1
Packet Size	56
Number of times	Times 5

Start Stop

Results		Clear Log
PING 10.10.10.1 (10.10.10.1) from 10.88.3.158 56(84) bytes of data.		
64 bytes from 10.10.10.1: icmp_req=1 ttl=62 time=27.6 ms		
64 bytes from 10.10.10.1: icmp_req=2 ttl=62 time=26.5 ms		
64 bytes from 10.10.10.1: icmp_req=3 ttl=62 time=28.9 ms		
64 bytes from 10.10.10.1: icmp_req=4 ttl=62 time=28.3 ms		
64 bytes from 10.10.10.1: icmp_req=5 ttl=62 time=27.7 ms		

10.10.10.1 ping statistics ---		
5 packets transmitted, 5 received, 0% packet loss, time 4005ms		
rtt min/avg/max/mdev = 26.516/27.855/28.933/0.814 ms		

Tip

A system administrator can use the ping utility to manually check the connectivity of a particular LAN/WAN connection.

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21.13 Traceroute Test

The traceroute test tool traces the routing path to the destination through a particular Ethernet interface or a SpeedFusion™ connection. The traceroute test utility is located at **System>Tools>Traceroute**.

Traceroute	
Connection	WAN 1
Destination	64.233.189.99

Results <input type="button" value="Clear Log"/>	
Traceroute to 64.233.189.99 (204.233.189.99), 30 hops max, 90 bytes packet size	
0	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
1	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
2	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
3	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
4	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
5	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
6	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
7	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
8	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
9	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
10	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
11	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
12	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
13	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
14	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
15	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
16	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
17	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
18	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
19	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
20	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
21	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
22	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
23	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
24	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
25	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
26	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
27	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
28	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
29	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
30	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
31	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
32	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
33	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
34	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
35	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
36	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
37	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
38	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
39	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
40	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
41	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
42	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
43	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
44	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
45	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
46	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
47	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
48	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
49	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
50	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
51	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
52	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
53	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
54	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
55	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
56	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
57	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
58	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
59	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
60	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
61	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
62	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
63	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
64	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
65	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
66	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
67	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
68	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
69	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
70	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
71	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
72	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
73	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
74	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
75	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
76	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
77	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
78	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
79	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
80	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
81	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
82	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
83	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
84	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
85	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
86	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
87	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
88	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
89	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms
90	10.0.0.1 (10.0.0.1) 0.000 ms < 0.000 ms < 0.000 ms

Tip

A system administrator can use the traceroute utility to analyze the connection path of a LAN/WAN connection.

21.14 PepVPN Test

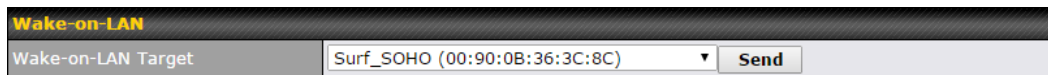
The **PepVPN Test** tool can help to test the throughput between different VPN peers. You can define the **Test Type**, **Direction**, and **Duration** of the test, and press **Go!** to perform the throughput test. The VPN test utility is located at **System>Tools>PepVPN Test**, illustrated as follows:

PepVPN Throughput Test	
Profile	NY Office
Type	<input checked="" type="radio"/> TCP <input type="radio"/> UDP
Direction	<input checked="" type="radio"/> Upload <input type="radio"/> Download
Duration	10 seconds (5 - 600)
<input type="button" value="Go!"/>	
Results	
(Empty)	

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21.15 Wake-on-LAN

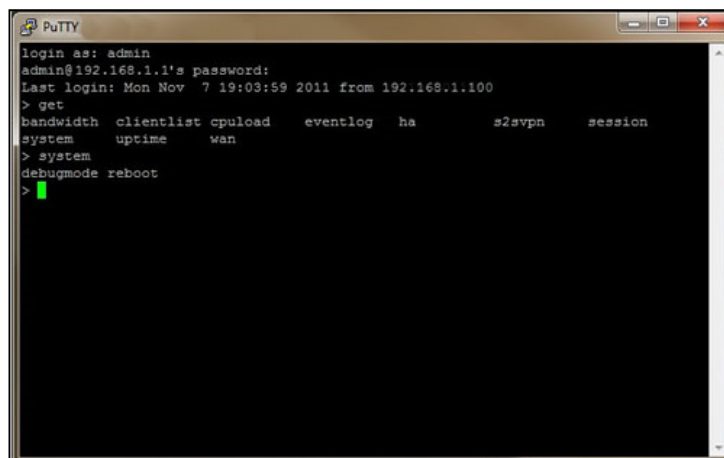
Peplink routers can send special “magic packets” to any client specified from the Web UI. To access this feature, navigate to **System > Tools > Wake-on-LAN**



Select a client from the drop-down list and click **Send** to send a “magic packet”

21.16 CLI (Command Line Interface Support)

The CLI (command line interface) can be accessed via SSH. This field enables CLI support. The below settings specify which TCP port and which interface(s) should accept remote SSH CLI access. The user name and password used for remote SSH CLI access are the same as those used for web admin access.



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22 Status

22.1 Device

System information is located at **Status>Device**.

System Information	
Router Name	MAX_HD2_8D1C
Model	Pepwave MAX HD2
Hardware Revision	2
Serial Number	2830-A48A-8D1C
Firmware	6.2.0 build 2891
PepVPN Version	4.0.0
Modem Support Version	1017 (Modem Support List)
Host Name	max-hd2-8d1c
Uptime	7 days 50 minutes
System Time	Mon Feb 23 11:14:13 WET 2015
Diagnostic Report	Download
Remote Assistance	Turn on


System Information	
Router Name	This is the name specified in the Router Name field located at System>Admin Security .
Model	This shows the model name and number of this device.
Product Code	If your model uses a product code, it will appear here.
Hardware Revision	This shows the hardware version of this device.
Serial Number	This shows the serial number of this device.
Firmware	This shows the firmware version this device is currently running.
PepVPN Version	This shows the current PepVPN version.
Modem Support Version	This shows the modem support version. For a list of supported modems, click Modem Support List .
Host Name	The host name assigned to the Pepwave router appears here.
Uptime	This shows the length of time since the device has been rebooted.
System Time	This shows the current system time.
Diagnostic Report	The Download link is for exporting a diagnostic report file required for system investigation.

