PERSISTENT SYSTEMS

PERSONAL TRANSPORT 5 (PT^5)

USER MANUAL

VERSION 1.4

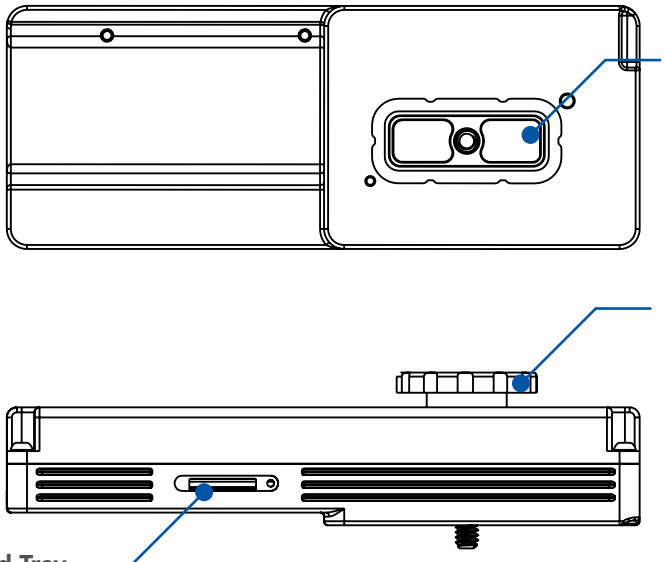
03EN481 Rev. E

BEFORE CONNECTING PT^5, UPGRADE MPU5 TO FIRMWARE VERSION 19.7.X OR HIGHER

Issued: December, 2024

Table of Contents

PT5 Device Features



22-Pin Connector
Connects to any side connector on the MPU5 or PT5 Device Tether Cable

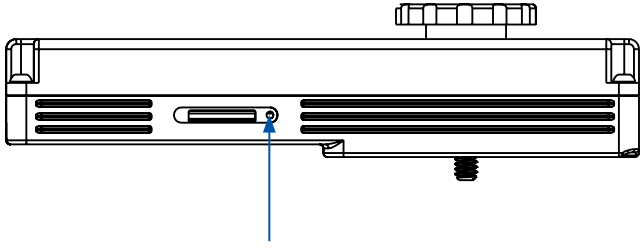
Thumbscrew
Tighten to 4 in-lbs. for IP66-compliant connection

SIM Card Tray
Compatible with ATT NANO Sim

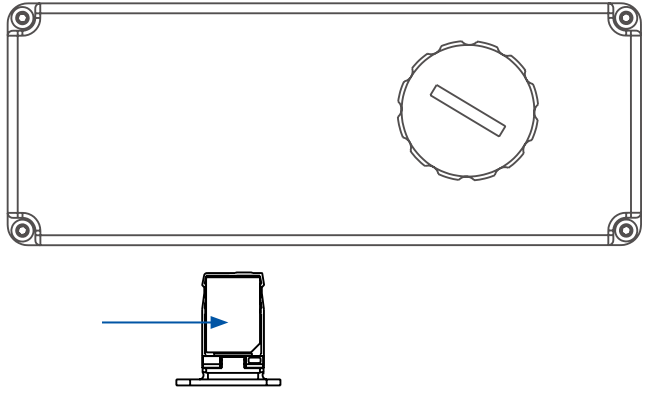
Inserting SIM Card

The PT[5] supports 5G Sub-6GHz and 4G Networks via NANO SIM.

