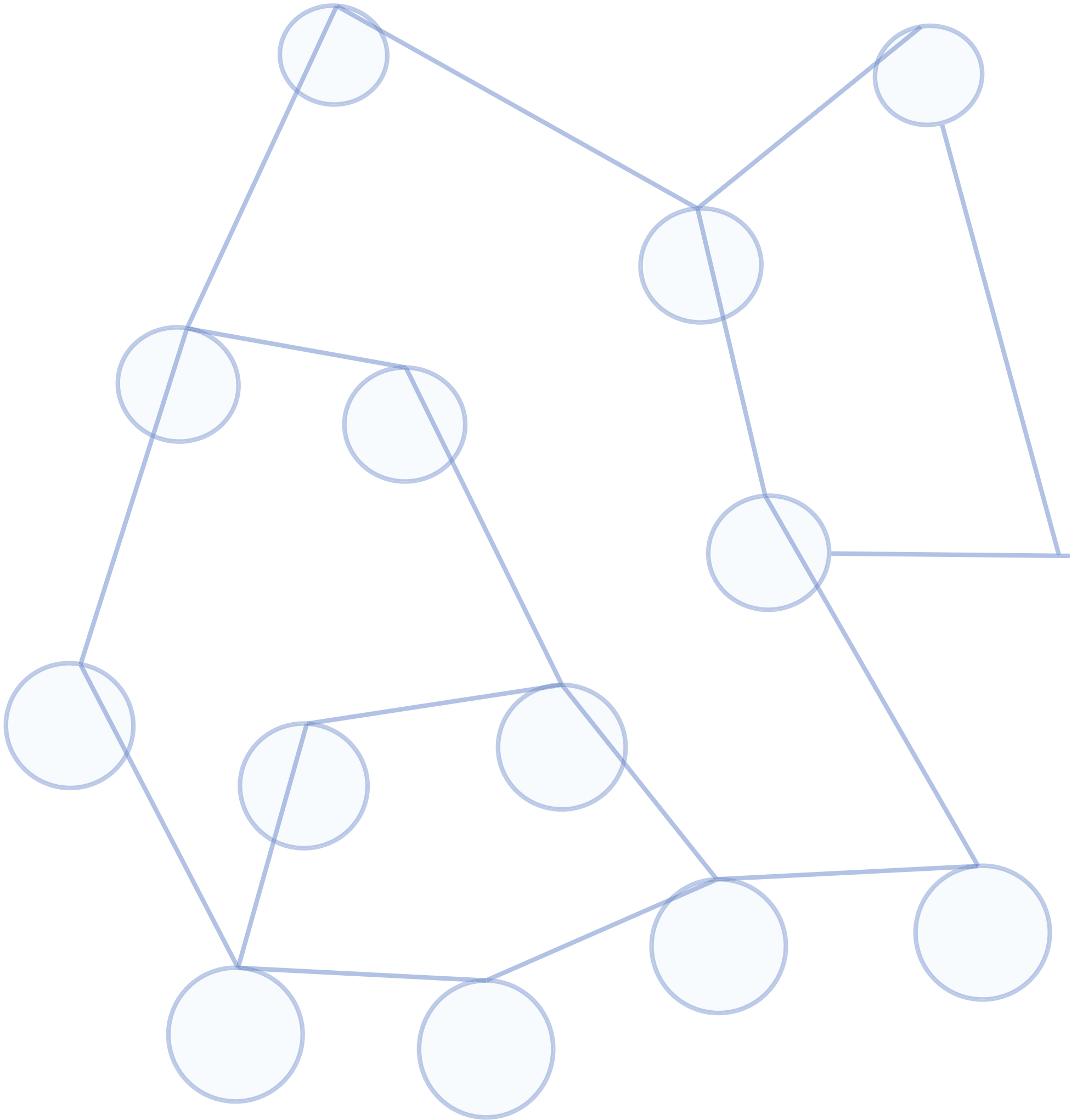




WeLink

WELINK-LR User Guide -
Stand Alone Operation





WELINK-LR

Part Number: PMP-PV1

WeLink PMP Access Point

The WeLink 3Gbps PMP Radio Head is engineered for the ultimate cost to performance ratio. This radio head, when paired with the WeLink MBU, enables multiple multi-gigabit connections of up to 2.5Gbps at distances of nearly 1km with 99.99% availability (rain zone K). The PMP Radio Head also features a compact, sleek design to allow for inconspicuous installation in almost any environment.

New Generation Same Simplicity

Expanding on our v1 system we are upgrading speeds but focusing on our core benefit: simplicity. Simply plug in the Radio Head into the MBU, aim and you have a multi-gigabit link

Key Features

- Plug and play with MBU
- Dual firmware image with automatic rollback
- Full channel support from 57-71Ghz
- Auto modulation adjustment (hitless)
- AES Encryption supported
- Improved latency and throughput
- Proprietary fast-path support
- Enhanced wireless statistics
- OTA seamless firmware upgrade support
- Automatic troubleshooting file generation support





WELINK-LR

Part Number: PMP-PV1

Specifications

Hardware

60 GHz baseband modem + RF
2.5 Gbps Aggregate Capacity

Interfaces

x1 2.5Gbps (Nbase-T) Eth with PoE in
x1 2.5Gbps (Nbase-T) Eth with PoE out (optional use)
42V under max. 270mA load

Wireless

57-71 GHz
Channels Supported 2 Ghz
Radio TX Power:
• 38.20dBm

Antenna Gain: 18dBi

Antenna Pattern

- Horizontal: 120deg
- Vertical: 90deg

Radio Sensitivity

- -70dBm @ MCS1
- -56dBm @ MCS12

Power

x15W Power Consumption (Max)

Operating Environment

-30 to 65c
IP65

Mechanical

11in x 3.7in x 1.5in, Weight 2.5lbs

Mounting

- Hose Clamp or Wall Mount





WELINK-LR
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Whats in the Box

- 1 PMP Radio
- 1 Bracket
- 1 PoE Injector
- 1 Hose Clamp



PMP Radio



Hose Clamp



WELINK-LR

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System Requirements

Microsoft Windows 11, 10, 8, 7, Vista, XP, Linux,
Mac OS X

Web Browser: Chrome, Mozilla Firefox, Safari,
Microsoft Edge or Internet Explorer 8 (or above)

Standalone Configuration

The PMP without the MBU is unable to operate in a standalone access point operation. Using a 48v .5A (4,5+:7,8-) POE injector (not included) it is possible to power the radio for testing, configuration and firmware updates, or operate in CPE mode.



