



10.1.1 General Network interface setup configuration

The default IP address of the access point is set to 192.168.1.1. The user can change the current static IP address of the device from this screen. DHCP client (DHCP client or DHCPv6 client) option is to get the dynamic IP address from reachable DHCP server in the network. Once the protocol is set to DHCP client or DHCPv6 client, the device will automatically get the IP address (IPv4 or IPv6) from the DHCP server.

Click on the “Edit” option in interface screen as shown in “Figure 24: Basic overview of the interface configuration screen”. A basic overview of the network interface setup configuration screen to switch protocol is given below:

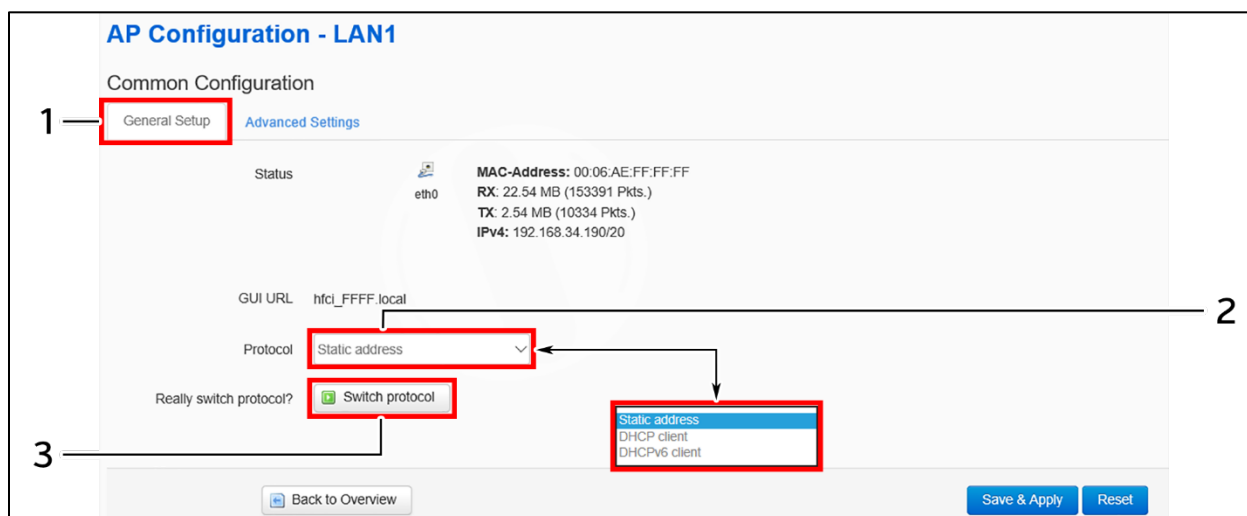


Figure 25: Basic overview of the network interface setup configuration screen to switch protocol

Follow the steps given below to switch protocol:

Table 13: List of actions to switch protocol

Callout	Name	Description
1.	General Setup	Click on “General Setup” option
2.	Protocol	Select the protocol desired protocol from the dropdown list (Static address/DHCP client/DHCPv6 client)
3.	Really switch protocol	Click on “Switch protocol” to confirm the protocol switch



10.1.1.1 Static IP configuration

The default IP address of the access point is set to 192.168.1.1. User can change the default IP address with an unused IP address. Refer Figure 25: Basic overview of the network interface setup configuration screen to switch protocol and set the protocol to static address.

Refer the figure below to provide the static address parameters:

AP Configuration - LAN1

Common Configuration

General Setup | **Advanced Settings**

Status MAC-Address: 00:06:AE:FF:FF:FF
RX: 33.93 MB (226852 Pkts.)
TX: 3.42 MB (14738 Pkts.)
IPv4: 192.168.34.190/20

GUI URL: hfcL_FFFF.local

Protocol: **Static address** (Selected from dropdown: Static address, DHCP client, DHCPv6 client)

IPv4 Address: 192.168.100.10

IPv4 Netmask: 255.255.255.0

IPv4 Gateway: 192.168.32.1

IPv4 Broadcast: 192.168.32.2

Use Custom DNS Servers: ☒ 8.8.8.8

IPv6 Assignment Length: disabled (Assign a part of given length of every public IPv6-prefix to this interface)

IPv6 Address: 2001:0:9d38:6ab8:1484:502:3f57:c

IPv6 Gateway: 2001:0:9d38:6ab8:1484:502:3f57:c

IPv6 Routed Prefix: 64 (Public prefix routed to this device for distribution to clients.)

WLCIPv4 Address: 192.168.35.35

WLCIPv6 Address: 0:9d38:6ab8:1484:502:5657:d008

AP Hostname: HFCCL

Buttons: Back to Overview, Save & Apply, Reset

Figure 26: Basic overview of static address parameters for general network interface setup



Follow the steps given below to provide static address parameters:

Table 14: List of actions to provide static address parameters

Callout	Name	Description
1.	Protocol	The protocol is set to “Static address”. Enter the following parameters
2.	IPv4 address	Enter the “IPv4 address”. This is a unique address of the Host/Device e.g.192.168.100.10
3.	IPv4 netmask	Select the “IPv4 netmask” from the dropdown list or select “Custom” option to enter it manually. This specifies the number of bits for network part and host part e.g.255.255.255.0
4.	IPv4 gateway	Enter the “IPv4 gateway”. Gateway address is given to reach other network device e.g.192.168.100.254
5.	IPv4 broadcast	Enter the “IPv4 broadcast”. Broadcast address is to broadcast message in a network e.g. 192.168.100.255
6.	Use custom DNS servers	Enter the “DNS server”. Click on add icon to add multiple DNS servers. DNS server is to resolve the transition of domain name to IP and IP to domain name
7.	IPv6 Assignment Length	Enable/Disable the IPv6 assignment length for IPv6 address. Specify the number of bits that belong to network part, if enabled. The prefix-length specifies a range of devices e.g. IPv6 prefix length = 64 means range of IP addresses between 2001:0DB8:ABCD:0012:0000:0000:0000:0000 and 2001:0DB8:ABCD:0012:FFFF:FFFF:FFFF:FFFF
8.	IPv6 address	Enter the “IPv6 address”. Unique address of the Host/Device e.g.2001:11::100
9.	IPv6 gateway	Enter the “IPv6 gateway”. Gateway address is given to reach other network device e.g.2001:11::1
10.	IPv6 Routed prefix	Specify the prefix length for IPv6 address. Specifies the number of bits that belong to network part. The prefix-length specifies a range of devices e.g. IPv6 prefix length = 64 means range of IP addresses between 2001:0DB8:ABCD:0012:0000:0000:0000:0000 and 2001:0DB8:ABCD:0012:FFFF:FFFF:FFFF:FFFF
11.	WLC IPv4 address	Enter the WLC IP address in IPv4 format
12.	WLC IPv6 address	Enter the WLC IP address in IPv6 format
13.	AP Host Name	Enter a unique name for the AP

Click “Save” to save the general network setup configuration or click “Reset” to configure the same again.