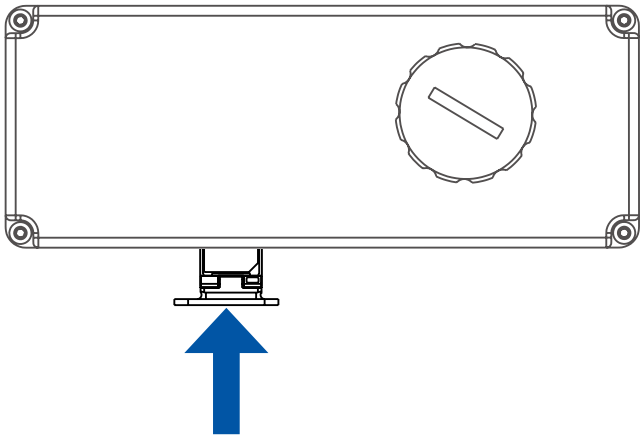
1 Use SIM card tool to open tray



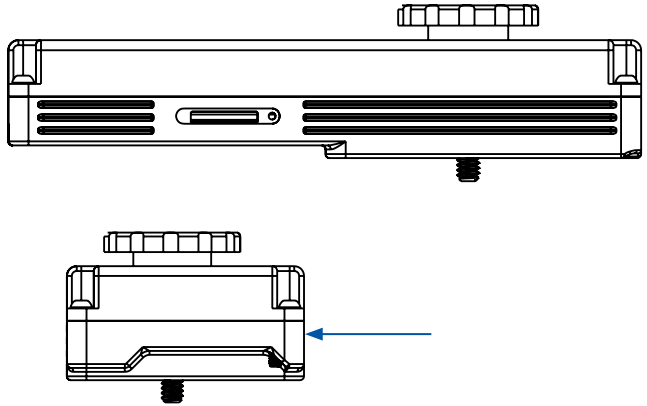
2 Insert or replace SIM card



3 Push SIM tray into slot

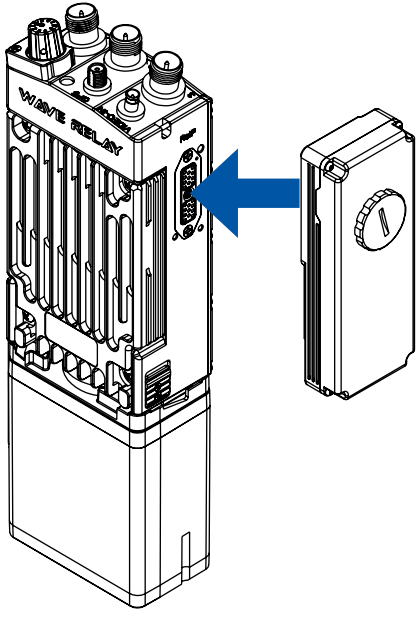


4 Ensure SIM tray is flush with PT[5] chassis

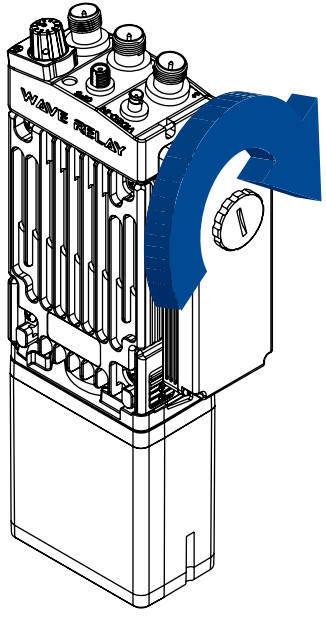


Connecting the PT5 to the MPU5 (Direct Connection)

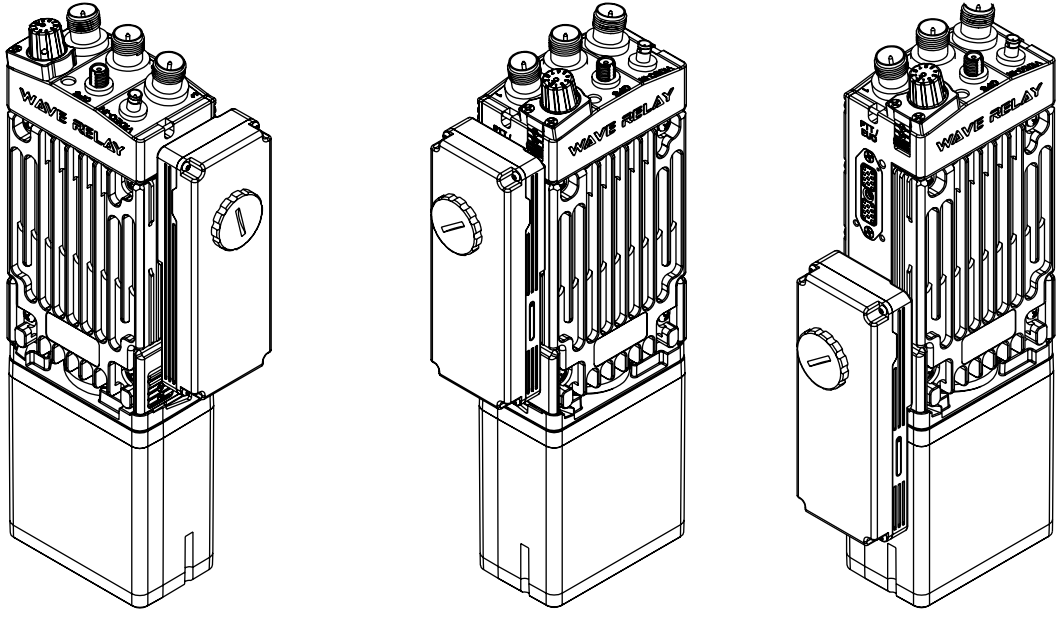
1. Align the PT5 with the Side Connector



