WeLink

PTP 3Gbps User Guide -
Stand Alone Operation

WeLink

PTP 3Gbps V2
Part Number: PTP-PV2-14

WeLink PTP Radio Head

The WeLink 3Gbps PTP Radio Head is engineered for the ultimate cost to performance ratio. This radio head, when paired with the WeLink MBU, enables multi-gigabit connections of up to 2.5Gbps at distances of nearly 1km with 99.99% availability (rain zone K). The PTP 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

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PTP 3Gbps
PTP Radio Head
DataSheet
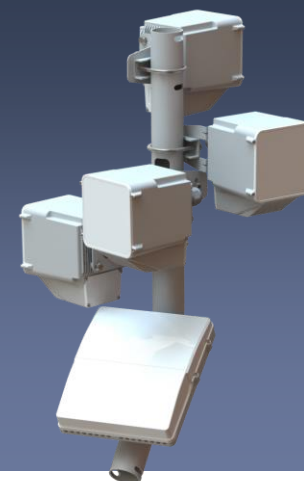
PTP 3Gbps V2
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Specifications

Hardware

60 GHz baseband modem + RF
2.5 Gbps Aggregate Capacity

Interfaces

x1 2.5Gbps (Nbase-T) Eth with PoE in

Wireless

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

- 39.75dBm

Antenna Gain:

- 4in: 34dBi

Antenna Pattern

- 4in: 5deg +/-4deg beam steering
- 7in: 2deg +/-3deg beam steering

Radio Sensitivity

- -72dBm @ MCS1
- -56dBm @ MCS12

Power

x15W Power Consumption (Max)

Operating Environment
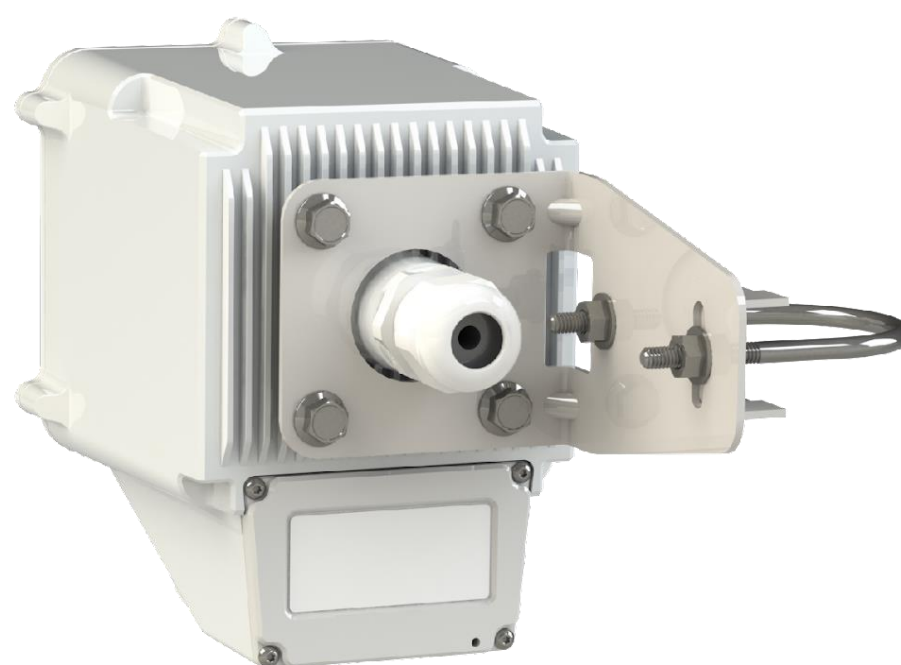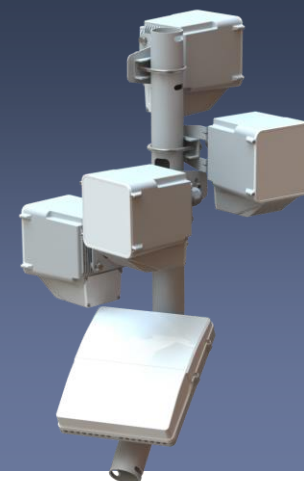
-30 to 65c
IP65

Mechanical

4.5in x 4.5in x 4in, Weight 2.1lbs
8in x 8in x 6in, Weight 4.5lbs

Mounting

- 50mm pipe mount provided
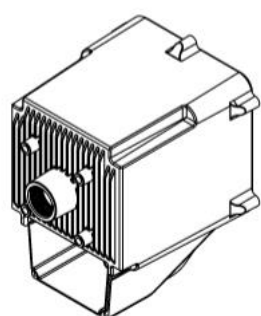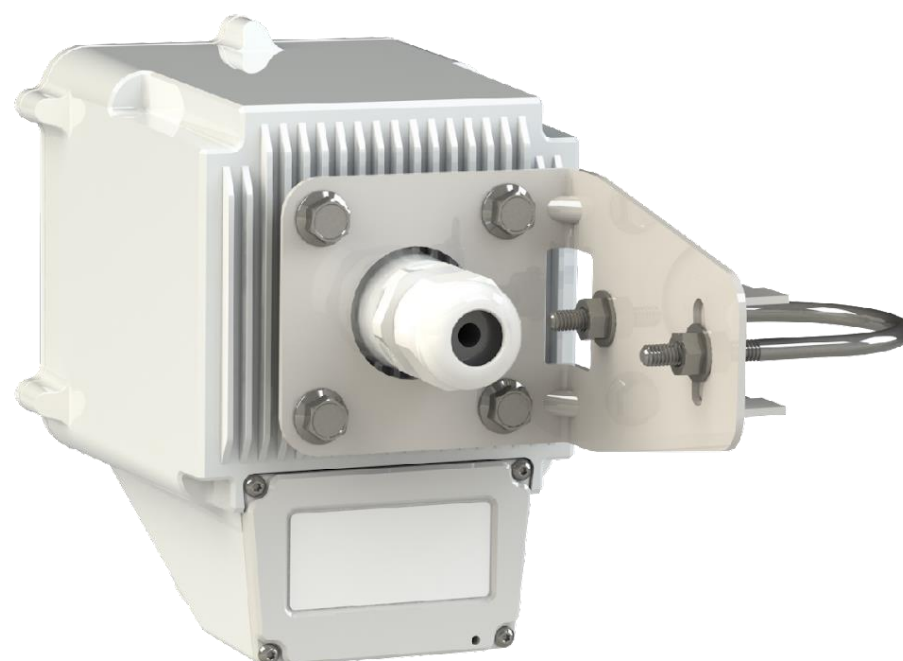- +/- 15deg vertical aiming