10.1.1.2 DHCP client configuration

If the protocol is set to DHCP client, the device will automatically get the IPv4 address from the DHCP server. Refer Figure 25: Basic overview of the network interface setup configuration screen to switch protocol and set the protocol to DHCP client.

Refer the figure below to provide the DHCP client parameters:

AP Configuration - LAN1

Common Configuration

General Setup | **Advanced Settings**

Status **eth0** **MAC-Address:** 00:06:AE:FF:FF:FF
RX: 49.88 MB (338993 Pkts.)
TX: 4.84 MB (21224 Pkts.)
IPv4: 192.168.34.190/20

1 GUI URL: hfci_FFFF.local

Protocol: **DHCP client** (dropdown menu)

2 WLC IPv4 Address: 192.168.35.35

AP Hostname: **HFCL** **3**

Static address
DHCP client
DHCPv6 client

[Back to Overview](#) [Save & Apply](#) [Reset](#)

Figure 27: Basic overview of DHCP client parameters for general network interface setup

Follow the steps given below to provide DHCP client parameters:

Table 15: List of actions to provide DHCP client parameters

Callout	Name	Description
1.	Protocol	The protocol is set to “DHCP client”. The IPv4 address and the other parameters will be taken care by the DHCP server. Enter the following parameters
2.	WLC IPv4 address	Enter the WLC IP address in IPv4 format
3.	AP Host Name	Enter a unique name for the AP

Click “Save” to save the general network setup configuration or click “Reset” to configure the same again.



10.1.1.3 DHCPv6 client configuration

If the protocol is set to DHCPv6 client, the device will automatically get the IPv6 address from the DHCP server. Refer Figure 25: Basic overview of the network interface setup configuration screen to switch protocol and set the protocol to DHCPv6 client.

Refer the figure below to provide the DHCPv6 client parameters:

AP Configuration - LAN1

Common Configuration

General Setup | Advanced Settings

Status

eth0

MAC-Address: 00:06:AE:FF:FF:96
RX: 135.41 GB (97853416 Pkts.)
TX: 221.80 GB (279852594 Pkts.)
IPv4: 192.168.34.217/20

Static address
DHCP client
DHCPv6 client

1 GUI URL hfci_FF96.local

Protocol DHCPv6 client

2 Dual Stack Enable

3 WLCIPv6 Address 2001:0:9d38:6ab8:1484:502:3f57:1

4 WLCIPv4 Address 192.168.35.35

5 AP Hostname HFCL

Back to Overview

Save & Apply Reset

Figure 28: Basic overview of DHCPv6 client parameters for general network interface setup

Follow the steps given below to provide DHCPv6 client parameters:

Table 16: List of actions to provide DHCPv6 client parameters

Callout	Name	Description
1.	Protocol	The protocol is set to “DHCPv6 client”. The IPv6 address and the other parameters will be taken care by the DHCP server. Enter the following parameters
2.	Dual Stack	Enable/Disable the dual stack
3.	WLC IPv6 address	Enter the WLC IP address in IPv6 format
4.	WLC IPv4 address	Enter the WLC IP address in IPv4 format
5.	AP Host Name	Enter a unique name for the AP

Click “Save” to save the general network setup configuration or click “Reset” to configure the same again.



10.2 Advanced Network interface setup configuration for thin AP

Switch between Ethernet port and fiber port from this screen. Click on the “Edit” option (5) in interface screen as shown in “Figure 24: Basic overview of the interface configuration screen”. A basic overview of the advanced network interface setup configuration screen is given below:



Figure 29: Basic overview of the advanced network interface setup configuration screen

Follow the steps given below for advanced network interface setup configuration:

Table 17: List of actions for advanced network interface setup configuration

Callout	Name	Description
1.	Advanced Settings	Click on “Advanced Settings” option
2.	Port Mode	Set the port to either Ethernet port mode or to Fiber port mode. If the mode is set to Fiber port mode, make sure that the SFP is connected



11 Switch AP Mode

A basic overview of the screen to switch mode from thin AP to thick AP is given below:

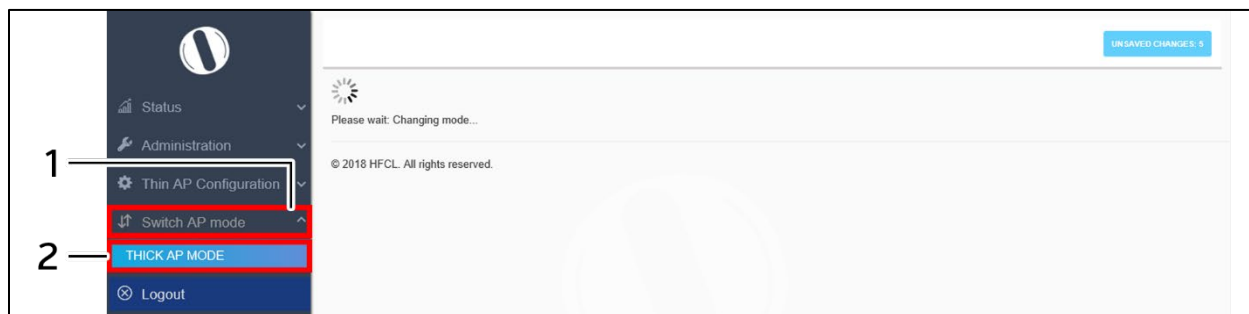


Figure 30: Basic overview of the screen to switch mode from thin AP to thick AP

Follow the steps given below to switch mode from thin AP to thick AP:

Table 18: List of actions to switch mode from thin AP to thick AP

Callout	Name	Description
1.	Switch AP Mode	Click on “Switch AP Mode” dropdown
2.	Thick AP Mode	Click on “Thick AP Mode” option

The screen displays the message as “Please wait changing mode”

12 Logout

Click on the logout option to terminate the user session.