2. Tighten the thumbscrew to 4 in-lbs.



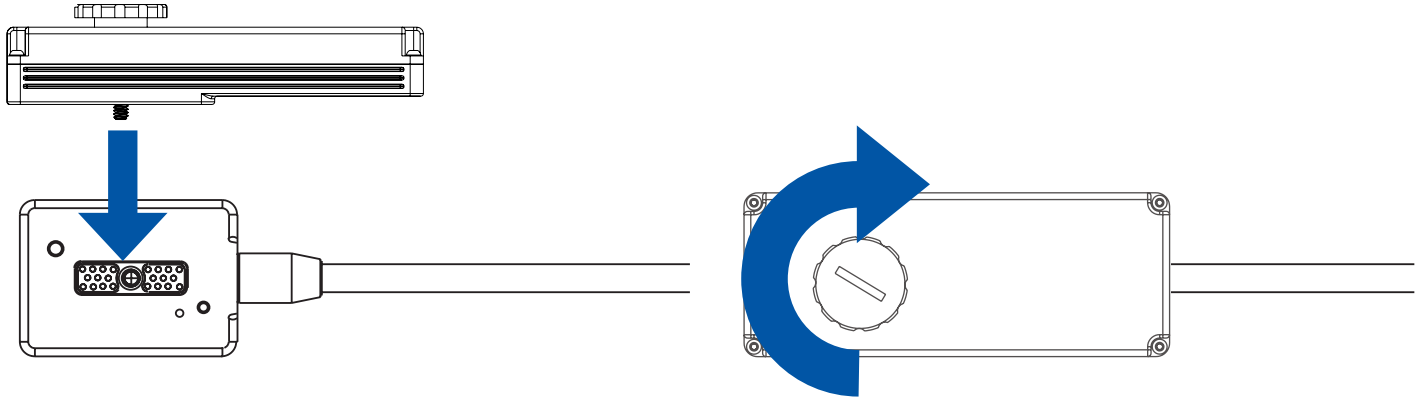
3 The PT5 can be attached to any side connector



Connecting the PT5 to the MPU5 (Cable Connection)

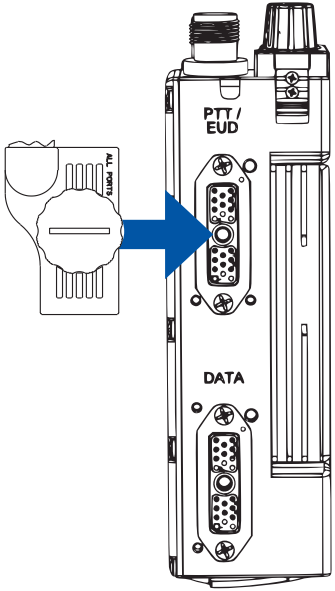
1. Align the PT5 with the cable connector

2. Tighten the thumbscrew to 4 in-lbs.

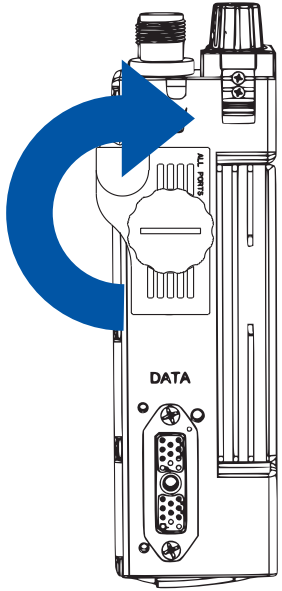


3 Align the cable 22-Pin connector with the MPU5 side connector.

Note: The PT5 cable can connect to any side connector.