WELINK-LR
Part Number: PMP-PV1

Planning

Link Planning

Prior to installation a network wide frequency plan should be coordinated. Consideration for the given topography, climate, interferences and other challenges will need to be considered.

Colocation

6 Channels at 2000MHz

Line of Sight

A 120° horizontal, 90° vertical sector of coverage.

Installation

Tool List

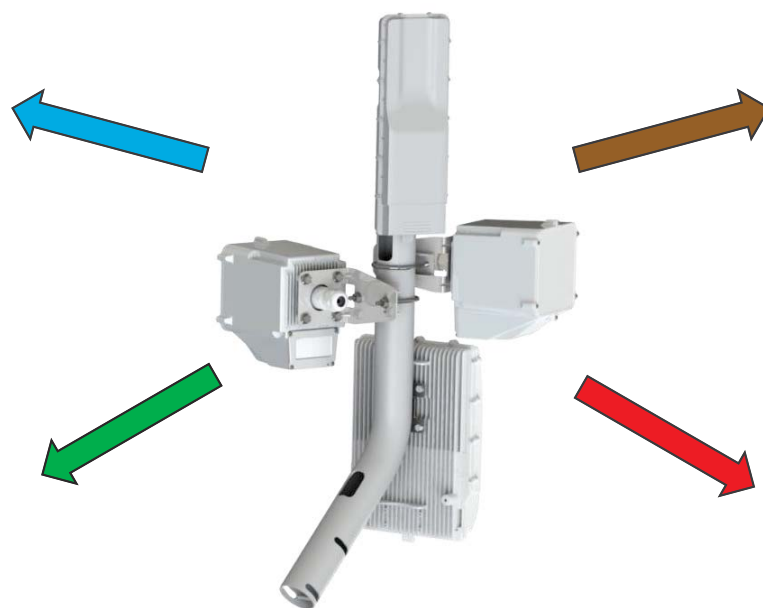
Hose Clamp + Flathead Screwdriver

Other Requirements

Typical J-Arm installation or 50mm pole

Mounting hardware are all properly grounded per local building codes.

User manual includes a statement that cautions users that is not permitted to use the product on aircraft or satellites.





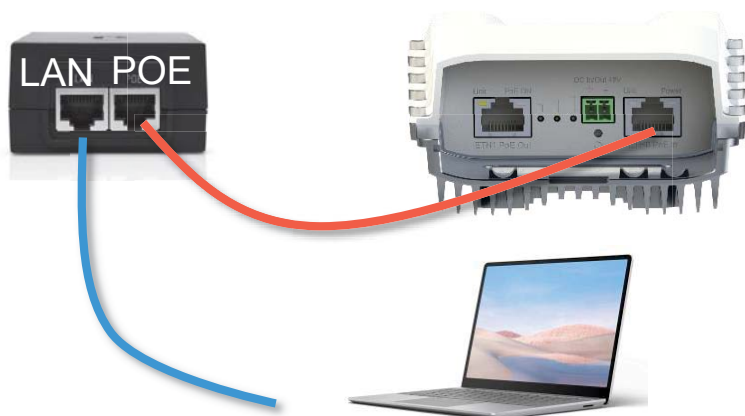
WELINK-LR

Part Number: PMP-PV1

Local configuration

Ethernet configuration

1. Connect Cat cable from your computer to the LAN port on the power over ethernet injector.
2. Connect provided Cat6 from the CUB to the POE port on the power over ethernet injector.
3. Connect power to the power over ethernet injector
4. The default PMP IPv4 address is 192.168.1.1



1. Configure the Ethernet adapter on your computer to 192.168.1.x subnet
2. Launch your web browser. Go to **http://192.168.1.1**
3. The login screen will appear



WELINK-LR
Part Number: PMP-PV1

Port configuration



Port Designations

1. ETH1 w/ configurable PoE out
2. Device Status LEDs
3. DC Power In/Out. Out requires power provided to the device over PoE
4. Physical Reset Button
5. ETH0, PoE in can be used to power the device



WELINK-LR
Part Number: PMP-PV1

PMP WebUI

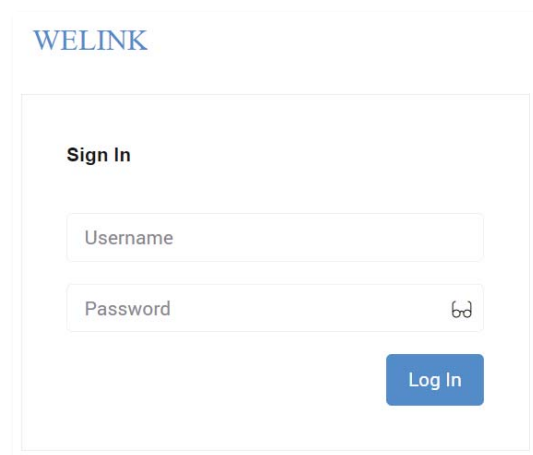
POE Login

1. Set your Ethernet IP address to **192.168.1.x/24**
2. Enter the default IPv4 address of **192.168.1.1** in your web browser.