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Remote Assistance

Click **Turn on** to enable remote assistance.

Interface	MAC Address
LAN	00:1A:DD:BD:54:40
WAN 1	00:1A:DD:BD:54:41
WAN 2	00:1A:DD:BD:54:42

The second table shows the MAC address of each LAN/WAN interface connected. To view your device's End User License Agreement (EULA), click .

Important Note

If you encounter issues and would like to contact the Pepwave Support Team (<http://www.pepwave.com/contact/>), please download the diagnostic report file and attach it along with a description of your issue. In Firmware 5.1 or before, the diagnostic report file can be obtained at **System>Reboot**.

22.1.1 GPS Data

The MAX HD2 and HD2 IP67 automatically store up to seven days of GPS location data in GPS eXchange format (GPX). To review this data using third-party applications, click **Status>Device** and then download your GPX file.

The Pepwave MAX BR1, HD2, and HD2 IP67 export real-time location data in NMEA format through the LAN IP address at TCP port 60660. It is accessible from the LAN or over a SpeedFusion connection. To access the data via a virtual serial port, install a virtual serial port driver. Visit <http://www.peplink.com/index.php?view=faq&id=294> to download the driver.

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22.2 Active Sessions

Information on active sessions can be found at **Status>Active Sessions>Overview**.

Service	Inbound Sessions	Outbound Sessions
AIM/ICQ	0	1
Bittorrent	0	32
DNS	0	51
Flash	0	1
HTTPS	0	76
Jabber	0	5
MSN	0	11
NTP	0	4
QQ	0	1
Remote Desktop	0	3
SSH	0	12
SSL	0	64
XMPP	0	4
Yahoo	0	1

Interface	Inbound Sessions	Outbound Sessions
WAN 1	0	176
WAN 2	0	32
Wi-Fi WAN	0	51
Cellular 1	0	64
Cellular 2	0	0
USB	0	0

Top Clients

Client IP Address	Total Sessions
10.9.66.66	1069
10.9.98.144	147
10.9.2.18	63
10.9.66.14	56
10.9.2.26	33

This screen displays the number of sessions initiated by each application. Click on each service listing for additional information. This screen also indicates the number of sessions initiated by each WAN port. In addition, you can see which clients are initiating the most sessions.

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You can also perform a filtered search for specific sessions. You can filter by subnet, port, protocol, and interface. To perform a search, navigate to **Status>Active Sessions>Search**.

Overview Search

Session data captured within one minute. [Refresh](#)

IP / Subnet	Source or Destination ▾	255.255.255.255 (/32) ▾
Port	Source or Destination ▾	
Protocol / Service	TCP ▾	
Interface	<input type="checkbox"/> WAN 1 <input type="checkbox"/> WAN 2 <input type="checkbox"/> Wi-Fi WAN <input type="checkbox"/> Cellular 1 <input type="checkbox"/> Cellular 2 <input type="checkbox"/> USB <input type="checkbox"/> VPN	
<input type="button" value="Search"/>		

Outbound

Protocol	Source IP	Destination IP	Service	Interface	Idle Time
No sessions					

Total searched results: 0

Inbound

Protocol	Source IP	Destination IP	Service	Interface	Idle Time
No sessions					

Total searched results: 0

Transit

Protocol	Source IP	Destination IP	Service	Interface	Idle Time
No sessions					


Total searched results: 0

This **Active Sessions** section displays the active inbound/outbound sessions of each WAN connection on the Pepwave router. A filter is available to sort active session information. Enter a keyword in the field or check one of the WAN connection boxes for filtering.

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22.3 Client List

The client list table is located at **Status>Client List**. It lists DHCP and online client IP addresses, names (retrieved from the DHCP reservation table or defined by users), current download and upload rate, and MAC address.

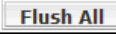
Clients can be imported into the DHCP reservation table by clicking the  button on the right. You can update the record after import by going to **Network>LAN**.

Filter		<input type="checkbox"/> Online Clients Only			
		<input type="checkbox"/> DHCP Clients Only			
Client List 					
IP Address ▲	Name	Download (kbps)	Upload (kbps)	MAC Address	Import
192.168.1.100		0	0	00:50:56:99:E1:76	
Scale: <input checked="" type="radio"/> kbps <input type="radio"/> Mbps					

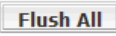
If the PPTP server (see **Section 19.2**), SpeedFusion™ (see **Section 12.1**), or AP controller (see **Section 20**) is enabled, you may see the corresponding connection name listed in the **Name** field.

22.4 WINS Client

The WINS client list table is located at **Status>WINS Client**.







WINS Client List	
Name ▲	IP Address
UserA	10.9.2.1
UserB	10.9.30.1
UserC	10.9.2.4
	


The WINS client table lists the IP addresses and names of WINS clients. This option will only be available when you have enabled the WINS server (navigation: **Network>Interfaces>LAN**). The names of clients retrieved will be automatically matched into the Client List (see previous section). Click **Flush All** to flush all WINS client records.

WINS Client List	
Name ▲	IP Address
UserA	10.9.2.1
UserB	10.9.30.1
UserC	10.9.2.4
	


22.5 UPnP / NAT-PMP

The table that shows the forwarded ports under UPnP and NAT-PMP protocols is located at **Status>UPnP/NAT-PMP**. This section appears only if you have enabled UPnP / NAT-PMP as mentioned in **Section 16.1.1**.