4 Tighten the thumbscrew to 4 in-lbs.



Software Configuration

Note: The MPU5 will remember these settings if you remove the PT^5 and will use the same settings when the PT^5 is reconnected.
The PT^5 will use these settings no matter which side connector it is attached to
The PT^5 DOES NOT have to be connected to configure these settings.

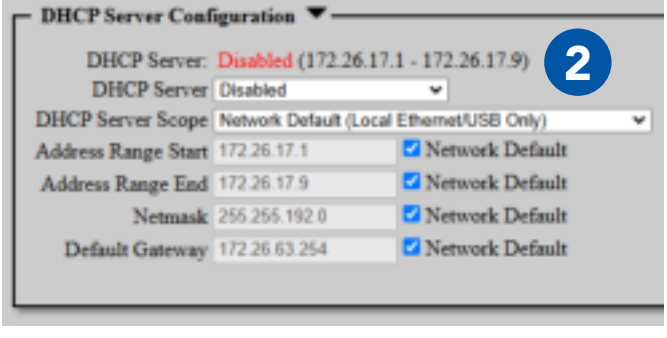
PT^5 Status page will display a red warning if a PT^5 is not attached.

DHCP Configuration

WARNING!: DHCP is required for Wi-Fi Mode. DHCP is not required for Cellular Mode.

1 Click **Node Configuration** > **PT5**

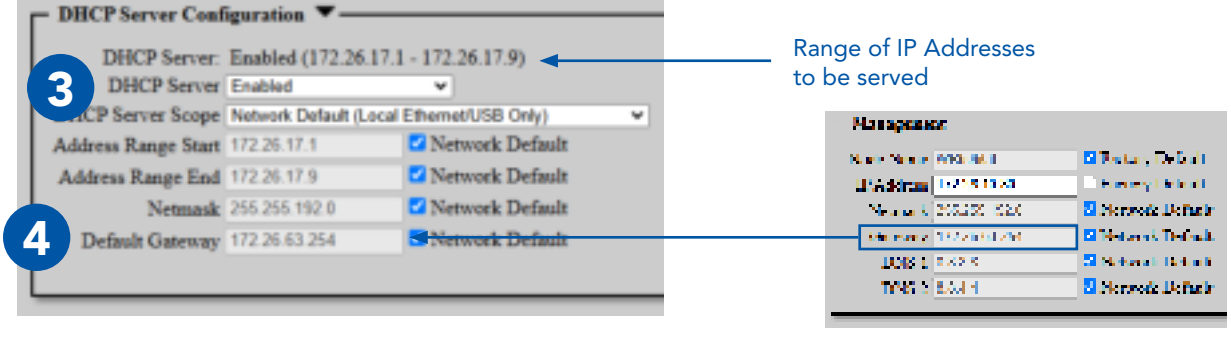
2 If DHCP is not enabled on the node, it must be enabled. DHCP Server status will display in red if DHCP Server is disabled.



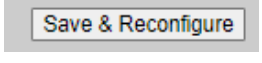
DHCP Configuration

3 Set **DHCP Server** to **Enabled**.

4 Ensure **Default Gateway** matches the local node's Gateway.
See **03EN221 DHCP Quick Start Guide** for more information on configuring DHCP Server.



5 Click **Save & Reconfigure Unit**



Note: The PT[5] does NOT serve IP addresses - the MPU5 is the DHCP server and will serve IP addresses.

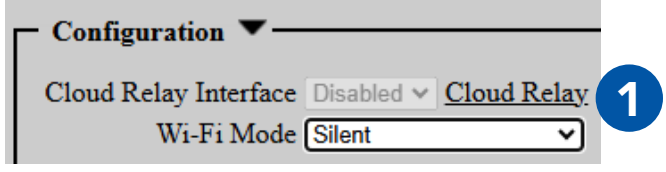
Note: It takes 2 minutes for the PT[5] to boot & SSIDs to be broadcast.

Cellular Mode Configuration

Note: a SIM card MUST be installed to use cellular mode.