13 Connect to the Thick Access Point and Log In

You can connect to the access point's web management interface to view or change its LAN and wireless access settings. Refer the procedure mention in “Connect to the Indoor Access Point” and “Connect to the Outdoor Access Point” section and connect to a thick mode access point.

13.1 Login through GUI

This is the 1st screen of AP GUI. It provides access to the users with valid login credentials only. The login credentials will determine the access rights of the user.

A basic overview of the same is shown below:

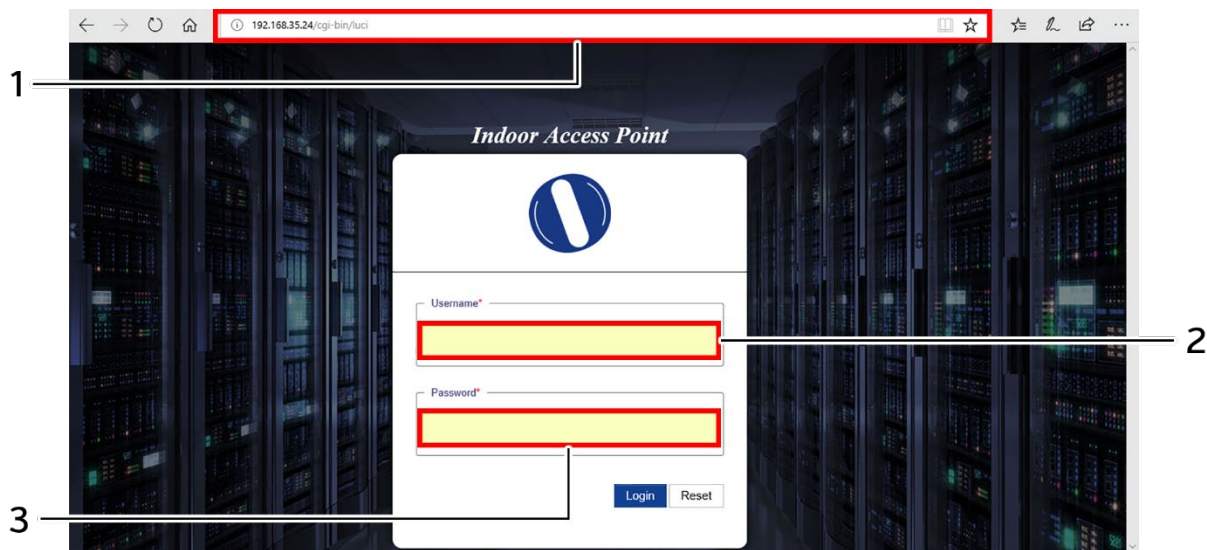


Figure 31: Basic overview of login screen

Follow the steps given below to login through GUI:

Table 19: List of actions to login through GUI

Callout	Name	Description
1.	Web browser	Open a web browser and enter the “IP address of the AP” in the address bar. 192.168.1.1 is the default IP address
2.	User name	Enter the valid “User ID”
3.	Password	Enter the valid “Password”

Click on “Login”, a successful/authenticated login will take the user to Status Overview screen.



14 Status overview screen

The screen provides the status overview of:

1. System summary
2. Software
3. Hardware
4. Wireless Summary

14.1 System summary

A basic layout of the system summary is given below:

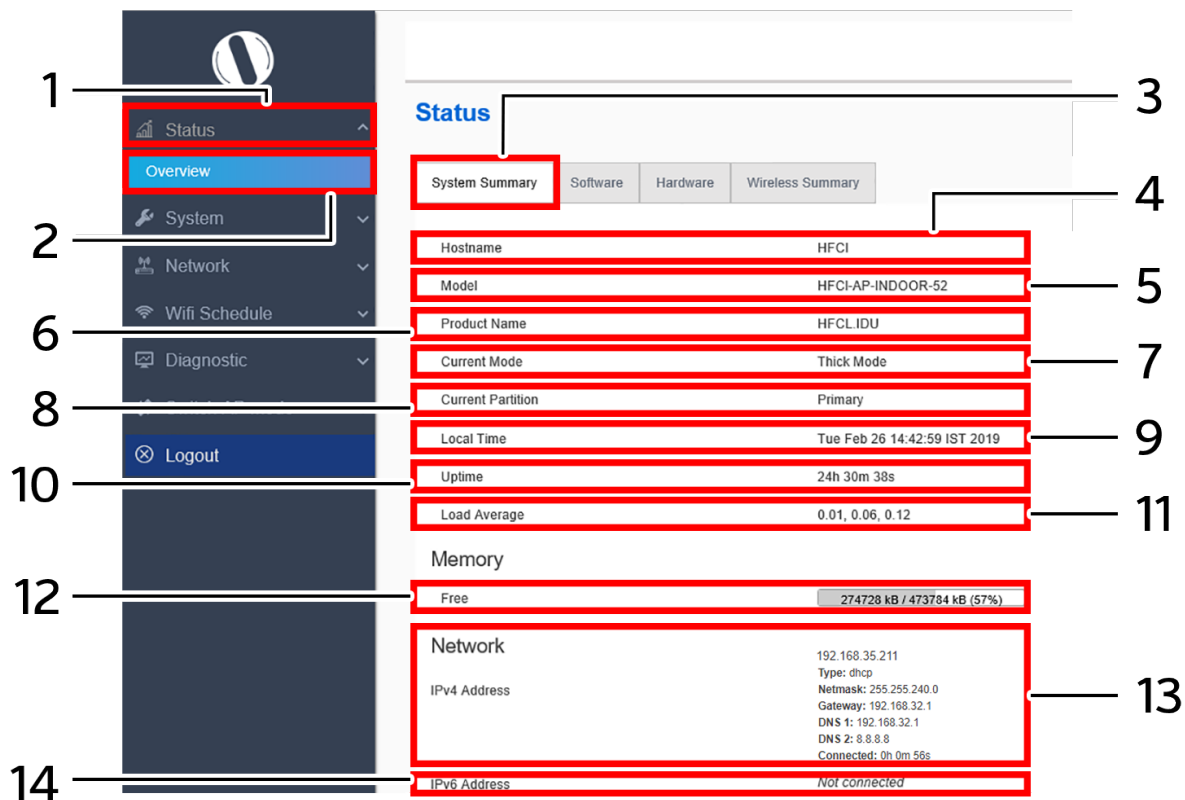


Figure 32: Basic layout of the system summary screen

Follow the steps given below to view the system summary:

Table 20: List of information displayed in the system summary

Callout	Name	Description
1.	Status	Click on the “Status” dropdown
2.	Overview	Click on “Overview” option
3.	System summary	Click on “System summary” option
4.	Hostname	Displays the “Hostname” assigned to the respective AP in the “System Configuration” screen



Callout	Name	Description
5.	Model	Displays the model number of the product. The same is configured with the factory settings of the device and reflects in this section on system boot up
6.	Product Name	Displays the name of the product
7.	Current Mode	Displays the current acting mode of the AP (Thick mode or Thin mode)
8.	Current Partition	Displays the current partition in use
9.	Local Time	Displays the date and time details according to the time zone allocated in the “System Configuration” screen
10.	System uptime	Displays the time duration since the respective AP board is up and successfully running without any shutdown
11.	Average Load	Displays the average load on the device
12.	Memory	Displays the free and available memory of the respective device
13.	Network/IPv4 Address	Displays the IPv4 address of the respective device
14.	Network/IPv6 Address	Displays the IPv6 address of the respective device

14.2 System software

A basic layout of the system software is given below:

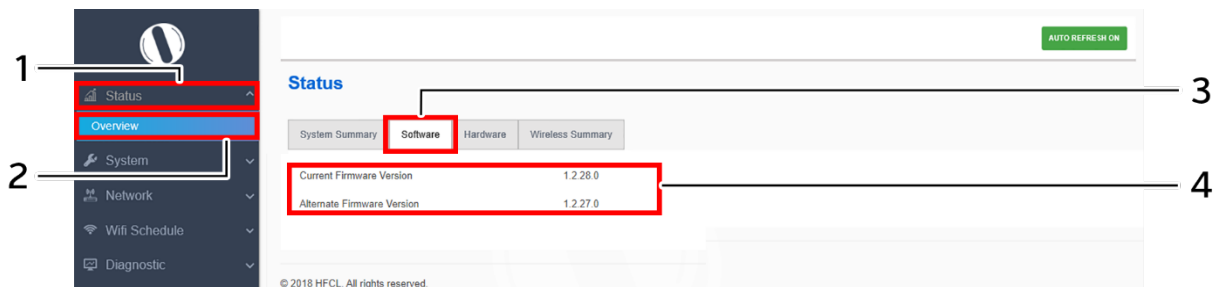


Figure 33: Basic layout of the system software screen

Follow the steps given below to view the system software information:

Table 21: List of information displayed in the system software screen

Callout	Name	Description
1.	Status	Click on the “Status” dropdown
2.	Overview	Click on “Overview” option
3.	Software	Click on “Software” option
4.	Firmware Version	Displays the current and alternate firmware version of the respective AP. The operating system is based on openwrt project model



14.3 System hardware

A basic layout of the system hardware is given below:



Figure 34: Basic layout of the system hardware screen

Follow the steps given below to view the system hardware information:

Table 22: List of information displayed in the system hardware screen

Callout	Name	Description
1.	Status	Click on the “Status” dropdown
2.	Overview	Click on “Overview” option
3.	Hardware	Click on “Hardware” option
4.	Hardware Version	Displays the current hardware version of the respective AP
5.	Device Type	Displays the device type (Indoor or Outdoor)
6.	Serial Number	Displays the serial number of the respective AP. The same is configured with the factory settings of the device and reflects in this section on system boot up
7.	MAC-Address	Displays the MAC address assigned to the product. The same is configured with the factory settings of the device and reflects in this section on system boot up



14.4 System wireless

A basic layout of the thick AP system wireless overview is given below:

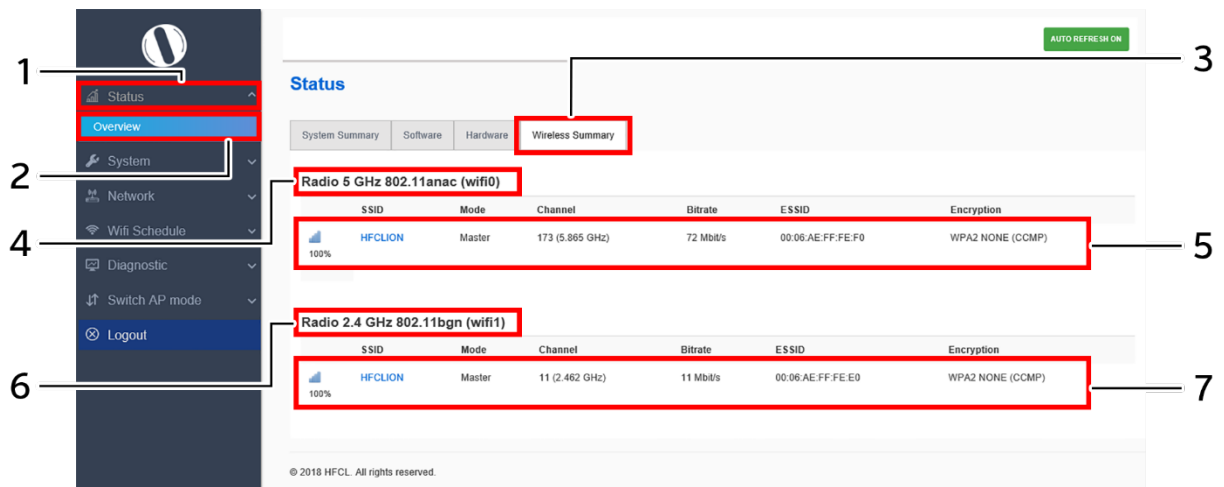


Figure 35: Basic layout of the thick AP system wireless overview screen

Follow the steps given below to view thick AP system wireless overview:

Table 23: List of information displayed in thick AP system wireless overview

Callout	Name	Description
1.	Status	Click on the “Status” dropdown
2.	Overview	Click on “Overview” option
3.	Wireless	Click on “Wireless” option
4.	Radio 5 GHz	Displays the current radio operating mode of the access point at 5 GHz. Refer the section for 5 GHz radio configurations
5.	SSID 5 GHz	Displays all configured SSIDs operating at 5 GHz in a listed form along with some basic details as shown in the figure above. Refer the section for configuration of SSIDs operating at 5 GHz radio
6.	Radio 2.4 GHz	Displays the current radio operating mode of the access point at 2.4 GHz. Refer the section for 2.4 GHz radio configurations
7.	SSID 2.4 GHz	Displays all configured SSIDs operating at 2.4 GHz in a listed form along with some basic details as shown in the figure above. Refer the section for configuration of SSIDs operating at 2.4 GHz radio



15 System maintenance screen

The maintenance activities of the respective access point are executed from this screen. The list of options available for the user is given below:

1. System general and log settings
2. Admin password configuration
3. Backup/Flash Firmware
4. Reboot
5. Factory Reset

15.1 System general settings

The user can configure the basic aspects of the respective access point, like its hostname and the timezone. A basic overview of the screen is given below:

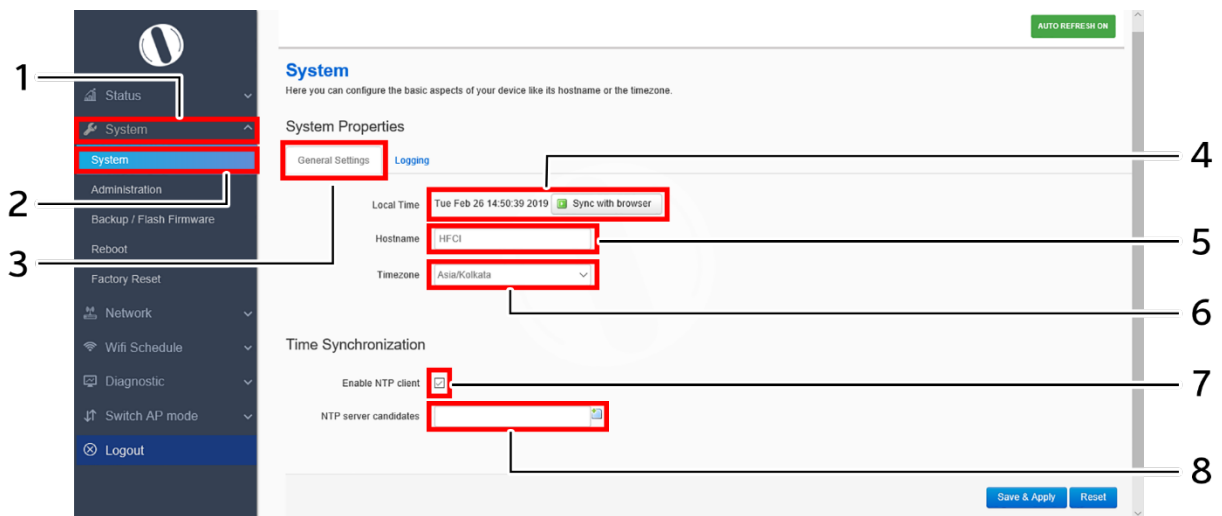


Figure 36: Basic overview of the system general settings screen for thick AP

Follow the steps given below and configure the system general settings for the thick AP:

Table 24: List of actions to configure the system general settings for thick AP

Callout	Name	Description
1.	System	Click on “System” dropdown
2.	System	Click on “System” option
3.	General Settings	Click on “General Settings” option
4.	Local Time	Displays the local date and time of the region. The user can click on “Sync with browser” option to sync the date and time
5.	Host Name	Enter the “Hostname”. The same will be reflected in the systemsummary of status overview screen
6.	Time Zone	Select the respective “Timezone” from the dropdown list. It represents the region of the globe that observes a uniform standard time for legal, commercial, and social purposes.



Callout	Name	Description
		The date and time of the respective timezone will be reflected in the system summary of status overview screen.
7.	Time sync/NTP	Click on the check box and enable or disable the NTP client
8.	NTP Server candidates	Click on the + icon and add multiple servers

Click on “Save & Apply” to save the systemadmin password configuration or click “Reset” to configure the same again.



15.2 System log settings

If user wants to see the back-end logs or if user faces any issue, logs relevant to the AP's application software are populated in the Diagnostic/System Log screen for monitoring purpose. The same can be uploaded to an external server and the configuration for the same is performed in this screen. Event messages or corresponding messages will be sent to the logging server based on the configured log level.

A basic overview of the screen is given below:

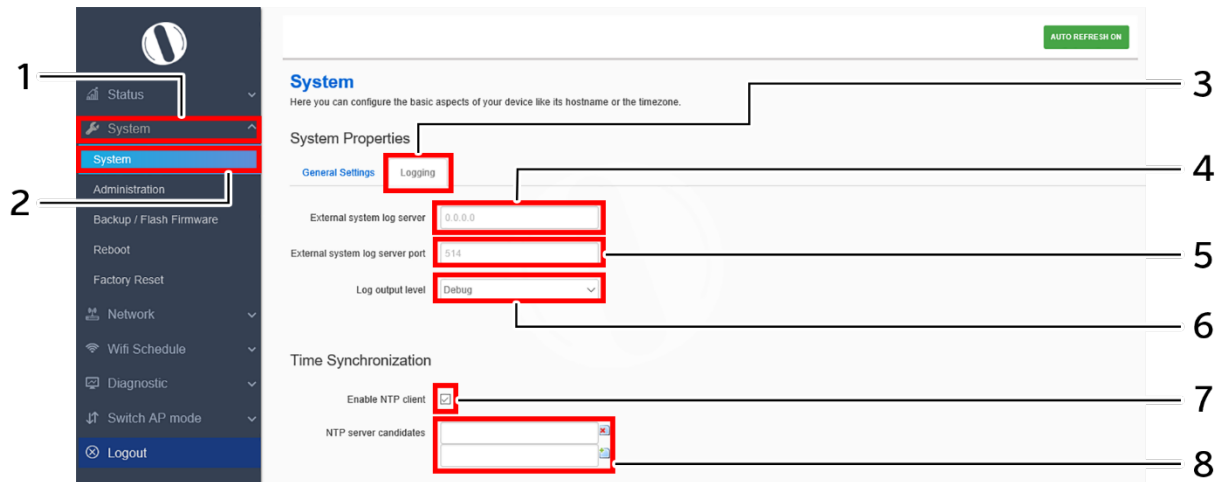


Figure 37: Basic overview of the system general settings screen for thick AP

Follow the steps given below and configure the system general settings for the thick AP:

Table 25: List of actions to configure the system general settings for thick AP

Callout	Name	Description
1.	System	Click on “System” dropdown
2.	System	Click on “System” option
3.	Log Settings	Click on “Log Settings” option
4.	External systemlog server	Enter the “External system log server” address. The systemlogs are uploaded to the external server on regular interval if the external server is specified with this option
5.	External systemlog server port	Enter the “External system log server port” number
6.	Log output level	Select the “Log output level” from the dropdown list (Debug/Info/Notice/Warning/Error/Critical/Alert/Emergency). Categorization of the systemlogs is specified in the backend. The selection of “Log output level” determines the type of logs to be displayed in system log screen. The “Debug” option shows all of the systemlogs. E.g.: If “Debug” is selected, all logs from debug to emergency will be logged and if “Notice” is selected, logs from Notice to Emergency will be logged
7.	Time sync/ NTP	Click on the check box and enable or disable the NTP client



Callout	Name	Description
8.	NTP Server candidates	Click on the + icon and add multiple servers

Click on “Save & Apply” to save the systemadmin password configuration or click “Reset” to configure the same again.



15.3 Set Password for thick AP

This screen provides the user with options to change the default password for respective thick access point. The default username is “root” and the default admin password is “root”.

A basic overview of the screen is given below:



Figure 38: Basic overview of the system admin password configuration screen for thick AP

Follow the steps given below and configure the system admin password for the thick AP:

Table 26: List of actions to configure the password for thick AP

Callout	Name	Description
1.	System	Click on “System” dropdown
2.	Administration	Click on “Administration” option
3.	Password	Enter the new “Password”
4.	Confirm Password	Enter the password again for “Confirm Password”

Click on “Save & Apply” to save the systemadmin password configuration or click “Reset” to configure the same again.



15.4 Backup/Flash Firmware

Downloading the configuration files at an external drive location and updating the configuration files from an external file is a common feature. It helps the user to keep a backup of different configuration files and even makes it easier to apply the same in multiple devices. The device supports dual firmware.

15.4.1 Generate Backup

Download the existing configuration of the device in a file with this option. The user can use this backup file and apply the same configuration again from “Upload configuration or backup” screen. This avoids configuration of each and every parameter again and again, if a similar configuration is already available in the backup files.

A basic overview of the Backup/Flash Firmware screen to generate the backup is given below:

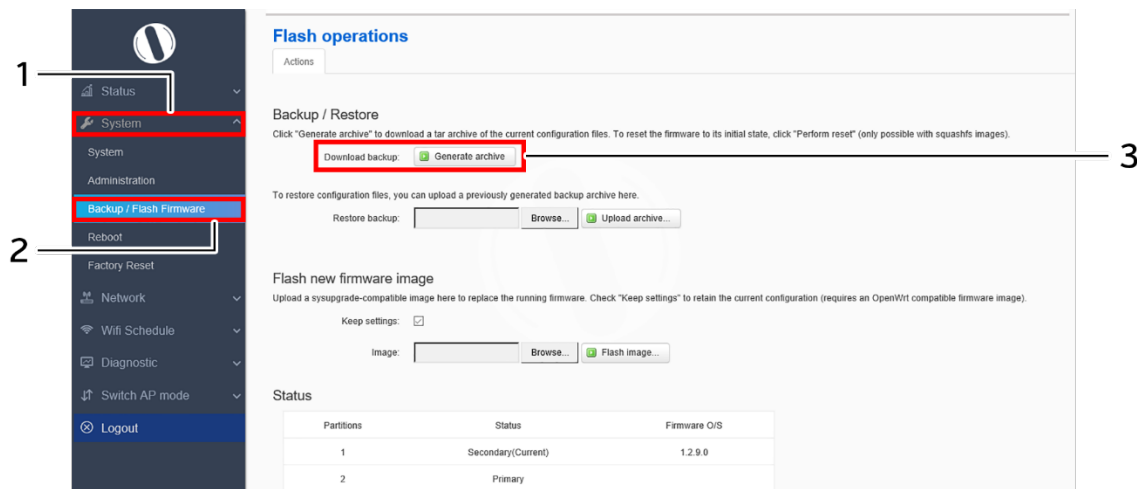


Figure 39: Basic overview of the backup/flash firmware screen to generate backup

Follow the steps given below to generate a backup of current device’s configuration and files:

Table 27: List of actions to generate a backup of current device’s configuration and files

Callout	Name	Description
1.	System	Click on “System” dropdown in navigation tollbar
2.	Backup/Flash Firmware	Click on “Backup/Flash Firmware” option
3.	Download backup	Click on “Generate archive” option to download the backup. The user can select the location in his computer to extract and save the configuration and system files.



15.4.2 Upload configuration or backup

Use an existing valid configuration file or device backup file and change the device parameters respectively from this screen. The user can apply similar configuration to multiple devices or can apply different type of configurations to various set of devices with minimal of the effort.