Forwarded Ports						
External	Internal	Internal Address	Type	Protocol	Description	
47453	3392	192.168.1.100	UPnP	UDP	Application 031	
35892	11265	192.168.1.50	NAT-PMP	TCP	NAT-PMP 58	
4500	3560	192.168.1.20	UPnP	TCP	Application 013	
5921	236	192.168.1.30	UPnP	TCP	Application 047	
22409	8943	192.168.1.70	NAT-PMP	UDP	NAT-PMP 97	
2388	27549	192.168.1.40	UPnP	TCP	Application 004	

Click  to delete a single UPnP / NAT-PMP record in its corresponding row. To delete all records, click **Delete All** on the right-hand side below the table.

Important Note

UPnP / NAT-PMP records will be deleted immediately after clicking the button  or **Delete All**, without the need to click **Save** or **Confirm**.

22.6 SpeedFusion Status


Current SpeedFusion™ status information is located at **Status>SpeedFusion™**. Details about SpeedFusion™ connection peers appears as below:

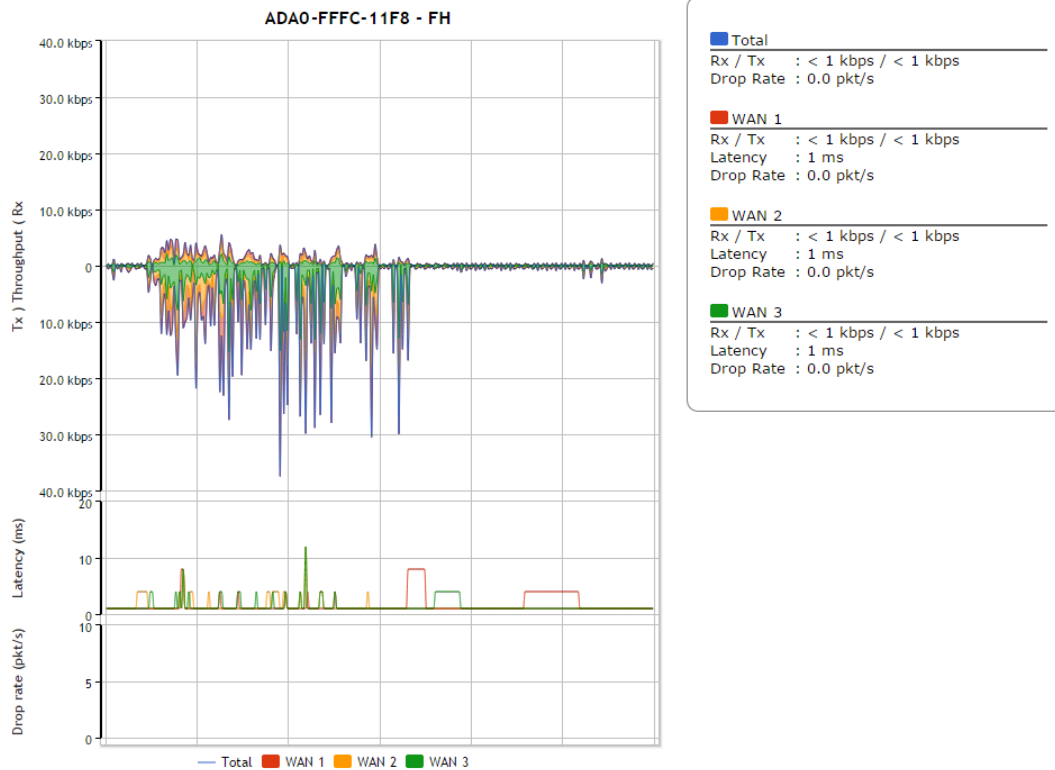
PepVPN with SpeedFusion - Remote Peer Details				<input type="checkbox"/> Show disconnected profiles	
Search		<input type="text"/>			
Remote Peer	Profile	Information			
 ▶ ADA0-FFFC-11F8	FH	192.168.77.0/24			
 ▶ 3ED2-8F63-1824	380-5 - NO NAT	192.168.3.0/24			

Click on the corresponding peer name to explore the WAN connection(s) status and subnet information of each VPN peer.

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Remote Peer	Profile	Information
ADA0-FFFC-11F8	FH	192.168.77.0/24
WAN 1	Rx: < 1 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s Latency: 1 ms
WAN 2	Rx: < 1 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s Latency: 1 ms
WAN 3	Rx: < 1 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s Latency: 1 ms
Total	Rx: < 1 kbps Tx: 1.1 kbps	Drop rate: 0.0 pkt/s
3ED2-8F63-1824	380-5 - NO NAT	192.168.3.0/24
WAN 1	Rx: < 1 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s Latency: 4 ms
WAN 2	Rx: < 1 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s Latency: 4 ms
WAN 3	Rx: < 1 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s Latency: 4 ms
Total	Rx: 1.6 kbps Tx: < 1 kbps	Drop rate: 0.0 pkt/s


Click the  button for a chart displaying real-time throughput, latency, and drop-rate information for each WAN connection.




When pressing the  button, the following menu will appear:

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PepVPN performance analysis - 9B0A-A29B-2931



PepVPN Test:
Check the general TCP/UDP throughput.



PepVPN Analyzer:
Check the uplink performance of each tunnel.

Warning: PepVPN Analyzer will temporarily interrupt VPN connectivity and will restore after test.

Close



PepVPN Test:
Check the general TCP/UDP throughput.

After clicking the icon, the following menu appears:

Configuration

Type	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	Start
Direction	<input checked="" type="radio"/> Upload <input type="radio"/> Download	
Duration	10 seconds (5 - 600)	

WAN Statistics

WAN 1	Rx: 2.5 kbps	Tx: 5.3 kbps	Drop rate: 0.0 pkt/s	Latency: 186 ms
WAN 3	Rx: n/a	Tx: n/a	Drop rate: n/a	Latency: n/a
WAN 4	Rx: n/a	Tx: n/a	Drop rate: n/a	Latency: n/a
Total	Rx: 2.5 kbps	Tx: 5.3 kbps	Drop rate: 0.0 pkt/s	Latency: 186 ms

Select the L2 protocol (TCP/UDP), direction, and duration and click the **Start** button to begin the general throughput test.