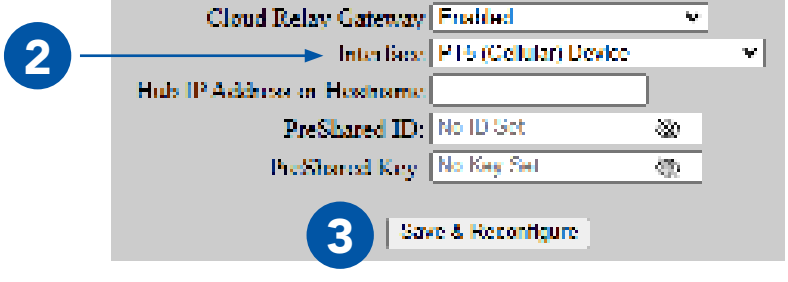
Cellular can be used only for Cloud Relay (no dirty Internet) and is controlled on the Cloud Relay Configuration page.

1. Click **Cloud Relay**. This will open the Cloud Relay configuration page.



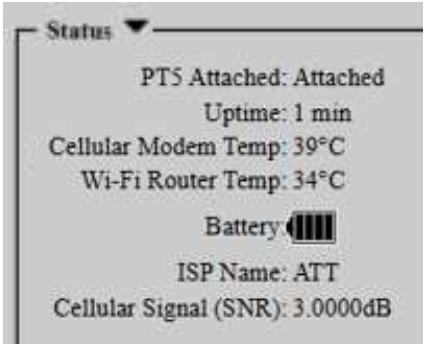
2. Set **Cloud Relay Interface** to **PT[5] (Cellular) Device**. For additional information on configuring Cloud Relay, see **03EN215 Cloud Relay Manual**.

3. Click **Save & Reconfigure**.



Cellular Mode Status

1. Status is displayed at the top of the PT5 Configuration page



This box displays the status for the PT5 itself as well as cellular connectivity status.
Uptime: PT5 uptime
Cellular Modem Temp: Temperature of the PT5 Cellular Modem
Wi-Fi Router Temp: Temperature of the PT5 Wi-Fi Router
Battery: PT5 internal battery level
ISP Name: Name of cellular network currently being accessed
Cellular Signal (SNR): Signal strength of cellular network
Refresh: Reload status box

2 Status is displayed in the WMI Header:

Cellular Disabled

Cellular Enabled, 5G Connected

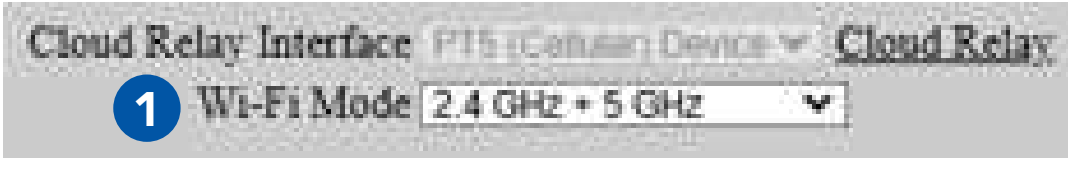
Cellular Enabled, LTE Connected

Cellular Enabled, No Connection

Wi-Fi Configuration

Note: The PT^5 can operate in two different bands that can be configured independently.
Note: It takes 2 minutes for the PT^5 to boot & SSIDs to be broadcast.

1. Set **Wi-Fi Mode** to:
   - **2.4 + 5 GHz:** Connect devices to the MPU5 via Wi-Fi in the 2.4 GHz and 5 GHz bands.
   - **2.4 GHz:** Connect devices to the MPU5 via Wi-Fi in the 2.4 GHz band only.
   - **5 GHz:** Connect devices to the MPU5 via Wi-Fi in the 5 GHz band only.
   - **Silent:** PT^5 is powered; Wi-Fi capabilities are disabled.



2 The MPU5 will generate a random SSID the first time you connect a PT[5]. Click Randomize SSIDs to generate new random SSIDs. You may also type a custom SSID, if desired.