A basic overview of the Backup/Flash Firmware screen to upload data and configuration from an external file is given below:

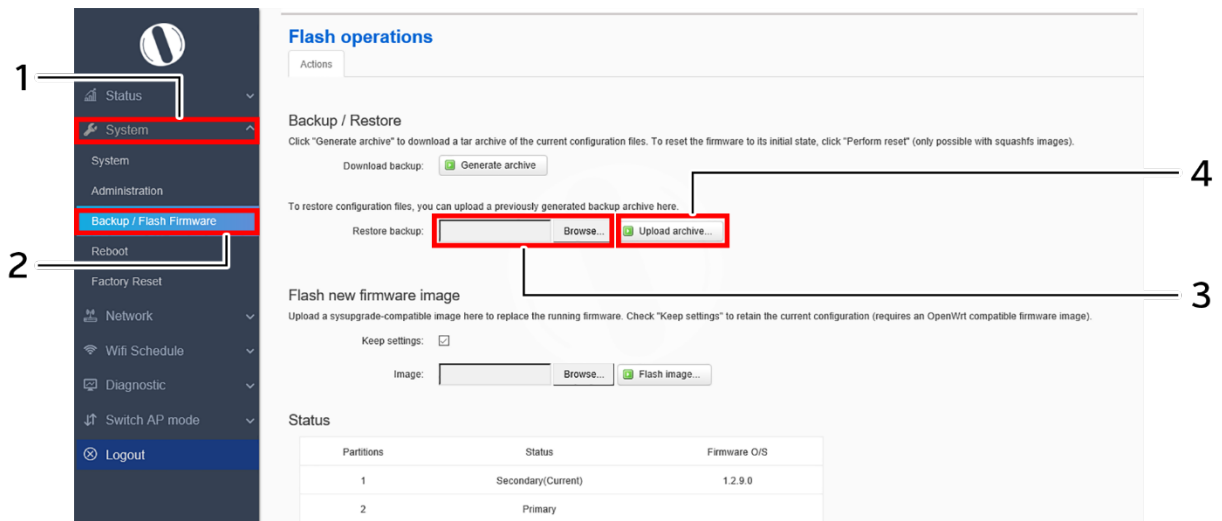


Figure 40: Basic overview of the backup/flash firmware screen to upload configuration

Follow the steps given below to upload data and configuration from an external file:

Table 28: List of actions to upload configuration from an external file

Callout	Name	Description
1.	System	Click on “System” dropdown in navigation tollbar
2.	Backup/Flash Firmware	Click on “Backup/Flash Firmware” option
3.	Browse/Restore backup	Click on “Browse” option and select the file in your computer to and restore the backup file or any other valid configuration file
4.	Restore backup	Click on “Upload archive” option to apply the configurations from selected file



15.4.3 Upgrade firmware

The firmware is stored in the flash memory and can be updated with new versions to include new features or to modify the existing one. This AP has two partitions. The firmware version is always uploaded in the alternate partition to keep the current firmware image restored which is located in the current partition of access point. When we upgrade new firmware, the existing firmware will become backup firmware. If any issues found in new firmware, the backup firmware will be booted.

Save the software file in systemdrive of your laptop or system. Refer the image below:

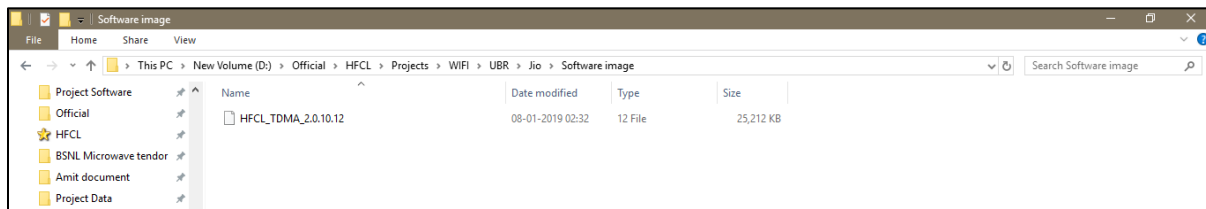


Figure 41: Software file in the system drive

In the above figure, the software file is saved in the “D” drive.

A basic overview of the Backup/Flash Firmware screen to upgrade the firmware from an external file is given below:

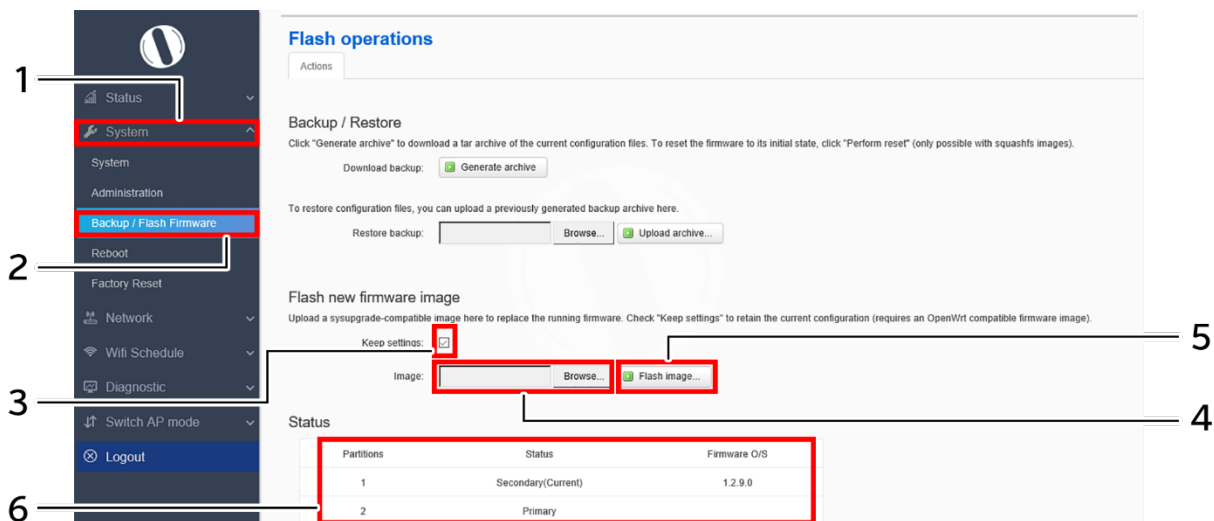


Figure 42: Basic overview of the backup/flash firmware screen to upgrade the firmware

Follow the steps given below to upgrade the firmware from an external file:

Table 29: List of actions to upgrade the firmware from an external file

Callout	Name	Description
1.	System	Click on “System” dropdown in navigation tollbar
2.	Backup/Flash Firmware	Click on “Backup/Flash Firmware” option
3.	Selection box/Keep settings	Click on “Selection box” to retain the existing device configuration (or) deselect the “Selection box” to discard the