Results

0.1250 MB / 1.00 sec = 1.0485 Mbps
1.0000 MB / 1.00 sec = 8.3888 Mbps
1.3125 MB / 1.00 sec = 11.0098 Mbps
3.0000 MB / 1.00 sec = 25.1465 Mbps
5.6875 MB / 1.00 sec = 47.7473 Mbps
6.0625 MB / 1.00 sec = 50.8562 Mbps
4.9375 MB / 1.00 sec = 41.4188 Mbps
4.5000 MB / 1.00 sec = 37.7487 Mbps
5.0000 MB / 1.00 sec = 41.9438 Mbps
5.6875 MB / 1.00 sec = 47.7099 Mbps
37.3167 MB / 10.05 sec = 31.1504 Mbps 8 %TX 9 %RX 47 retrans 132.62 msRTT
TEST DONE

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PepVPN Analyzer:
Check the uplink performance of each tunnel.

The bandwidth bonding feature of PepVPN occurs when multiple WAN lines from one end merge with multiple WAN lines from the other end. For this to happen, each WAN line needs to form a connection with all the WAN lines on the opposite end. The function of the PepVPN analyzer is to report the throughput, packet loss, and latency of all possible combinations of connections. **Please note that the PepVPN Analyzer will temporarily interrupt VPN connectivity and will restore after test.**

After clicking the icon, the analyzer will require several minutes to perform its analysis depending the number of WAN links in the SpeedFusion™ Tunnel. Once the test the complete, the report will appear:

Results							
Estimated time: 150 s							
Time remaining: 0 s							
100%							
Local WAN1 > Remote WAN3	Local WAN1 > Remote WAN4	Local WAN1 > Remote WAN5	Local WAN1 > Remote WAN6	Tx Avg. (Mbps)	Tx Max. (Mbps)	Packet loss (%)	RTT (ms)
O				5.87	16.95	0.76	420.51
	O			20.72	26.39	1.59	29.89
		O		30.10	43.69	2.24	29.61
			O	45.01	55.93	2.16	28.24
O	O			24.87	33.56	0.86	49.86
O		O		19.30	31.28	0.01	49.78
	O	O		18.59	30.41	2.08	39.78
O	O	O		20.56	34.60	0.00	38.11
O			O	36.70	59.16	2.64	42.06
	O		O	19.98	30.40	4.40	38.01
O	O		O	31.63	42.99	0.72	37.99
		O	O	36.88	55.78	2.60	33.89
O		O	O	38.30	47.89	0.01	29.98
	O	O	O	33.21	55.23	2.69	30.48
O	O	O	O	30.02	46.66	3.77	28.68

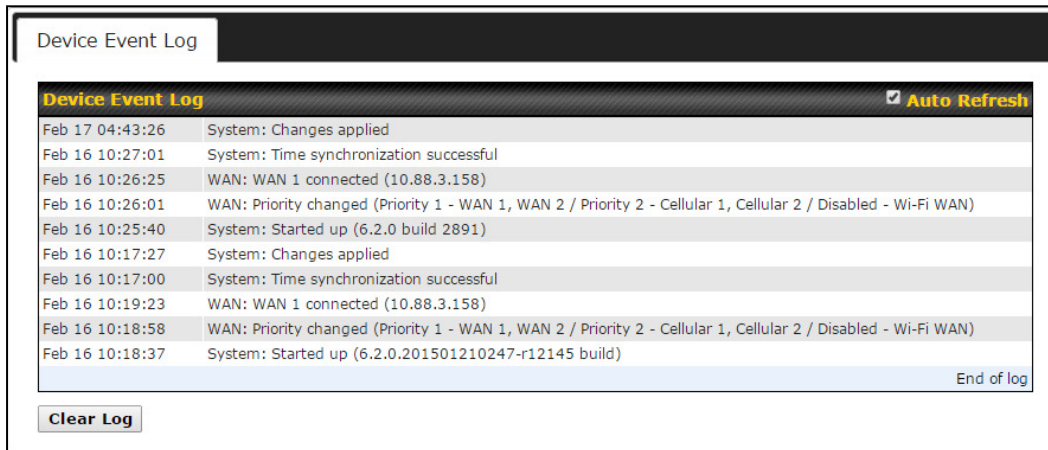
"O" indicates that specific WAN / Tunnel is active for that particular test.

"Tx Avg." is the averaged throughput across the full 10 seconds time, while "Tx Max." is the averaged throughput of the fastest 30% of time.

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22.7 Event Log

Event log information is located at **Status>Event Log**.



The screenshot shows the 'Device Event Log' interface. At the top, there is a tab labeled 'Device Event Log' and a checkbox for 'Auto Refresh' which is checked. Below this is a table of events:

Time	Event Description
Feb 17 04:43:26	System: Changes applied
Feb 16 10:27:01	System: Time synchronization successful
Feb 16 10:26:25	WAN: WAN 1 connected (10.88.3.158)
Feb 16 10:26:01	WAN: Priority changed (Priority 1 - WAN 1, WAN 2 / Priority 2 - Cellular 1, Cellular 2 / Disabled - Wi-Fi WAN)
Feb 16 10:25:40	System: Started up (6.2.0 build 2891)
Feb 16 10:17:27	System: Changes applied
Feb 16 10:17:00	System: Time synchronization successful
Feb 16 10:19:23	WAN: WAN 1 connected (10.88.3.158)
Feb 16 10:18:58	WAN: Priority changed (Priority 1 - WAN 1, WAN 2 / Priority 2 - Cellular 1, Cellular 2 / Disabled - Wi-Fi WAN)
Feb 16 10:18:37	System: Started up (6.2.0.201501210247-r12145 build)

At the bottom right of the log area, it says 'End of log'. Below the log area is a 'Clear Log' button.