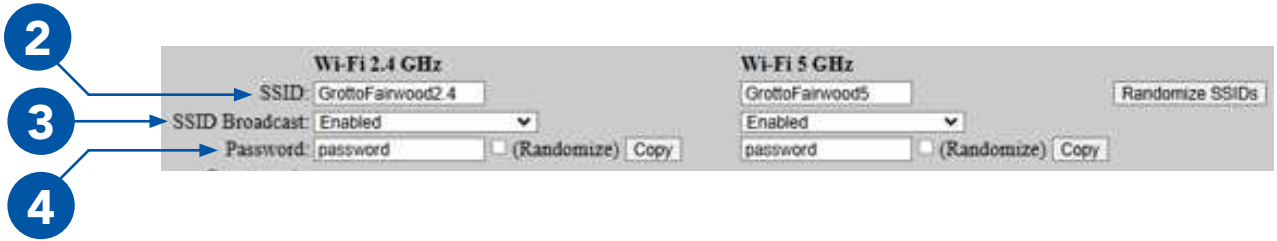
3 Set **SSID Broadcast**:

Disabled (default): SSID will not appear in devices' Wi-Fi network browser; users will have to manually enter Wi-Fi SSID to connect.

Enabled: SSID will appear in devices' Wi-Fi network browser; users can connect by selecting it.

Note: When SSID Broadcast is set to disabled, refer to your device's manual for information on how to connect to hidden networks.

4 Set a custom **Password**, if desired. Users will need this password to connect to the Wi-Fi network. **Check** the Randomize box to generate a randomized password. Click **Copy** to copy the password to your clipboard.

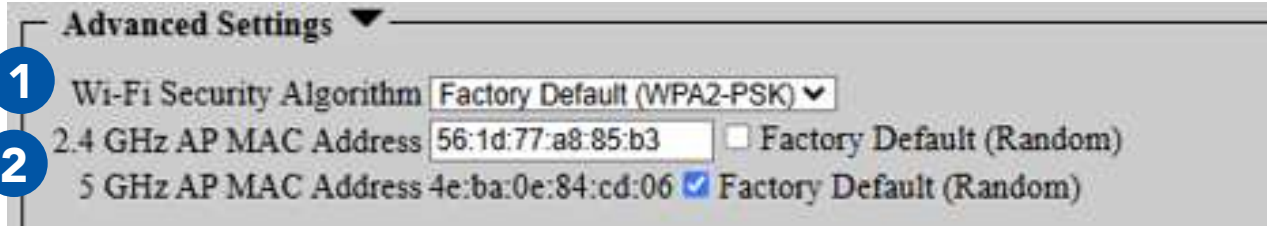


5 Click **Save & Reconfigure**

6 The WMI will generate QR codes - scan the QR code with your EUD camera to connect your device to the Wi-Fi network.

Advanced Wi-Fi Configuration

1. Set **Wi-Fi Security Algorithm** to WPA2 or WPA3. WPA3 offers stronger encryption but older client devices may have limited compatibility.
2. By default, the PT[5] will use a random MAC address for each Wi-Fi access point on boot and/or each time the PT[5] is configured.. To disable random MAC address generation and always use the same MAC address, uncheck the Factory Default box.



Advanced Wi-Fi Configuration

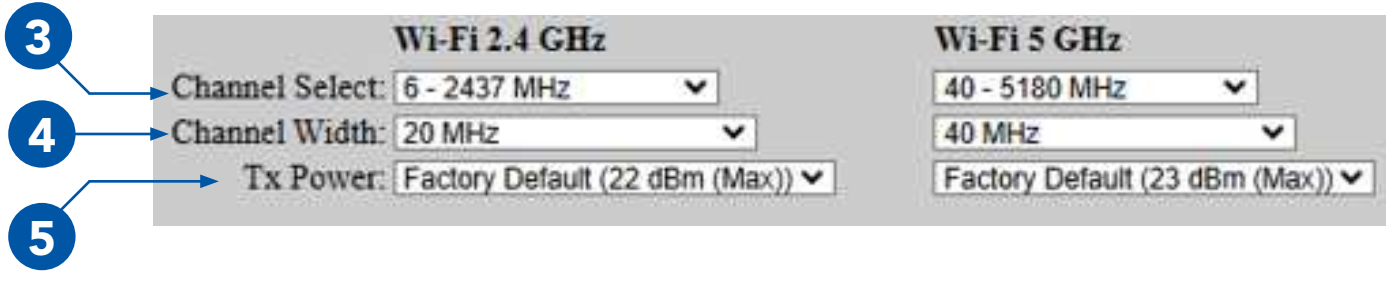
3. Adjust **Channel Select** for each Wi-Fi band.
   Numbers - Frequency: Instruct the PT[5] to use a specific Wi-Fi Channel/Frequency
   Auto: PT[5] will pick the best channel/frequency on boot

4. Adjust **Channel Width** for each Wi-Fi band.

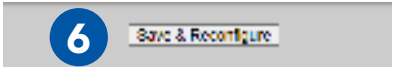
Note: Larger Channel Width offers higher throughput but shorter range.