PTP 3Gbps V2
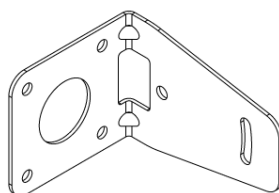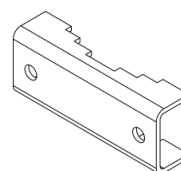Part Number: PTP-PV2-14

Whats in the Box

1 PTP Radio
1 Bracket
1 U-Clamp
1 1m Outdoor Rated Cat6 Cable
1 M6 Threaded U-Bolt
4 M6x10 Cap Screw
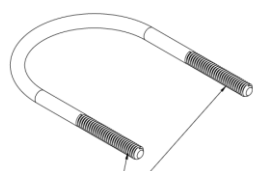2 M6 Serrated Nut
1 PG16 White Plastic Cable Gland

PTP Radio

Bracket

U-Clamp

Threaded U-Bolt
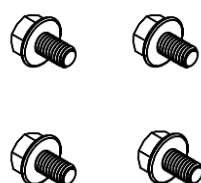
4 Cap Screws
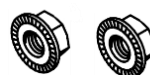
2 Nuts

Cable Gland
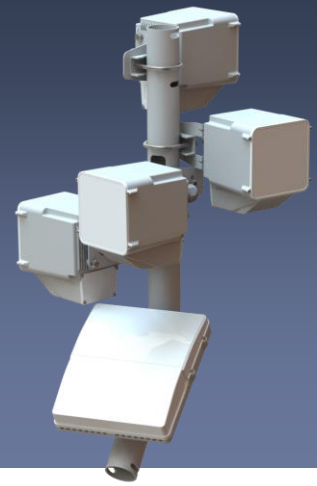
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Part Number: PTP-PV2-14

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 CUB without the MBU is unable to operate in a
standalone PTP 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.

**users that is not permitted to use the product on
aircraft or satellites.**
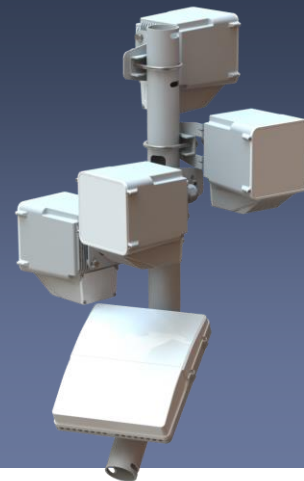
PTP 3Gbps V2
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Planning

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

Clear line of site PTP with no obstructions.

Installation

Tool List

10 mm wrench

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.
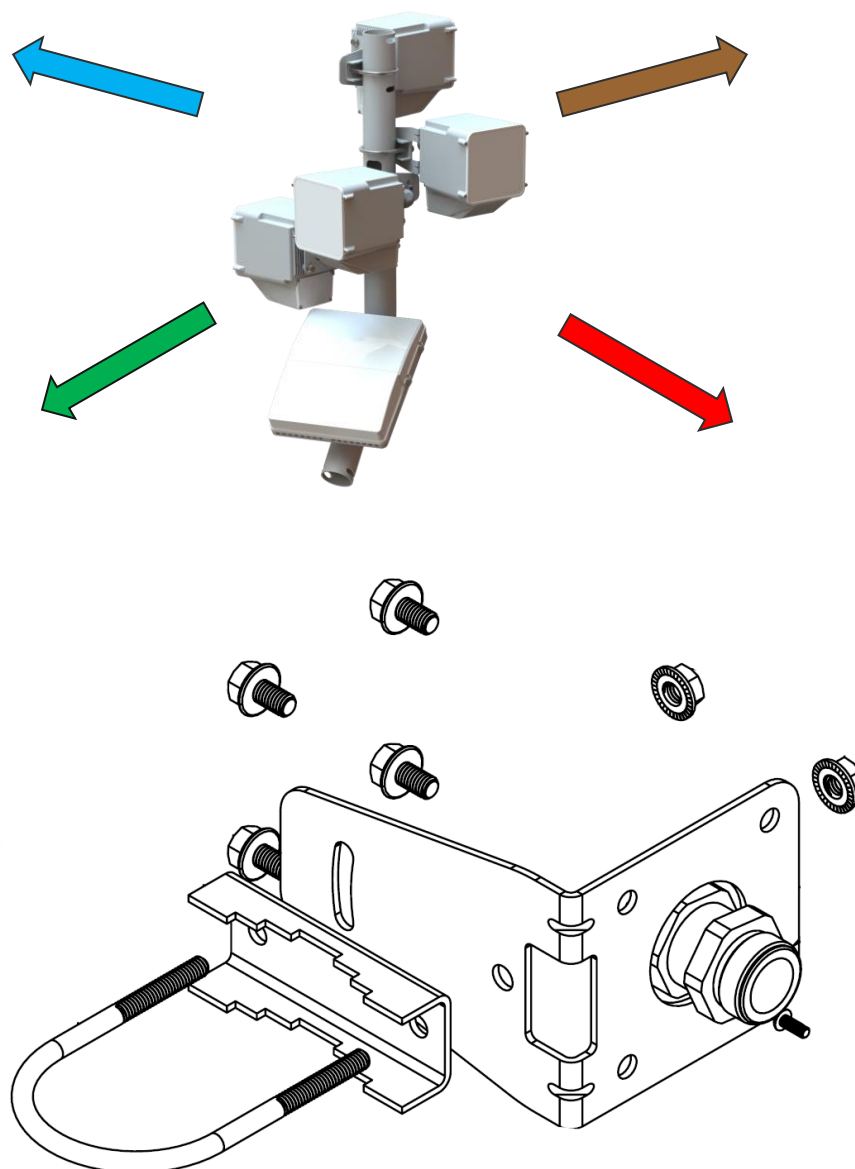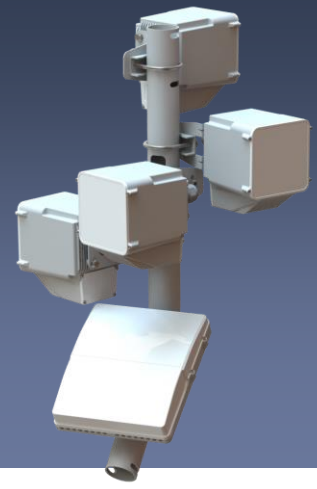
PTP 3Gbps V2
Part Number: PTP-PV2-14