The log section displays a list of events that has taken place on the Pepwave router. Check **Auto Refresh** to refresh log entries automatically. Click the **Clear Log** button to clear the log.

22.8 Bandwidth

This section shows bandwidth usage statistics and is located at **Status>Bandwidth**. Bandwidth usage at the LAN while the device is switched off (e.g., LAN bypass) is neither recorded nor shown.

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22.8.1 Real-Time

The **Data transferred since installation** table indicates how much network traffic has been processed by the device since the first bootup. The **Data transferred since last reboot** table indicates how much network traffic has been processed by the device since the last bootup.

Data transferred since installation (Sun Oct 10 05:56:02 PST 2010)

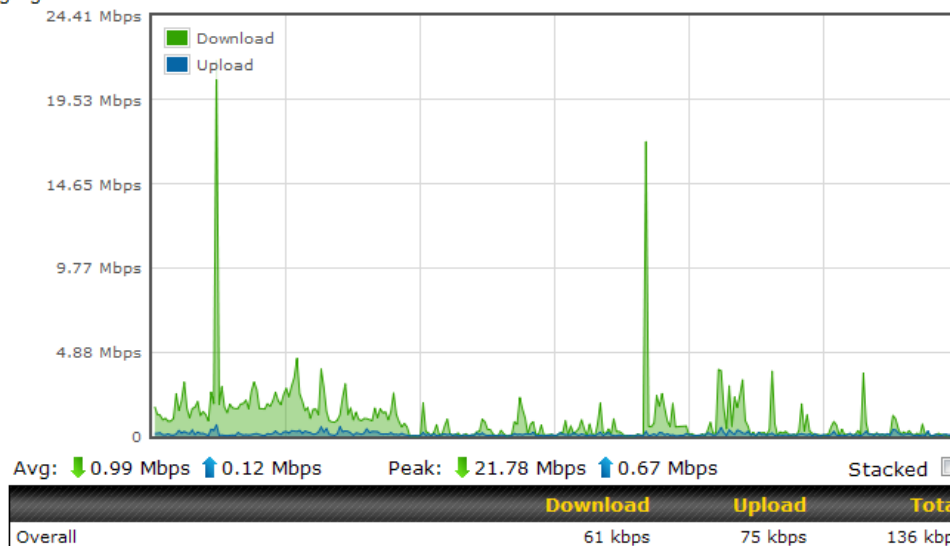
	Download	Upload	Total
All WAN Connections	216.68 GB	91.70 GB	308.38 GB

Data transferred since last reboot

[\[Hide Details \]](#)

	Download	Upload	Total
All WAN Connections	0.74 GB	0.63 GB	1.37 GB
WAN1	0.67 GB	0.61 GB	1.28 GB
WAN2	0.07 GB	0.02 GB	0.09 GB

Aggregated Transfer

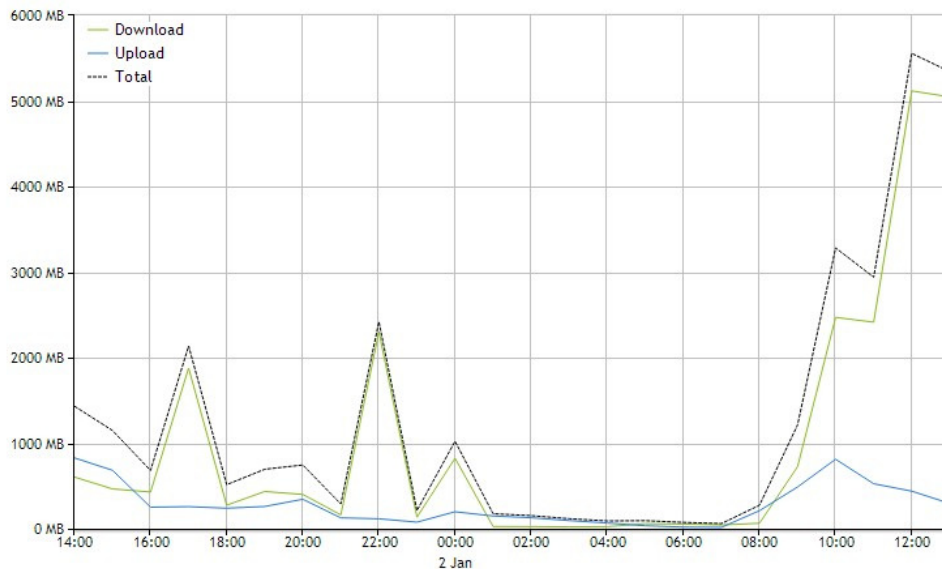


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22.8.2 Hourly

This page shows the hourly bandwidth usage for all WAN connections, with the option of viewing each individual connection. Select the desired connection to check from the drop-down menu.

Hourly Usage	
Connection	All WAN
Scale	<input checked="" type="radio"/> MB <input type="radio"/> GB



Date	Download	Upload	Total
13:00	5 047 MB	295 MB	5 342 MB
12:00	5 117 MB	439 MB	5 556 MB
11:00	2 414 MB	526 MB	2 940 MB
10:00	2 470 MB	812 MB	3 282 MB
09:00	725 MB	488 MB	1 213 MB
08:00	64 MB	211 MB	275 MB