Logging In

Enter **root** for the username and **admin** for the password.

First time login will be asked to update the username and password or **Skip**



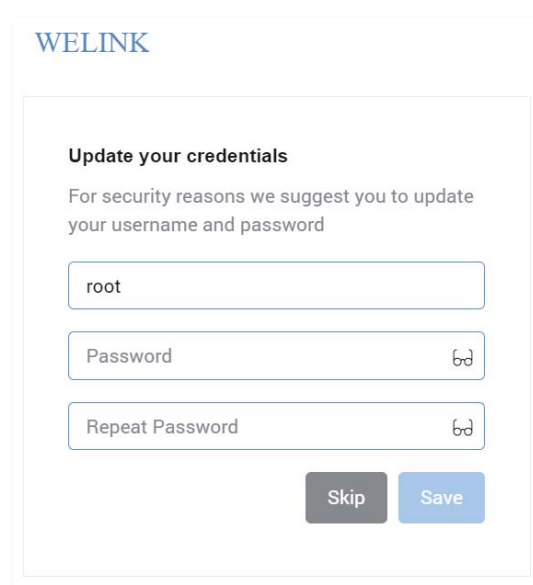
WELINK

Sign In

Username

Password

Log In



WELINK

Update your credentials

For security reasons we suggest you to update your username and password

Password

Repeat Password

Skip **Save**



WELINK-LR

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Dashboard Cont.

The screenshot shows the WeLink dashboard interface. On the left is a navigation sidebar with 'WeLink', 'Dashboard', and 'Settings'. The main content area is divided into three sections:

- Site overview:** A table listing two interfaces. Both are 'Provisioned' and running '1.9.5 53924' firmware. They both show '2502 (MCS 9)' for Tx and Rx MCS. The first interface has a link of '-53 dB' and a distance of '129 m' with an uptime of '5 days 15 hours'. The second interface has a link of '-55 dBm' and a distance of '18 m' with an uptime of '2 days 0 hours'.
- Device information:** A key-value table for 'Welink-PTMP' showing details like board type (gin-110-prs), location, hostname (ptmp1.1233westmorelos.CHN1), and active/backup firmware versions (1.9.6 rev 54588 and 1.9.5 rev 54343).
- System resources:** Two donut charts showing 'CPU' at 1.00% and 'Memory' at 147.4 MB / 419.3 MB.

Device Information – This section gives basic information regarding the device.

Device information	
Name: Welink-PTMP	Board: gin-110-prs
Location: -	Uptime: 5 days 15 hours
Hostname: ptmp1.1233westmorelos.CHN1	Active Firmware 1.9.6 rev 54588
	Backup Firmware 1.9.5 rev 54343

Name – Displays the customizable name or identification of the device.

Location – Displays the user defined location of the device.

Hostname – Displays the user defined hostname.

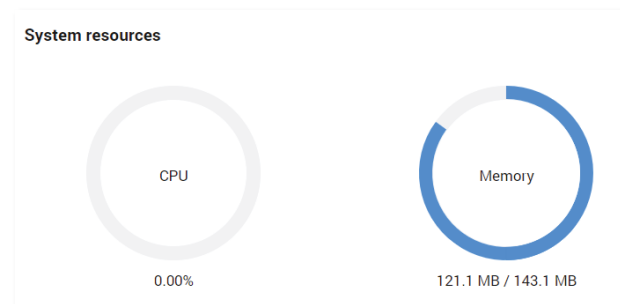
Active Firmware – Displays the current active bank firmware information.

Backup Firmware – Displays the current backup bank firmware information.

Board – Displays the processor information of the radio head.

Uptime – Displays the total time the device has been running since a reboot or system was powered on. *Days:Hours:Min:Sec*

System Resources – Displays current CUP and memory resources.



CPU – Displays the current CPU capacity in percentage being utilized

Memory – Displays the current system memory being consumed in MB.



WELINK-LR

Part Number: PMP-PV1

Dashboard Cont.

Internet information – This section gives basic internet connectivity information for IPv4 and IPv6 connections

Internet information			
Internet		IPv4	IPv6
Address:	-	DNS:	-
Netmask:	-	MAC:	C4:93:00:2B:BB:C5
Gateway:	-		

IPv4

- Address** – Displays the local IPv4 address.
- Netmask** – Displays the local subnet mask.
- Gateway** – Displays the local gateway
- DNS** – Displays the local DNS servers
- MAC** – Displays the local MAC address

IPv6

- Address** – Displays the local IPv6 address.
- Prefix** – Displays the local subnet prefix.
- Gateway** – Displays the local gateway
- DNS** – Displays the local DNS servers
- MAC** – Displays the local MAC address

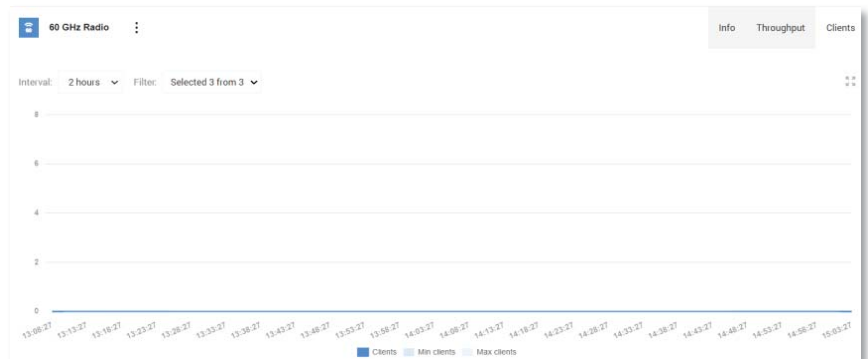
60GHz Radio – This section gives information about internal radio and the remote connected station