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 CUB IPv4 address is 192.168.1.1
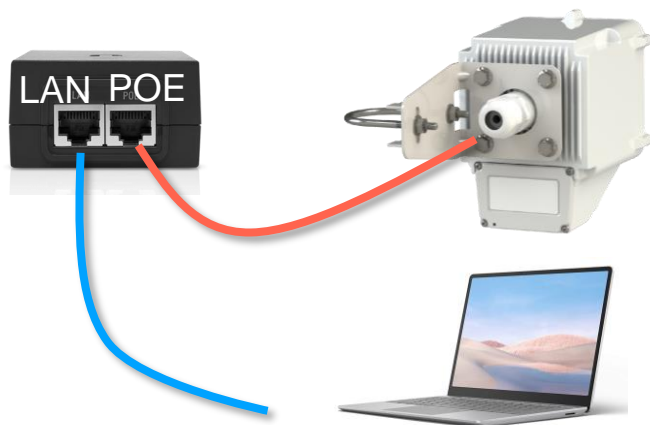
1. Configure the Ethernet adapter on your computer to 192.168.1.x subnet
2. Launch your web browser. Go to **http://192.168.1.1**
3. The login screen will appear

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PTP Radio Head
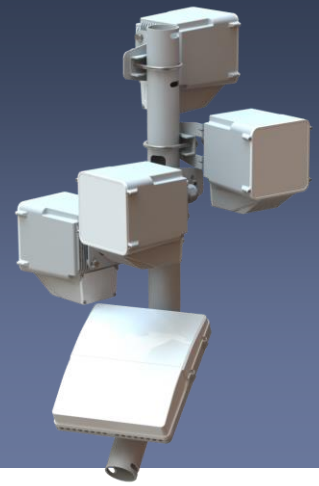
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CUB WebUI

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.