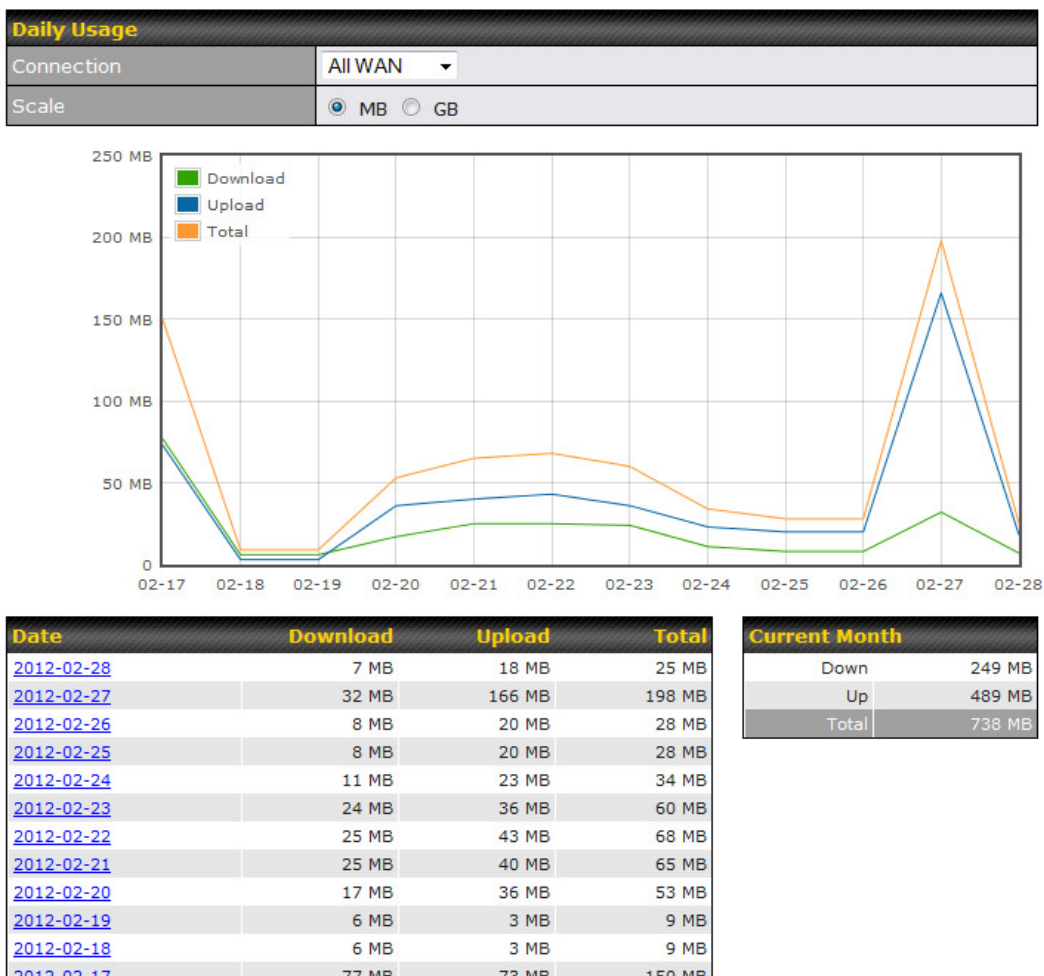
22.8.3 Daily

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This page shows the daily bandwidth usage for all WAN connections, with the option of viewing each individual connection.

Select the connection to check from the drop-down menu. If you have enabled the **Bandwidth Monitoring** feature, the **Current Billing Cycle** table for that WAN connection will be displayed.

Click on a date to view the client bandwidth usage of that specific date. This feature is not available if you have selected to view the bandwidth usage of only a particular WAN connection. The scale of the graph can be set to display megabytes (**MB**) or gigabytes (**GB**).