5. Adjust **Tx Power** for each Wi-Fi band. Higher transmit power offers more range but may increase detectability.

Note: If **PT[5] Mode** is set to **2.4 + 5 GHz** and **Tx Power** is changed while the PT[5] is attached, the PT[5] must be detached and re-attached before the Tx Power setting change takes effect.



6. Click **Save & Reconfigure**



Wi-Fi Status

1. Status is displayed at the top of the PT[5] Configuration page

This box displays the status for the PT[5] itself as well as devices connected via PT[5] Wi-Fi.
Uptime: PT[5] uptime
Cellular Modem Temp: Temperature of the PT[5] Cellular Modem
Wi-Fi Router Temp: Temperature of the PT[5] Wi-Fi Router
Battery: PT[5] internal battery level
Frequency Band: Displays the Frequency band on which the device is communicating
Host Name: Displays name of the connected device
MAC Address: Displays MAC address of the connected device
IP Address: Displays IP Address assigned to the device via DHCP
Remaining Time: Displays time until assigned IP Address expires.
Refresh: Reload status box

Wi-Fi Status

2 Status is displayed in the WMI Header:

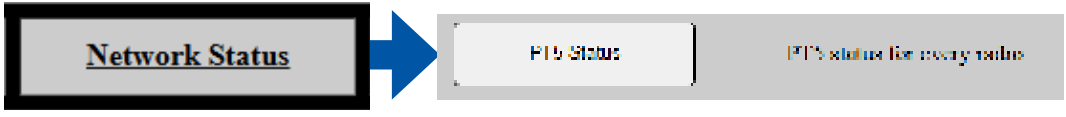
Wi-Fi Disabled

Wi-Fi Enabled

Number of client devices connected via Wi-Fi

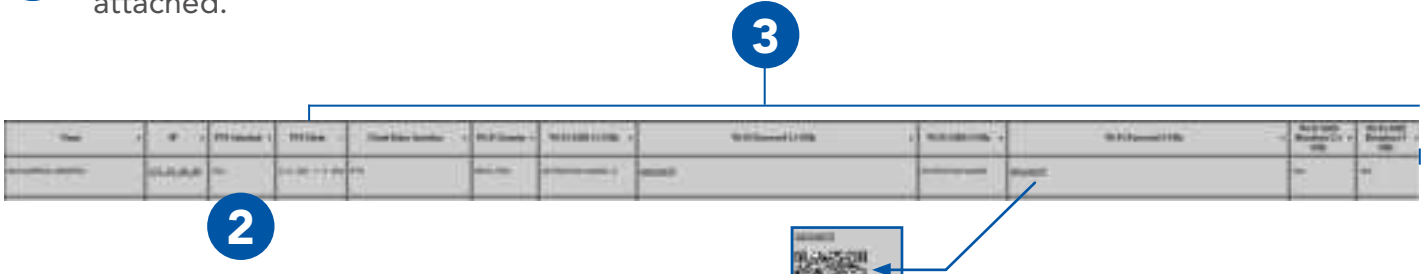
PT5 Network Status

1. Click **Network Status** > **PT5 Status**



2. The page will display which nodes have PT5s attached.

3. Page will display configured PT5 settings for all nodes regardless of whether a PT5 is attached.



Clicking **password** will display the QR code used to connect.

PERSONAL TRANSPORT 5 (PT^5)

USER MANUAL

VERSION 1.4

PERSISTENT SYSTEMS

www.persistentsystems.com

Federal Communication Commission Interference Statement

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: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employing a unit of measurement is known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of www.fcc.gov/oet/ea/fccid after searching on FCC ID: 2AG3J-WRPT50001

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.