60 GHz Radio											
Channel: 5 (66960 MHz), 2160 MHz		Clients: 2									
Radio SSIDs:											
SSID	Mode	Security	MAC	Connected AP MAC	Clients	Bytes Tx	Bytes Rx	Link time	Signal	Tx rate	Rx rate
> 74565	Access point	Open	C4:93:00:32:F7:B0	-	2	412.9 GB	26.2 GB	-	-	-	-

- Channel** – Displays the current operating channel / frequency and spectral width of the channel being used.
- Clients** – Displays the number of connected clients when in AP mode
- Radio SSIDs** – Displays the remote connected radio head link information.
- SSID** – Displays the SSID of the link.
- Mode** – Displays the current mode of the local radio head *Access Point* or *Station*

- Security** – Displays the current security being used over the link.
- MAC** – Displays the local radio head MAC address.
- Connected AP MAC** – Displays the remote connected radio head MAC address.
- Clients** – Displays the number of clients in AP mode.
- Bytes Tx** – Displays the number of bytes transited since reboot.
- Bytes Rx** – Displays the number of received bytes since reboot.
- Link Time** - Displays the total time the wireless link been running without synchronization loss. *Days:Hours:Min:Sec*
- Signal** – Displays the signal rate.
- Tx Rate** – Displays the current transmits rate base upon current modulation
- Rx Rate** – Displays the current receive rate base upon current modulation

Clients – Displays the number of clients connected in AP mode



Interval – Select a time interval from *5 minutes, 2 hours, Day, Week* and *Year*.



WELINK-LR
Part Number: PMP-PV1

Dashboard Cont.

Toolbar – The toolbar shows client connections, WAN interface Tx and RX throughput, Device/Firmware actions



Clients – Displays the number of connected clients when in AP mode
WAN Throughput – Displays WAN throughput information.

Device Actions

DEVICE ACTIONS	FIRMWARE ACTIONS
Fetch troubleshooting file	Update firmware
Reset device to defaults	Upload a new firmware image to update the device firmware version.
Reboot device	Backup configuration
	Store the backup files in a safe location. When necessary, restore a backup.
	Switch firmware
	Switch firmware version between active and backup.

Fetch troubleshooting file – Downloads diagnostic file to the local computer containing additional debug information.

Reset device to defaults – Resets the radio head to the original default configurations.

Reboot Device – Reboots the device.

Firmware Actions

Update Firmware – Updates the device firmware.

Update firmware [Close]

Update system firmware version:

Reset config after device update

[Upload file](#)

Reset config after device update – After device firmware upgrade, radio head will be reset to default configuration.

Backup firmware – Exports or imports system settings to the local computer.

Backup configuration [Close]

Export system settings

Download a copy of the current device configuration:

[Download file](#)

Import system settings

Restore the device configuration from a backup file:

[Upload file](#)

Switch firmware – Switches firmware banks from active to backup.

Switch firmware [Close]

Currently active firmware: 1.9.4 rev 52751

Backup firmware: 1.9.0 rev 52724

[Switch to backup](#)



WELINK-LR

Part Number: PMP-PV1

Network

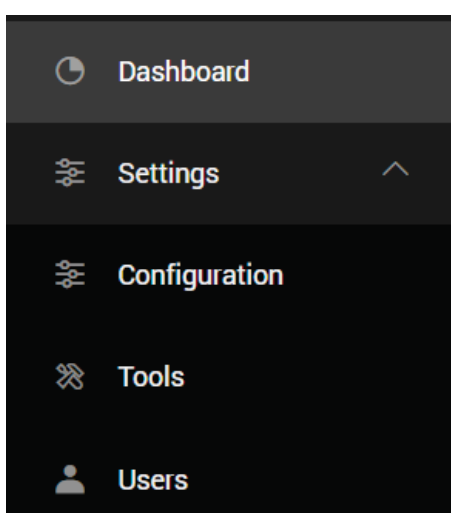
Dashboard > NetworkNetwork

Site **Network** Interfaces Clients Activity

Network information:

Management	IPv4	IPv6	Throughput
Address: 192.168.1.1 Netmask: 255.255.255.0	Gateway: - Members: 2 Members		

Network information – This section displays radio head network information.



Internet – This section gives basic internet connectivity information for IPv4 and IPv6 connections.

IPv4

Address – Displays the local IPv4 address.

Netmask – Displays the local subnet mask.

Gateway – Displays the local gateway.

Members – Shows interfaces that are members of the internet interface.

IPv6

Address – Displays the local IPv6 address.

Prefix – Displays the local subnet prefix.

Gateway – Displays the local gateway.

Members – Shows interfaces that are members of the internet interface.

Throughput - Displays the current throughput of the internet interface.

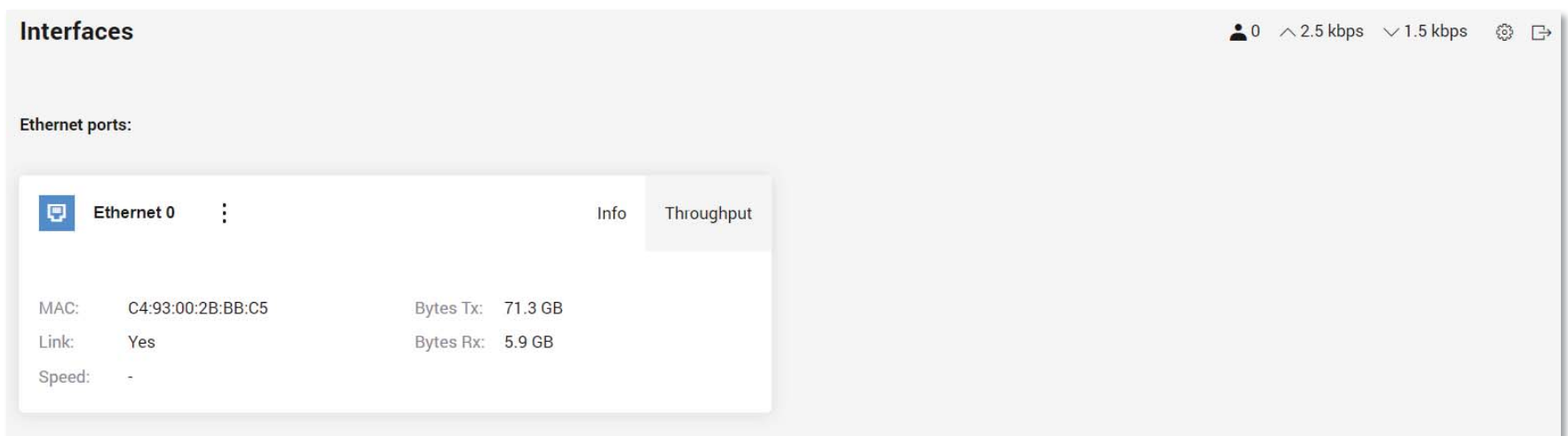
ARP Entries – Shows local ARP connections.