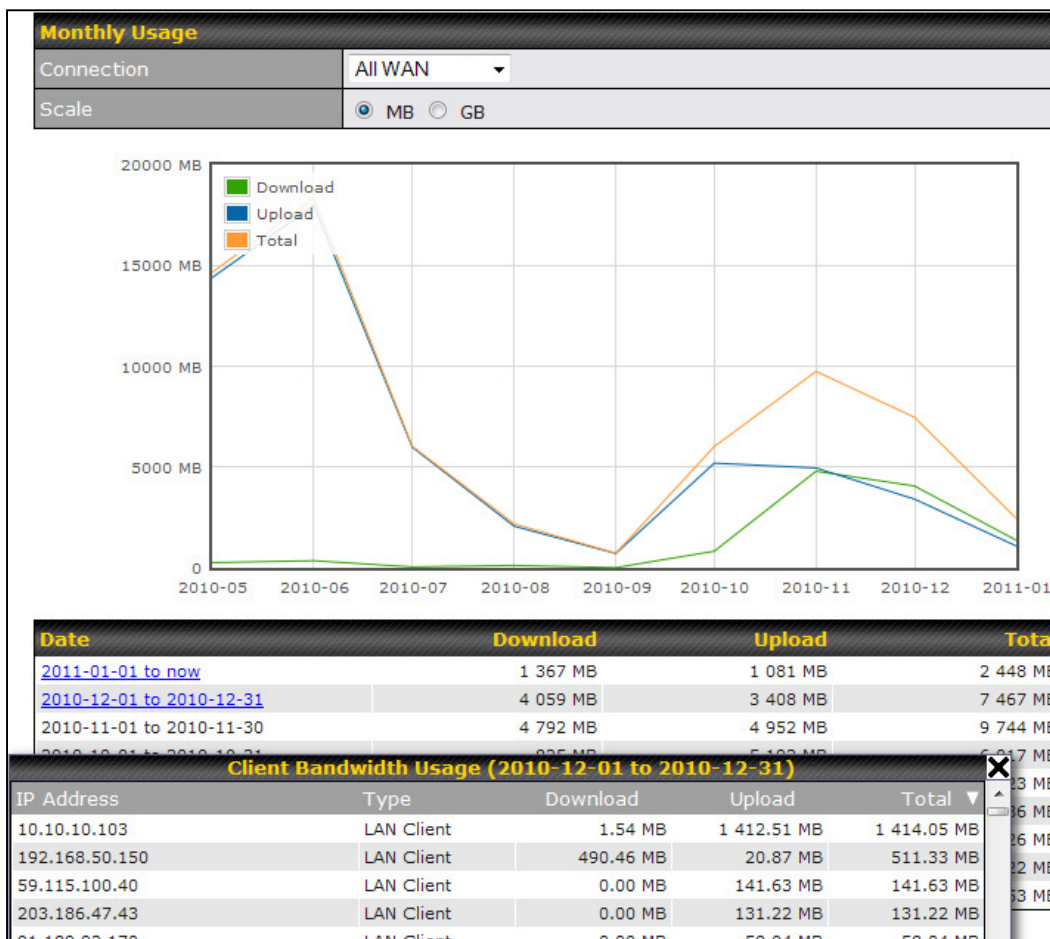
All WAN Daily Bandwidth Usage

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22.8.4 Monthly

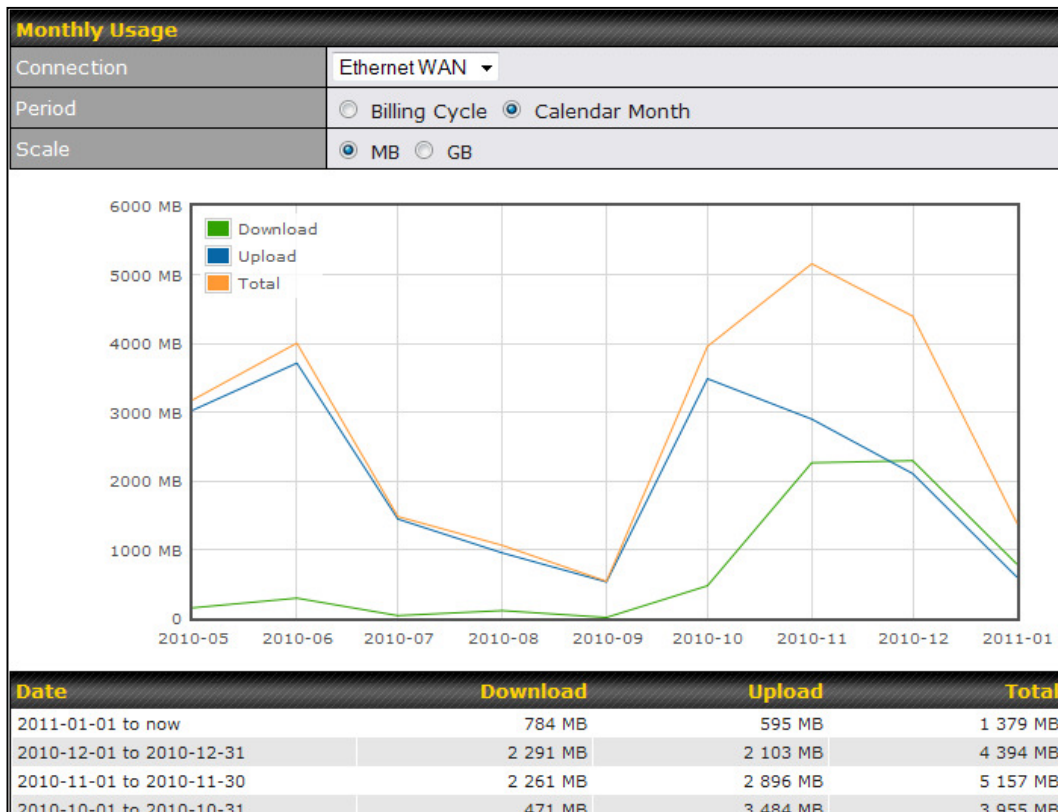
This page shows the monthly bandwidth usage for each WAN connection. If you have enabled the **Bandwidth Monitoring** feature, you can check the usage of each particular connection and view the information by **Billing Cycle** or by **Calendar Month**.

Click the first two rows to view the client bandwidth usage in the last two months. This feature is not available if you have chosen to view the bandwidth of an individual WAN connection. The scale of the graph can be set to display megabytes (**MB**) or gigabytes (**GB**).



All WAN Monthly Bandwidth Usage

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Ethernet WAN Monthly Bandwidth Usage

Tip

By default, the scale of data size is in **MB**. 1GB equals 1024MB.

Appendix A. Restoration of Factory Defaults

To restore the factory default settings on a Pepwave router, follow the steps below:

1. Locate the reset button on the front or back panel of the Pepwave router.
2. With a paper clip, press the reset button and hold it for at least 10 seconds, until the unit reboots itself.

After the Pepwave router finishes rebooting, the factory default settings will be restored.

Important Note

All previous configurations and bandwidth usage data will be lost after restoring factory default settings. Regular backup of configuration settings is strongly recommended.

Appendix B: Declaration

1. **The device supports time division technology**
2. **Federal Communication Commission and Industry Canada Interference Statement**

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.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

IMPORTANT NOTE

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 25cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination.

FCC Radiation Exposure Statement (for MAX700/ HD2 IP67/ BR1/ Surf SOHO)

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.

FCC Radiation Exposure Statement (for MAX On-The-Go)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

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1. 20cm minimum when the product is operated alone without co-transmitting with a plug-in 3G USB dongle device.
2. 65cm minimum when the product is operated with a plug-in 3G USB device which has maximum of 7W ERP output power.
3. For co-transmission scenario which is not covered above, please consult the RF technician or device supplier.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination.

FCC Radiation Exposure Statement (for MAX HD2 LTE/ MAX HD2 LTEA)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 27cm between the radiator & your body.

50cm minimum when the product is operated with a plug-in 3G USB device which has maximum of 7W ERP output power.