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Sign In

Username

Password

Log In

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

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Update your credentials

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

root

Password

Repeat Password

Skip   Save

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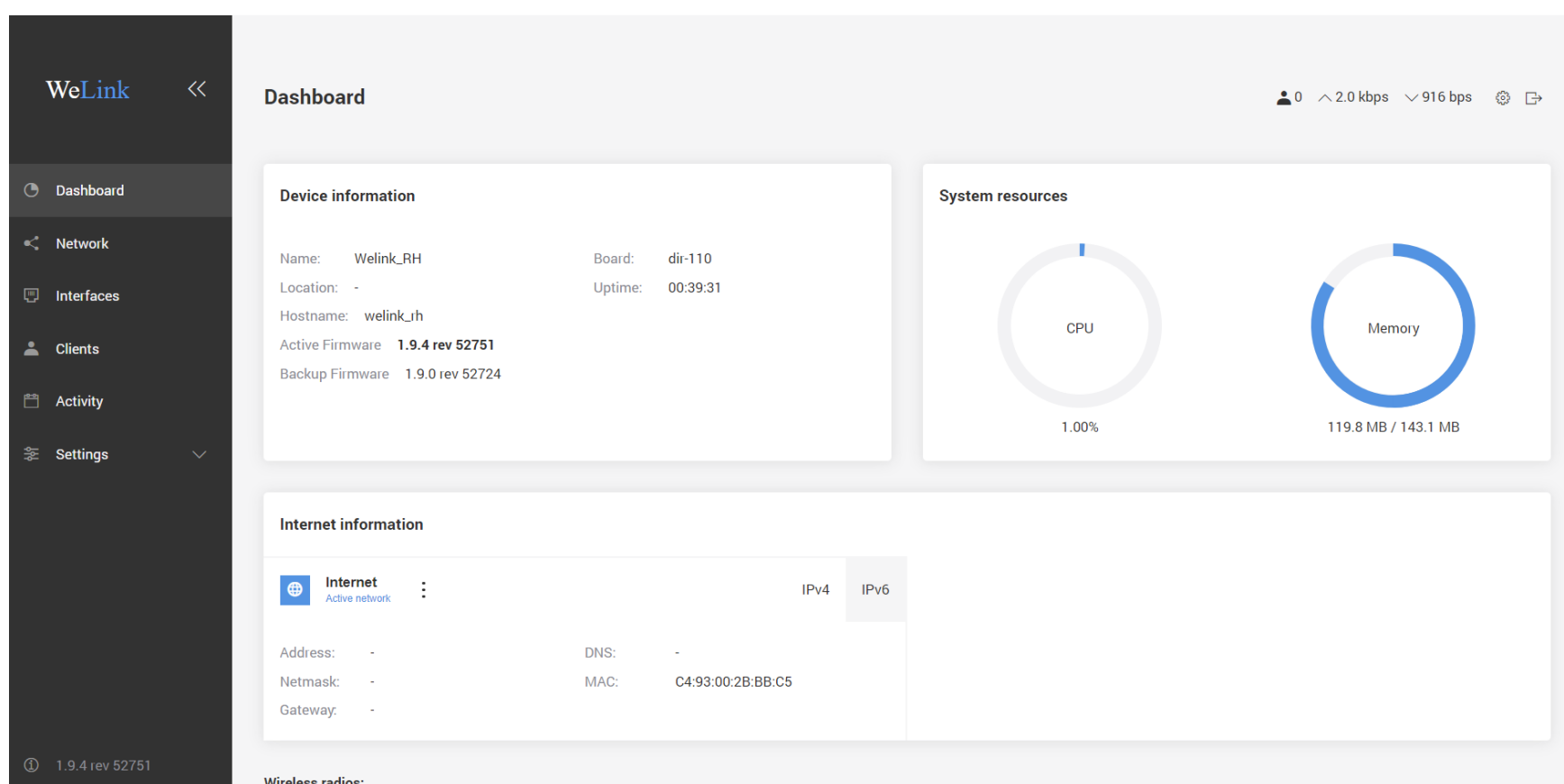
Device Information – This section gives basic information regarding the device.

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.
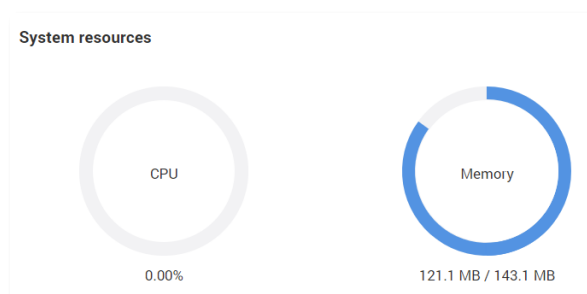
CPU – Displays the current CPU capacity in percentage being utilized
Memory – Displays the current system memory being consumed in MB.

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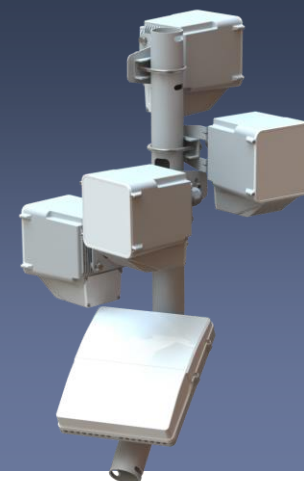
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Dashboard Cont.

Internet information – 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
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

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 recieve rate base upon current modulation

Throughput – Displays the current throughput over the wireless link
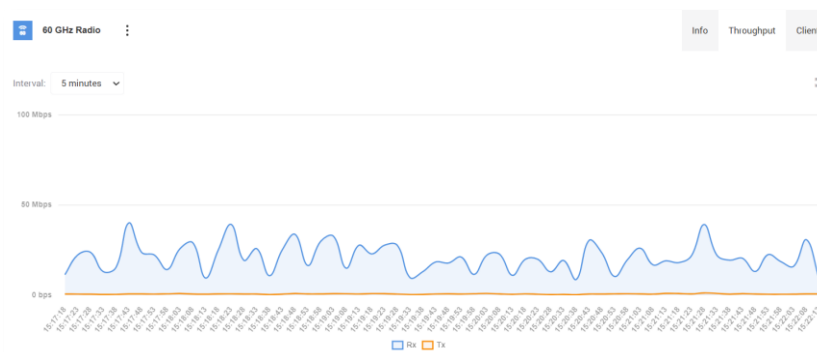
Interval – Select a time interval from *5 minutes*, *2 hours*, *Day*, *Week* and *Year*.

Clients – Displays the number of clients connected in AP mode

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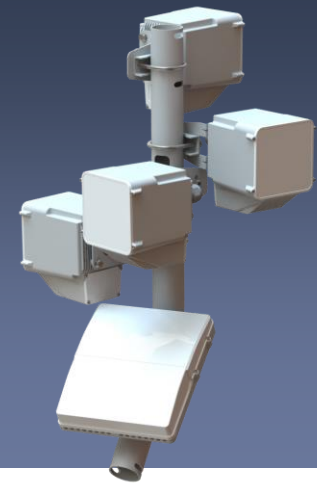
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Dashboard Cont.

Internet Throughput – This section displays the current throughput to the internet interface.