DHCP active leases – Displays local active DHCP leases if configured.



WELINK-LR
Part Number: PMP-PV1

Interfaces



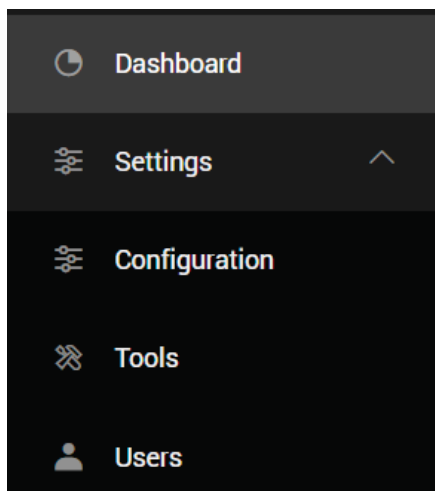
Interfaces 0 ^ 2.5 kbps v 1.5 kbps ⚙️ 🗨️

Ethernet ports:

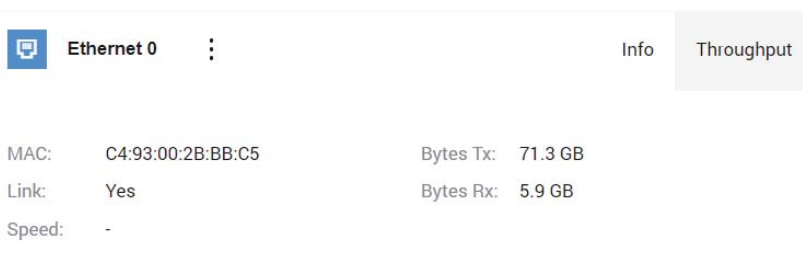
Ethernet 0 Info Throughput

MAC:	C4:93:00:2B:BB:C5	Bytes Tx:	71.3 GB
Link:	Yes	Bytes Rx:	5.9 GB
Speed:	-		

Interfaces – This section provides information on Ethernet interface.



Internet – This section gives basic internet connectivity information for IPv4 and IPv6 connections.



Ethernet 0 Info Throughput

MAC:	C4:93:00:2B:BB:C5	Bytes Tx:	71.3 GB
Link:	Yes	Bytes Rx:	5.9 GB
Speed:	-		

Info

MAC – Displays the local IPv4 address.

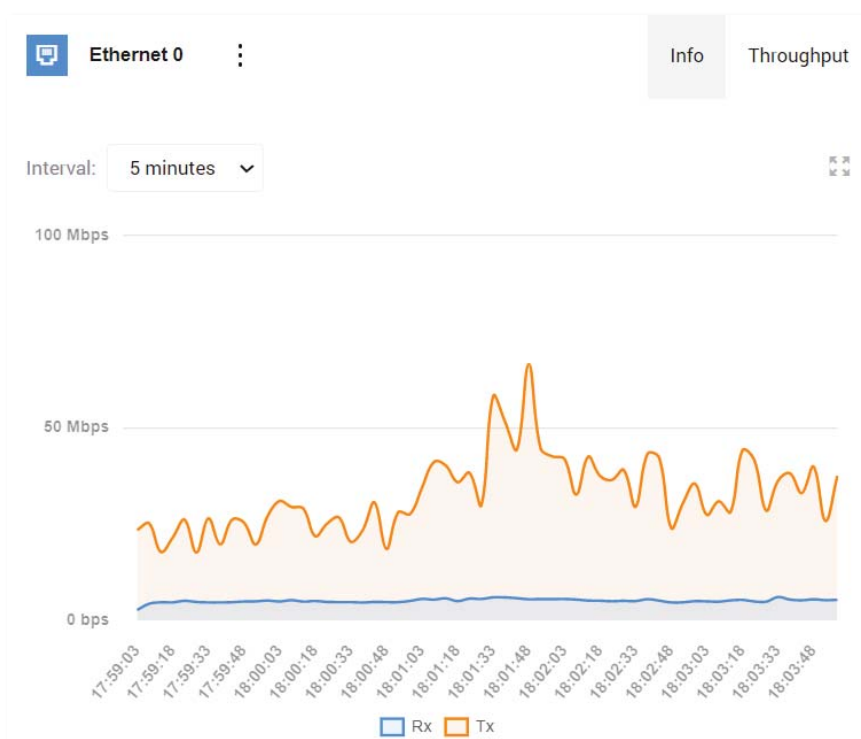
Link – Displays the local subnet mask.

Speed – Displays the local gateway.