For WLAN							
Antenna No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length (mm)
WAN(2.4G)-1	SmartAnt	SAA06-220690	3	2400 ~ 2500 MHz	Dipole	R-SMA	150
WAN(2.4G)-2	SmartAnt	SAA06-220690	3	2400 ~ 2500 MHz	Dipole	R-SMA	150
AP(5G)-1	SmartAnt	SAA06-220690	5.5	5150 ~ 5350 MHz	Dipole	R-SMA	260
			6	5350 ~ 5875 MHz			260
AP(5G)-2	SmartAnt	SAA06-220690	5.5	5150 ~ 5350 MHz	Dipole	R-SMA	260
			6	5350 ~ 5875 MHz			260
For GPS							
Antenna No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	
1	MASTER WAVE TECHNOLOGY CO., LTD.	98335KSAF000	4.5 ±0.5	1575.42 MHz	Magnetic	SMA	
For WWAN(LTE)							
Antenna No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	
Cellular 1 Main	MASTER WAVE TECHNOLOGY CO., LTD.	98619ZSAX025	1.99	699~960 MHz	Dipole	SMA	
Cellular 1 Diversity/Aux			4	1575~2170 MHz			
Cellular 2 Main			1	2300~2320 MHz			
Cellular 1 Diversity/Aux			2.8	2325~2690 MHz			

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Industry Canada Statement (for MAX Hotspot/ Surf SOHO/ 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

To maintain compliance with the RF exposure guidelines, place the unit at least 20cm from nearby persons.

Mise en garde_ : Pour assurer la conformité aux directives relatives à l'exposition aux fréquences radio, le jouet doit être placé à au moins 20_cm des personnes à proximité.

Caution :

(i) 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;

(ii) 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

(iii) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement:

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas;

(iii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

Radiation Exposure Statement:

This equipment complies with ISED 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.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

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Industry Canada Statement (for MAX HD2 LTE/LTEA)

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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution : (for MAX HD2 LTE/LTEA)

(i) 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;

(ii) 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

(iii) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement: (for MAX HD2 LTE/LTEA)

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas;

(iii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

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Radiation Exposure Statement: (for MAX HD2 LTE/LTEA)

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 37cm between the radiator & your body.

70cm minimum when the product is operated with a plug-in 3G USB device which has maximum of 7W ERP output power.

Déclaration d'exposition aux radiations: (for MAX HD2 LTE/LTEA)

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 37 cm de distance entre la source de rayonnement et votre corps.

70cm minimum lorsque le produit est utilisé avec un plug-in 3G périphérique USB qui a un maximum de 7W ERP puissance de sortie.

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3. CE Statement for Pepwave Routers

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN 60950-1: 2006 + A11 : 2009+A1 : 2010+ A12: 2011
Safety of Information Technology Equipment

- EN50385 : 2002 / Article 3(1)(a)
Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

EN 300 328 V1.7.1: 2006
Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

- EN 301 908-1 V5.2.1: 2011
Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 1: Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE Directive

- EN 301 511 V9.0.2: 2003
Global System for Mobile communications (GSM); Harmonized standard for mobile stations in the GSM 900 and DCS 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC)

- EN 301 489-1 V1.9.2: 2008
Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

- EN 301 489-7 V1.3.1: 2005
ElectroMagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment ad services; Part 7: Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS)









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- EN 301 489-17 V2.2.1: 2012
Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment
- EN 301 489-24 V1.5.1: 2010
Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 24: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile and portable (UE) radio and ancillary equipment



Český [Czech]	[<i>Jméno výrobce</i>] tímto prohlašuje, že tento [<i>typ zařízení</i>] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede [<i>fabrikantens navn</i>] erklærer herved, at følgende udstyr [<i>udstyrets typebetegnelse</i>] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erkläre [<i>Name des Herstellers</i>], dass sich das Gerät [<i>Gerätetyp</i>] in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab [<i>tootja nimi = name of manufacturer</i>] seadme [<i>seadme tüüp = type of equipment</i>] vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, [<i>name of manufacturer</i>], declares that this [<i>type of equipment</i>] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente [<i>nombre del fabricante</i>] declara que el [<i>clase de equipo</i>] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [<i>name of manufacturer</i>] ΔΗΛΩΝΕΙ ΟΤΙ [<i>type of equipment</i>] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente [<i>nom du fabricant</i>] déclare que l'appareil [<i>type d'appareil</i>] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente [<i>nome del costruttore</i>] dichiara che questo [<i>tipo di apparecchio</i>] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [<i>name of manufacturer / izgatavotāja nosaukums</i>] deklarē, ka [<i>type of equipment / iekārtas tips</i>] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

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Lietuvių [Lithuanian]	Šiuo [manufacturer name] deklaruoja, kad šis [equipment type] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
 Nederlands [Dutch]	Hierbij verklaart [naam van de fabrikant] dat het toestel [type van toestel] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
 Malti [Maltese]	Hawnhekk, [isem tal-manifattur], jiddikjara li dan [il-mudel tal-prodott] jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.
 Magyar [Hungarian]	Alulírott, [gyártó neve] nyilatkozom, hogy a [... típus]megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
 Polski [Polish]	Niniejszym [nazwa producenta] oświadczam, że [nazwa wyrobu] jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
 Português [Portuguese]	[Nome do fabricante] declara que este [tipo de equipamento] está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
 Slovensko [Slovenian]	[Ime proizvajalca] izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovenský [Slovak]	[Meno výrobcu] týmto vyhlasuje, že [typ zariadenia]spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
 Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
 Svenska [Swedish]	Härmed intygar [företag] att denna [utrustningstyp] står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

4. NCC for Pepwave Routers

For MAX Transit

WLAN

[警語]

「電磁波曝露量 MPE 標準值 1mW/cm² · 本產品使用時建議應距離人體 24 cm」

[警語內容]

(1) 電磁波警語標示：「減少電磁波影響，請妥適使用」。標示方式：必須標示於設備本體適當位置及設備外包裝及使用說明書上。

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

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第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

本行動寬頻設備的行動寬頻頻段(LTE900/LTE1800)

警告使用者:

此為甲類資訊技術設備，於居住環境中使用時，可能會造成射頻擾動，在此種情況下，使用者會被要求採取某些適當的對策。

PEP WAVE

Broadband Possibilities

www.pepwave.com

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<http://www.pepwave.com/partners/channel->