Interval – Select a time interval from *5 minutes*, *2 hours*, *Day*, *Week* and *Year*.
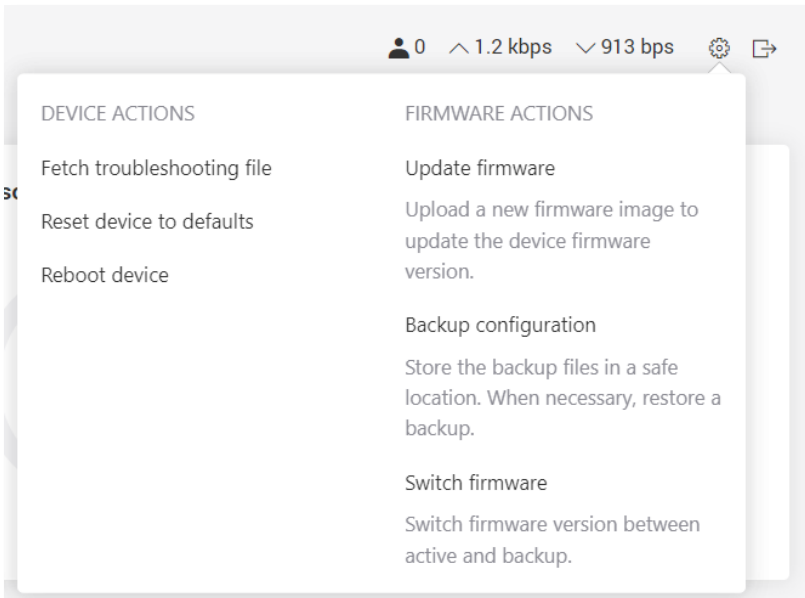
Toolbar – The toolbar shows client connections, WAN interface Tx and RX throughput, Device/Firmware actions

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

Device Actions

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.

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.

Switch firmware – Switches firmware banks from active to backup.

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Network

Network information – This section displays radio head network information.
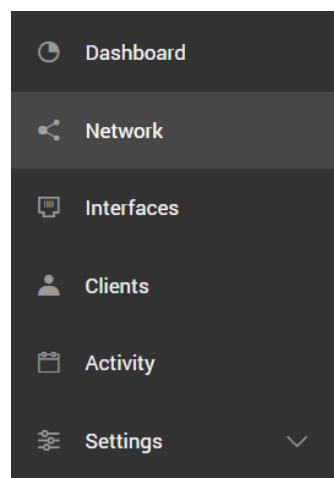
Internet – This section gives basic internet connectivity information for IPv4 and IPv6 connections.

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.
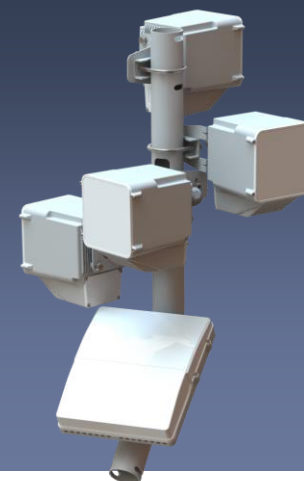
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Interfaces

Interfaces

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:	-		

👤0 ∧ 2.5 kbps ∨ 1.5 kbps ⚙ ⤴
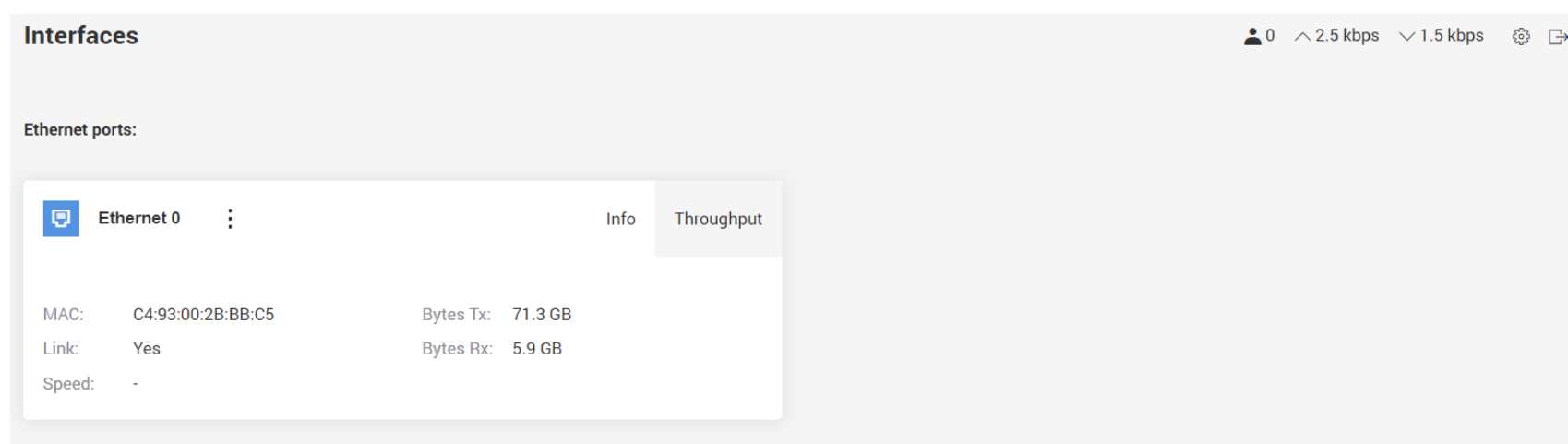
Interfaces – This section provides information on Ethernet interface.