Bytes TX – Shows interface total transmit Bytes

Bytes RX – Shows interface total receive Bytes

Throughput – Displays the throughput of Ethernet 0





WELINK-LR
Part Number: PMP-PV1

Clients

Dashboard > Clients

2 ^ 29 kbps v 1.7 kbps ⚙️ ↗️

Site Network Interfaces **Clients** Activity

2 wireless clients

Search X

MAC ↕	Radio ↕	SSID ↕	Security ↕	Uptime ↕	Signal ↕
∨ C4:93:00:32:CD:D9	60 GHz Radio	74565	Open	5 days 15 hours	-52 dBm
Uploading	Downloading	Tx bytes	Rx bytes	Tx rate	Rx rate
0 Mbps	0 Mbps	3.5 GB	4.1 GB	2502 Mbps	2502 Mbps
∨ C4:93:00:32:D8:3B	60 GHz Radio	74565	Open	2 days 0 hours	-56 dBm
Uploading	Downloading	Tx bytes	Rx bytes	Tx rate	Rx rate
0 Mbps	0 Mbps	1.0 GB	1.4 GB	2502 Mbps	2502 Mbps

Clients – This section provides current clients for radio heads in *Access point* Mode. CUB access points will only have 1 client connection.

MAC – Remote radio head MAC address

Radio – Remote radio information.

SSID – Wireless link SSID

Security – Displays the link security profile

Uptime – Shows interface total receive Bytes

Signal – Current link RSS in dBm

Client information – Display a graph of current clients connected.

Filter graph – Select intervals and values to view connected clients.

Interval:	Values:
<input checked="" type="radio"/> 2 hours	<input checked="" type="checkbox"/> MIN
<input type="radio"/> Day	<input checked="" type="checkbox"/> MAX
<input type="radio"/> Week	<input checked="" type="checkbox"/> Average
<input type="radio"/> Year	



WELINK-LR
Part Number: PMP-PV1

Activity

Activity 👤 0 ^ 1.9 kbps v 815 bps ⚙️ ↗️

Events

Items per page: 10 v

Download data

Search
✕

◇ Date & Time ◇	Message ◇
● 2022-01-26 15:15	Successful management authentication from fd8d:f9d: over WEB by root
● 2022-01-25 08:58	Client 6C:10:8B:00:0F:BA connected to 📶 141 (60 GHz Radio)
● 2022-01-25 08:58	📶 141 (60 GHz Radio) is up
● 2022-01-25 08:58	prs0 is up
● 2022-01-25 08:56	Client 6C:10:8B:00:0F:BA disconnected from 📶 141 (60 GHz Radio)
● 2022-01-25 08:56	📶 141 (60 GHz Radio) is down
● 2022-01-25 08:56	prs0 is down
● 2022-01-18 22:07	Client 6C:10:8B:00:0F:BA connected to 📶 141 (60 GHz Radio)
● 2022-01-18 22:07	📶 141 (60 GHz Radio) is up
● 2022-01-18 22:07	prs0 is up

Total entries: 26 ⏪ < 1 2 3 > ⏩

Events – This section provides history of the radio head Events are listed in chronological order and timestamped.

Items per page – Change from 10, 25, 50, and All entries listed per page.

Download Data – Downloads the event log in a .txt format to the local computer

Search – Use the search bar to look for specific entries that match your criteria.

Entries

- Normal
- Success
- Critical

Date & Time – Displays the date and time of each entry
Year-Month-Day Hour:Min

Message – Displays the event message.



WELINK-LR

Part Number: PMP-PV1

Settings > Configuration > Network

Network
Wireless
Ethernet
Services
System

Select network:

🌐 Internet

🔗 Local Network

+ Add network

Internet configuration

◀ 2

Remove

General

Network name

Network type
WAN

IPv4 mode
DHCP client

Fallback IPv4 address: IPv4 netmask:

DHCP broadcast

Custom DNS

Custom MAC

Management VLAN

Disabled

Allow device access from this zone

Internet Configuration – This section allows configuration of the radio head should and internet connection be needed. From here you may add or configure and existing network.

Network name – User configurable network identification

Network type – Select from *LAN* or *WAN* networks

IPv4 mode – Select from using a *Static IP* or using *DHCP client*.

Static – Static IP address, Netmask, Gateway, DNS servers will need to be assigned.

DHCP client – A Fallback IPv4 address and Netmask will be needed.

Fallback IPv4 address – This is a user defined address that the radio head will default to if no DHCP server assigns a dynamic address.

DHCP broadcast – Enable or diable DHCP broadcasts

Custom DNS – Enable a custom DNS server.

Custom MAC – Assign a custom MAC address to the radio head.

IPv4

Enabled

IP address: Netmask:

Gateway:

Default route metric:

DNS servers:

Management VLAN– This section allows configuration of the radio head Management VLAN

Disable – Disable the Management VLAN. If selected a static IP will need to be assigned for Management

Allow device access from this zone – Allows device access from this zone.



WELINK-LR

Part Number: PMP-PV1

Settings > Configuration > Wireless and Ethernet

Network **Wireless** Ethernet Services System

Wireless configuration

60 GHz Radio

Enabled

Wireless mode
Station

Channel
Auto

SSID
380 Scan

Lock AP MAC

Security mode
WPA2 personal

Passphrase
..... 63

Network zone
Internet

Data VLAN

Sensitivity
High

Wireless Configuration – This section allows configuration of the 60GHz radio head.

- Enable** – Enable or disable the 60GHz wireless signal.
- Wireless Mode** – Select from *Station* (default) or *Access point*
- Channel** – Select channels 1-4. When wireless mode Station is used Auto may be used or a static channel may be selected.
- SSID** – Enter the unique SSID
- Scan** – Scan function will be available if the wireless mode selected is station. **Lock AP MAC** – Enter the MAC address of pairing AP
- Security mode** – Select from *Open* or *WPA2 personal*

Passphrase – Enter a 8-63 character unique passphrase to be shared on the link.

Network zone – Select from *Internet* (default) or *Local Network*. Additional networks may be added from the networking tab.