- Dashboard
- Network
- Interfaces
- Clients
- Activity
- Settings

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:	-		
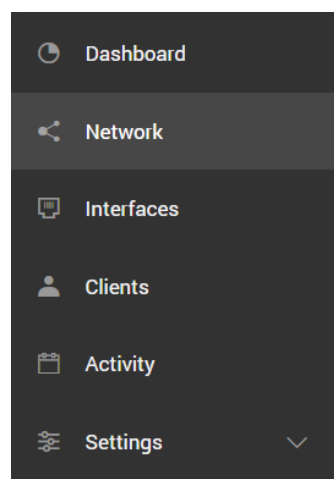
Info
MAC – Displays the local IPv4 address.
Link – Displays the local subnet mask.
Speed – Displays the local gateway.
Bytes TX – Shows interface total transmit Bytes
Bytes RX – Shows interface total receive Bytes

Throughput – Displays the throughput of Ethernet 0
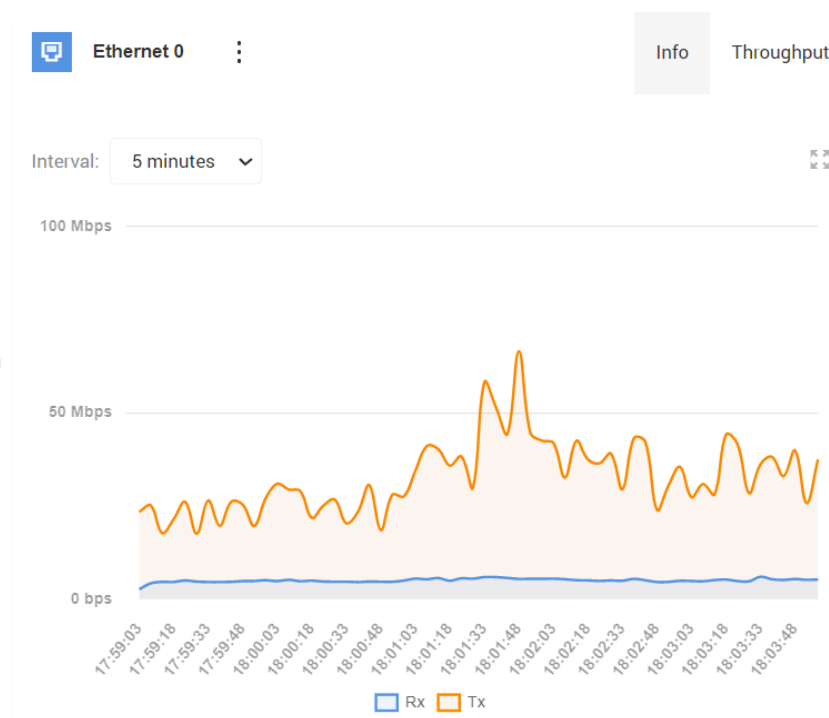
Ethernet 0		Info	Throughput

Interval: 5 minutes

100 Mbps

50 Mbps

0 bps

17:59:03 17:59:18 17:59:33 17:59:48 18:00:03 18:00:18 18:00:33 18:00:48 18:01:03 18:01:18 18:01:33 18:01:48 18:02:03 18:02:18 18:02:33 18:02:48 18:03:03 18:03:18 18:03:33 18:03:48

☐ Rx ☐ Tx

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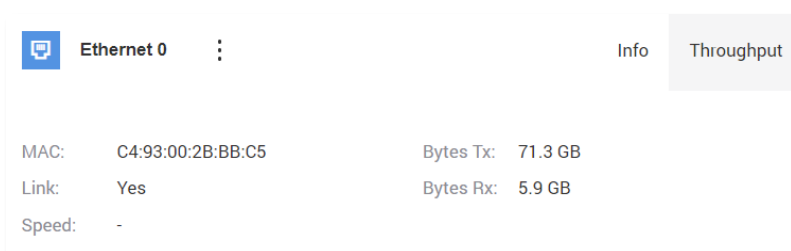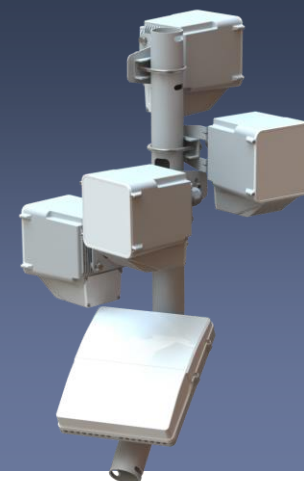
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Clients

Clients

👤 1   ∧ 2.1 kbps   ∨ 2.3 kbps   ⚙   ⤏
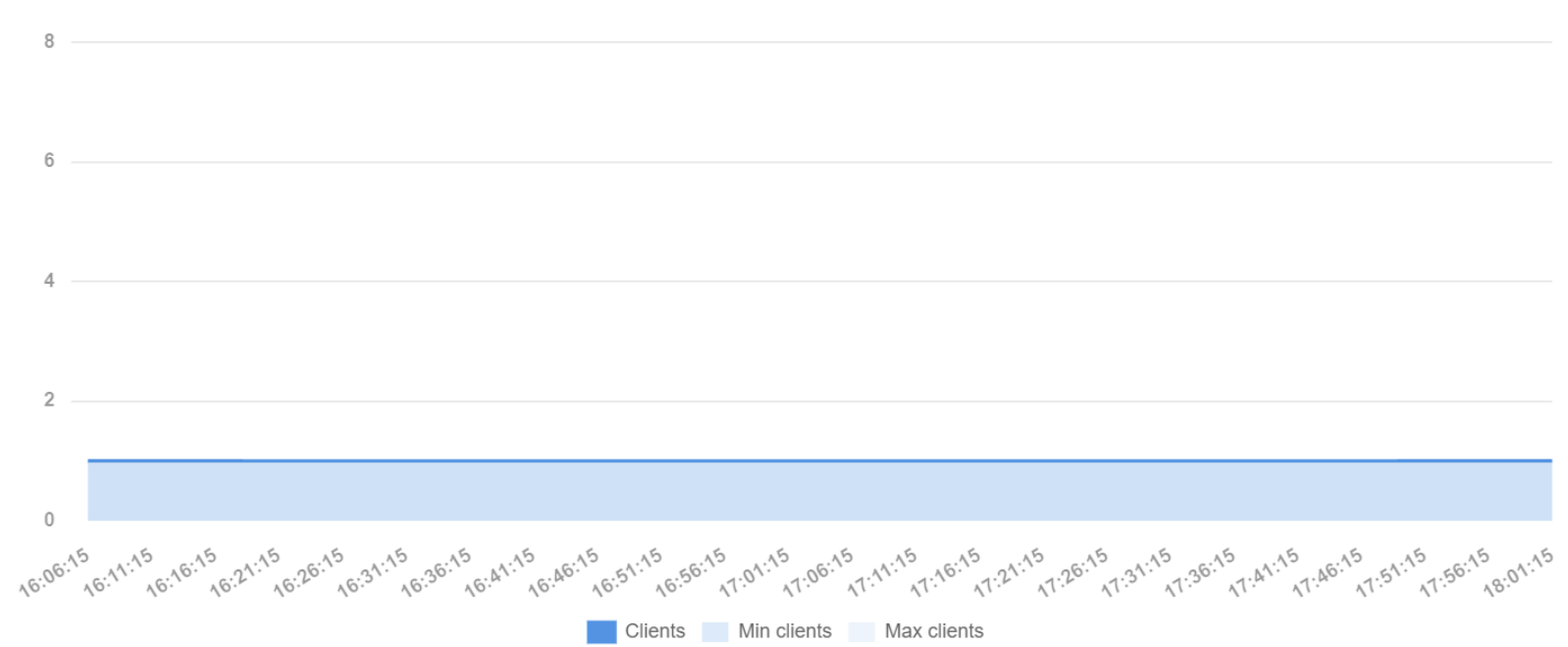
1 wireless clients

Search   ✕

MAC ⌃⌄	Radio ⌃⌄	SSID ⌃⌄	Security ⌃⌄	Uptime ⌃⌄	Signal ⌃⌄	
⌄ 20:CE:C4:01:01:E1	60 GHz Radio	380	Open	08:40:29	-46 dBm	✕

Clients information

Filter graph ⌄   ⤢

[Graph with y-axis values 8, 6, 4, 2, 0 and x-axis time values 16:06:15, 16:11:15, 16:16:15, 16:21:15, 16:26:15, 16:31:15, 16:36:15, 16:41:15, 16:46:15, 16:51:15, 16:56:15, 17:01:15, 17:06:15, 17:11:15, 17:16:15, 17:21:15, 17:26:15, 17:31:15, 17:36:15, 17:41:15, 17:46:15, 17:51:15, 17:56:15, 18:01:15]

■ Clients   ■ Min clients   ■ Max clients

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:
- ◉ 2 hours
- ○ Day
- ○ Week
- ○ Year

Values:
- ☑ MIN
- ☑ MAX
- ☑ Average

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PTP Radio Head
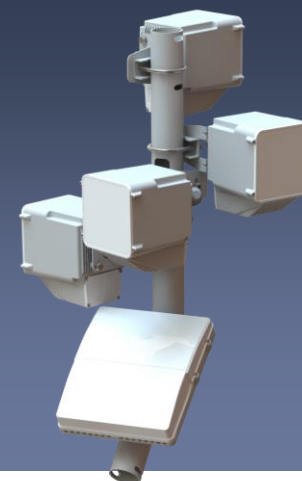
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Activity

Activity

👤 0   ⌃ 1.9 kbps   ⌄ 815 bps   ⚙   ⤷

Events

Items per page: [10 ▾]   [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.

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Settings > Configuration > Network

| Network | Wireless | Ethernet | Services | System |

Select network: ⊕ Internet   ⊰ Local Network   + Add network

Internet configuration   ⊰ 2   Remove

General

Network name
Internet

Network type
WAN

IPv4 mode
DHCP client

Fallback IPv4 address
192.168.1.1

IPv4 netmask
255.255.255.0

○ 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
123.123.123.123

Netmask
255.255.255.0

Gateway
123.123.123.1

Default route metric
1

DNS servers
8.8.4.4

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.

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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
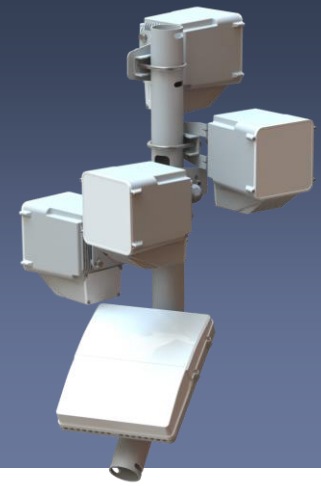
Security mode
WPA2 personal ⌄

Passphrase
•••••••• 👓

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
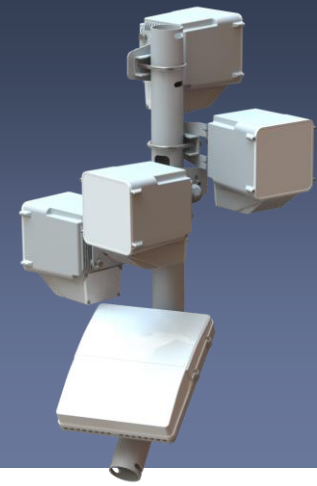Internet ⌄

⚪ 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

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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.
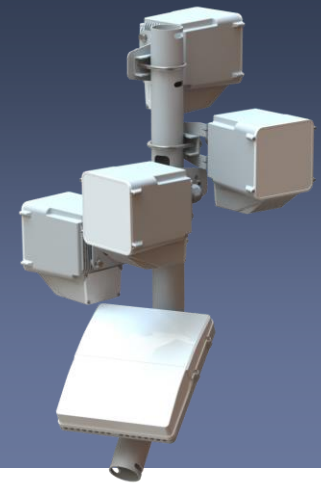
🔵 Enabled