Data VLAN – Enable to VLAN tagged data over the wireless link

Data VLAN

Data VLAN ID
100

Ethernet Configuration – This section allows for configuration of Ethernet 0

Network Wireless **Ethernet** Services System

Ethernet configuration

Ethernet 0

Enabled

Auto-negotiation

Network zone
Internet

Data VLAN

Enabled – Enable or disable Ethernet 0 port

Auto Negotiate – Select from *Auto(1G & 2.5G)*, *100M full duplex*, *100M half duplex*, *10M full duplex*, and *10M half duplex*.

Network zone – Select from *Internet* (default) or *Local Network*. Additional networks may be added from the networking tab

Data VLAN – Enable to VLAN tagged data over Ethernet 0



WELINK-LR

Part Number: PMP-PV1

Settings > Configuration > Services

Services Configuration – This section allows configuration of additional radio head services

Web Services – Configure non typical HTTP and HTTPS ports

Web services

Configure which ports are used to access the web services.

HTTP port
80

HTTPS port
443

NTP

Network Time Protocol (NTP) is a protocol used to synchronize computer clock times in a network.

Enabled

Server addresses
pool.ntp.org

Enable – Enable or Disable NTP
Server addresses – Enter IP address or domain name of the NTP server.

SNMP

Simple Network Management Protocol (SNMP) is an application-layer protocol for monitoring and managing network devices on a local area network (LAN) or wide area network (WAN). The purpose of SNMP is to provide network devices such as routers, servers and printers with a common language for sharing information with a network management system (NMS).

Enabled

Protocol
SNMPv2

Community
public

Enable – Enable or disable SNMP
Protocol – Select from SNMPv2, SNMPv3, or SNMPv2 + SNMPv3
Community – Enter the community string.

Remote syslog

Syslog is a way for this network device to send event messages to a logging server or file.

Enabled

Mode
Remote server

Protocol
UDP

Server address
10.10.10.1

Port
514

Log prefix

Enable – Enable or Disable Remote syslog
Mode – Select from Instant *logging to file*, (default) *Periodic logging*, and *Remote Server*.
Protocol – Select from TCP or UDP
Server address – Enter IP address of remote log server
Port – Enter port of log server.

SSH

The Secure Shell Protocol (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network.

Enabled

Port
22

Password login

Enable – Enable or Disable SSH
Port – Enter port of log server.
Password login – Require password upon SSH login.



WELINK-LR

Part Number: PMP-PV1

Settings > Configuration > Services cont.

Device discovery

This feature allows to find other devices compatible with the available discovery protocols, as well as to broadcast information to other devices.

Enabled

Discover nearby devices:

LLDP listener

Broadcast device info:

LLDP (Link Layer Discovery Protocol)

CDP (Cisco Discovery Protocol)

MNDP (MikroTik Neighbor Discovery Protocol)

Enable – Enable or Disable Device discovery

LLDP listener – Enable LLDP listener

LLDP – Enable (Link Layer Discovery Protocol)

CDP – Enable (Cisco Discovery Protocol)

MNDP – Enable (MikroTik Neighbor Discovery Protocol)

SNMP Traps

An asynchronous alert sent by the agent to the SNMP manager to indicate a significant event, such as an error or failure, has occurred.

Enabled

User

SNMP

Server address

10.10.10.1

OID prefix

1.3

Protocol

SNMPv2

Community

public

Enable – Enable or disable SNMP Traps

Protocol – Select from SNMPv2, SNMPv3

Community – Enter the community string SNMPv2

Password – Enter the password SNMPv3

Ping Watchdog

The purpose of ping watchdog is to reboot the device when it cannot ping a particular IP address.

Enabled

Ping interval (s)

300

Startup delay (s)

300

Failure count

3

IP address to ping

10.10.10.1

Enable – Enable or Disable Ping watchdog

Ping interval – Select ping interval from 5s to 300s

Startup delay – Select startup delay from 60s to 300s

Failure count – How many times failure must occur to enable watchdog

IP address to ping – Pingable remote IP address



WELINK-LR Part Number: PMP-PV1

Settings > Configuration > System

Network Wireless Ethernet Services **System**

System configuration

Device information Device name Welink-PTMP Device location Country United States Hostname ptmp1.1233westmorelos.CHN1	Time settings Time zone (UTC-8) America/Los Angeles Date 06/01/2022 Time 02:12 PM Set current time
Automatic firmware update <input type="checkbox"/> Check for firmware updates	Other settings <input checked="" type="checkbox"/> Physical reset button

Device Name – Set the device name
Device location – Set the device location
Country – Set the country
Hostname – Set the Hostname
Check for automatic firmware upgrade – Enable or disable automatic firmware upgrades

Time Zone – Set Time zone
Date – Set Date
Time – Set Time
Physical reset button – Enable or disable automatic reset button (if supplied)



WELINK-LR

Part Number: PMP-PV1

Settings > Tools > Device Discovery and Site Survey

Device discovery | Site survey | Ping | Traceroute | View log

Device discovery

Search

Chassis ID	Local Port ID	Remote Port ID	Management IPv4 address	Management IPv6 address	System name	System description	VLAN ID
C4:93:00:21:45:23	eth0	eth1	-	fd8d:f00:2145:2300::1	wer1.6009south195th	MBU200 r1.9.3 v52461	-
C4:93:00:2B:BB:BE	prs0	br-wan	-	fd8d:f00:2144:1910:c693:ff:fe2b:bbbe	Welink_RH	-	-

- Chassis ID** – MAC address of discoverable device
- Local Port ID** – Local port of discoverable device
- Remote Port ID** – Remote port of discoverable device
- Management IPv4 address** – Management IPv4 address if used
- Management IPv6 address** – Management IPv6 address if used
- System Name** – Name of remote device
- System description** – Description of remote device
- VLAN ID** – VLAN ID if used

Device discovery | **Site survey** | Ping | Traceroute | View log

Site survey scan

At least one enabled radio is required. Please enable a radio and save changes before scanning.