Port

22

🔵 Password login

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

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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

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Settings > Configuration > System

Network   Wireless   Ethernet   Services   **System**

System configuration

Device information

Device name

Welink_RH

Device location

Country

Lithuania

Hostname

welink_rh

Time settings

Time zone

(UTC+2) Europe/Vilnius

Date

01/25/2022

Time

02:06 PM

↻ Set current time

Automatic firmware update

⬤ Check for firmware updates

Other settings

⬤ 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)

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Settings > Tools > Device Discovery and Site Survey

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

Device discovery [Refresh]

Search ✕

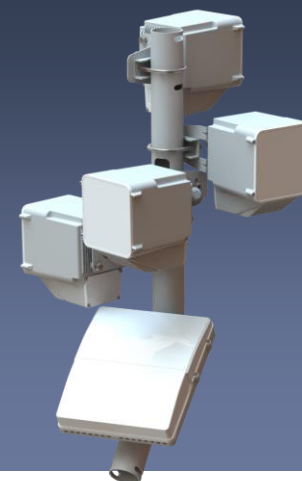| Chassis ID ⌄	Local Port ID ⌄	Remote Port ID ⌄	Management IPv4 address ⌄	Management IPv6 address ⌄	System name ⌄	System description ⌄	VLAN ID: ⌄
C4:93:00:21:45:23	eth0	eth1	-	fd8d:f00:2145:2300::1 🗎	wer1.6009south195th	MBU200 r1.9.3 v52461	-
C4:93:00:2B:BB:BE	prs0	br-wan	-	fd8d:f00:2144:1910:c693:ff:fe2b:bbbe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

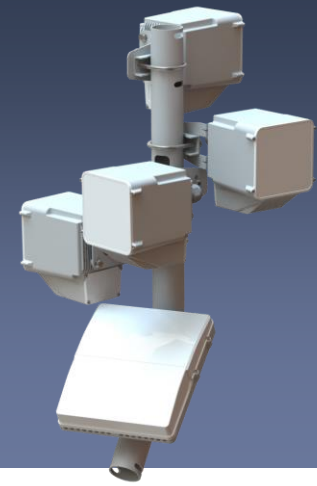| SSID ⌄	BSSID ⌄	Channel ⌄	Signal ⌄	Security ⌄
Perform scan to see results				

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.

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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

fd8d:f00:2145:2300::1   3   [●]   [Ping]

```
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
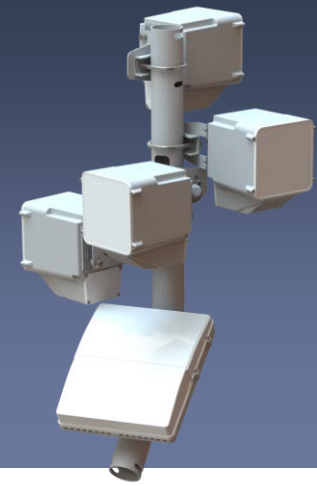
IP address or host name

fd8d:f00:2145:2300::1   [Traceroute]

```
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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PTP 3Gbps V2
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Settings > Tools > View Log

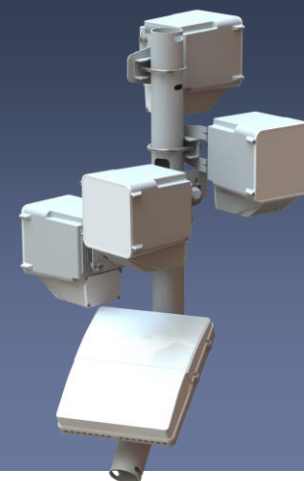| Device discovery	Site survey	Ping	Traceroute	View log

Device log   Refresh

Search   ✕

```
[41158.513587]  [DRIVER_LOG] [INFO1-OSIF]-[prs_supplicant_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 ffffffc008356500.
[42289.726593]  [DRIVER_LOG] [INFO1-OSIF]-[prs_supplicant_cfg80211_scan:856]: startScan failed
[42289.734886]  [DRIVER_LOG] [INFO1-OSIF]-[prs_supplicant_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 ffffffc008320500.
[42360.077651]  [DRIVER_LOG] [INFO1-OSIF]-[prs_supplicant_cfg80211_scan:856]: startScan failed
[42360.085990]  [DRIVER_LOG] [INFO1-OSIF]-[prs_supplicant_cfg80211_scan:859]: Delegate Scan request finished
```

Device Log – View logged messages of radio head

Settings > Tools> Users

User configuration   + Add

User name	Role	Status	Set new password
› root	Admin ⌄	⬤	👓 ✕

PTP 3Gbps V2
Part Number: PTP-PV2-14

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 30cm 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 30 cm between the radiator and your body.

All operational modes:
60 GHz: 802.ad

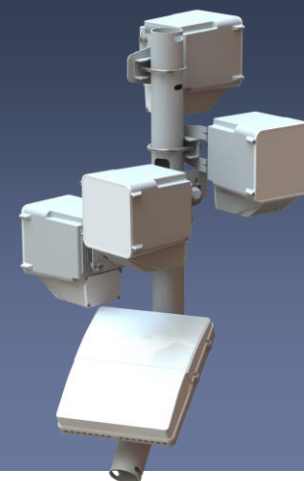The frequency and maximum transmitted power limit in EU are listed as below:

57-71GHz

Europe - EU Declaration of Conformity

Hereby, **WeLink Communications.** declares that the radio equipment type: PTP-PV2-14 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

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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.