SSID	BSSID	Channel	Signal	Security
Perform scan to see results				

- SSID** – SSID of scanned site
- BSSID** – BSSID of scanned site
- Channel** – Channel of scanned site
- Signal** – Signal in dBm of scanned site
- Security** – Security protocol of scanned site.



WELINK-LR Part Number: PMP-PV1

Settings > Tools > Ping and Traceroute

Device discovery Site survey **Ping** Traceroute View log

Ping tool

Use: IPv6 IPv4

IP address or host name: Ping iterations count:

```
PING fd8d:f00:2145:2300::1 (fd8d:f00:2145:2300::1): 56 data bytes
64 bytes from fd8d:f00:2145:2300::1: seq=0 ttl=64 time=0.624 ms
64 bytes from fd8d:f00:2145:2300::1: seq=1 ttl=64 time=0.575 ms
64 bytes from fd8d:f00:2145:2300::1: seq=2 ttl=64 time=0.567 ms
--- fd8d:f00:2145:2300::1 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 0.567/0.588/0.624 ms
```

IPv6 or IPv4 – Select protocol

IP address or hostname – enter the IP address of remote device.

Ping iterations count – How many times to ping the device.

Remote Port ID – Remote port of discoverable device

Device discovery Site survey Ping **Traceroute** View log

Traceroute tool

Use: IPv6 IPv4

IP address or host name:

```
traceroute to fd8d:f00:2145:2300::1 (fd8d:f00:2145:2300::1), 30 hops max, 72 byte packets
1  fd8d:f00:2145:2300::1 (fd8d:f00:2145:2300::1) 0.502 ms 0.504 ms 0.446 ms
```

IPv6 or IPv4 – Select protocol

IP address or hostname – enter the IP address of remote device.



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Settings > Tools > View Log

Device discovery
Site survey
Ping
Traceroute
View log

Device log

×

```

[41158.513587] [DRIVER_LOG] [INFO1-OSIF]-[PrsSupplicant_cfg80211_scan:859]: Delegate scan request finished
[42289.651266] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 2 a_freq 60480
[42289.661917] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 1 a_freq 58320
[42289.672483] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 3 a_freq 62640
[42289.683092] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 4 a_freq 64800
[42289.693695] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 5 a_freq 66960
[42289.704277] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 6 a_freq 69120
[42289.714865] [DRIVER_LOG] [INFO1-CORE]-[PrsCoreScanConnectionManager_ScanRequest:1414]: start scan 5, request id ffffffff008356500.
[42289.726593] [DRIVER_LOG] [INFO1-OSIF]-[PrsSupplicant_cfg80211_scan:856]: startScan failed
[42289.734886] [DRIVER_LOG] [INFO1-OSIF]-[PrsSupplicant_cfg80211_scan:859]: Delegate Scan request finished
[42360.002367] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 2 a_freq 60480
[42360.012978] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 1 a_freq 58320
[42360.023536] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 3 a_freq 62640
[42360.034126] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 4 a_freq 64800
[42360.044723] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 5 a_freq 66960
[42360.055320] [DRIVER_LOG] [INFO1-OSIF]-[PrsCoreChannelDB_FrequencyToChannel:273]: pEntry->channelIndex 6 a_freq 69120
[42360.065923] [DRIVER_LOG] [INFO1-CORE]-[PrsCoreScanConnectionManager_ScanRequest:1414]: start scan 5, request id ffffffff008320500.
[42360.077651] [DRIVER_LOG] [INFO1-OSIF]-[PrsSupplicant_cfg80211_scan:856]: startScan failed
[42360.085990] [DRIVER_LOG] [INFO1-OSIF]-[PrsSupplicant_cfg80211_scan:859]: Delegate Scan request finished
                    
```

Device Log – View logged messages of radio head

Settings > Tools > Users

User configuration

User name	Role	Status	Set new password
> root	Admin	<input checked="" type="checkbox"/>	<input type="text" value=""/> bd ×



WELINK-LR
Part Number: PMP-PV1

Safety and Regulatory Guidelines

FCC Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC 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 30 cm between the radiator and your body.

Industry Canada

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.

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 30 cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 30 cm de distance entre la source de rayonnement et votre corps.

CE Statement

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

All operational modes:
60 GHz: 802.ad

The frequency and maximum transmitted power limit in EU are listed as below:

58.32 -69.12 GHz

Europe - EU Declaration of Conformity

Hereby, **WeLink Communications**, declares that the radio equipment type: PMP-PV1 is in compliance with Directive 2014/53/EU and Directive 2014/35/EU.

AT	BE	BG	CH	CY	CZ
DE	DK	EE	EL	ES	FI
FR	HR	HU	IE	IS	IT
LI	LT	LU	LV	MT	NL
NO	PL	PT	RO	SE	SI
SK	TR	UK			

The abbreviations of the countries, as prescribed in table to the left, where any restrictions on putting into service or any requirements for authorization of use exist.



WELINK-LR
PMP Radio AP/CPE



WELINK-LR
Part Number: PMP-PV1

Safety and Regulatory Guidelines

Warnings and Cautionary Messages



Warning: This product does not contain any serviceable user parts.

Warning: Installation and removal of the unit must be carried out by qualified personnel only.

Warning: When connecting this device to a power outlet, connect the field ground lead on the tri-pole power plug to a valid earth ground line to prevent electrical hazards.



Caution: Wear an anti-static wrist strap or take other suitable measures to prevent electrostatic discharge when handling this equipment.

Caution: Do not plug a phone jack connector in the RJ-45 port. This may damage this device.

Caution: Use only twisted-pair cables with RJ-45 connectors that conform to FCC standards.