Callout	Name	Description
		same while updating the firmware of the device with a new version.
4.	Browse/Image	Click on “Browse” option. A popup window will appear on the screen. Go to the respective folder of software file and select the sysupgrade-compatible image to replace the running firmware. Refer image below.
Click on open, once the compatible images is selected.		
5.	Image	Click on “Flash image” to upload a sysupgrade-compatible imagec a`l
6.	Firmware status	Displays the firmware versions in primary and secondary partition of the access point

It will show a new page, which will have checksum, file size and other information. Refer image below:

- Status
- Maintenance
- Backup / Flash Firmware
- Reboot
- Factory Reset
- Configuration
- Edit Users
- Performance
- Diagnostics
- Alarms
- Logout

Backhaul Network Overview

Table Graphic All

root

System					Wireless			Link			
Name	Mac Address	Alarms	GPS	Mode	IP Address	Channel	MCS Index	Tx Power	RSSI	SNR	Bitrate
Local	44:9D:44:DC:E8:7F	0	Locked	Master	10.63.67.66 2405:200:1413:1332/123	64 - 5.32GHz	Auto (0-9) 9	19 dBm	-47 dBm	48 dB	173.3Mbit/s
Peer	00:03:7F:4B:F0:01	0	Locked	Slave	10.63.67.67 2405:200:1413:1333/123	64 - 5.32GHz	Auto (0-9) 9	18 dBm	-47 dBm	48 dB	173.3Mbit/s

Flash Firmware - Verify

The flash image was uploaded. Below is the checksum and file size listed, compare them with the original file to ensure data integrity. Click "Proceed" below to start the flash procedure.

- Checksum: 1e1841e7o76od0388cb3e9399aebc75
- Size: 24.62 MB
- Configuration files will be kept.

Cancel Proceed

Figure 43: Verify software upgrade

Click on Proceed after checking software version.



15.5 Reboot

Reboot restarts the device with existing configuration. We can change the firmware when the device is rebooted with different partitions. Based on the selected partition, the corresponding firmware will be loaded into the device as working firmware.

A basic overview of the Reboot screen is given below:

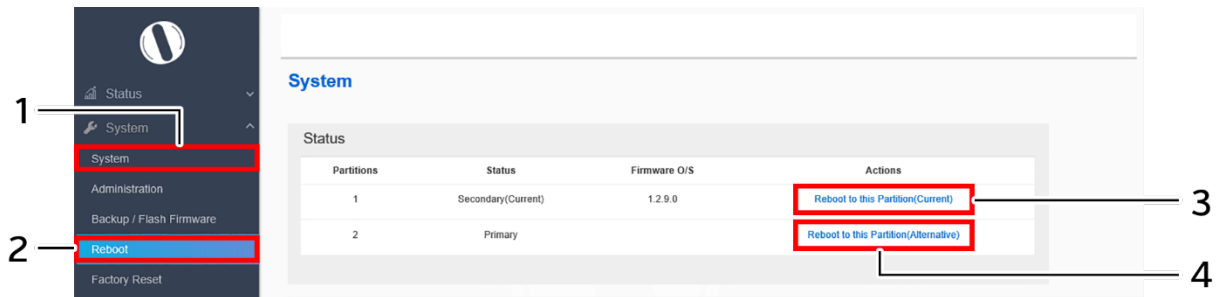


Figure 44: Basic overview of the reboot screen

Follow the steps given below and reboot the AP:

Table 30: List of actions to reboot the AP

Callout	Name	Description
1.	System	Click on “System” dropdown in navigation tollbar
2.	Reboot	Click on “Reboot” option
3.	Reboot to Current partition	Click on “Reboot to Current partition” option. Device will boot from current partition, and the firmware version present in the current partition will be in use
Or		
4.	Reboot to Alternate partition	Click on “Reboot to alternate partition” option. Device will boot from alternate partition, and the firmware version present in the alternate partition will be in use. The firmware upgrade always happen on alternate partition. Use this option and reboot to the latest uploaded firmware version.



15.6 Factory Reset

The device has factory assigned settings and configurations on deployment. The user can set the device to the same from this screen. The device will be configured back to factory settings and the existing settings and configurations will be discarded. It is recommended to take backup before setting the device to factory reset.

A basic overview of the Factory Reset screen is given below:

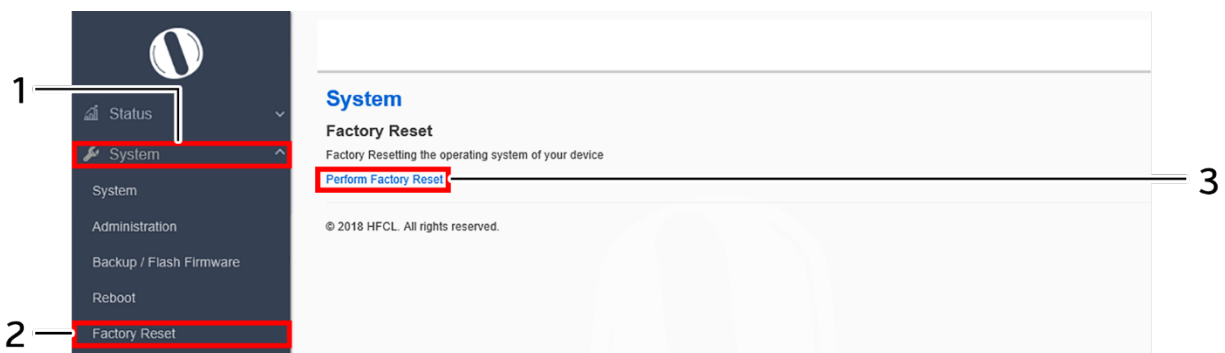


Figure 45: Basic overview of the factory reset screen

Follow the steps given below and factory reset the access point:

Table 31: List of actions to factory reset the access point

Callout	Name	Description
1.	System	Click on “System” dropdown in navigation tollbar
2.	Factory Reset	Click on “Factory Reset” option
3.	Perform Factory Reset	Click on “Perform Factory Reset” option to factory reset the respective access point



16 Network interfaces of thick AP

A basic overview of the network interface screen for thick AP is given below:

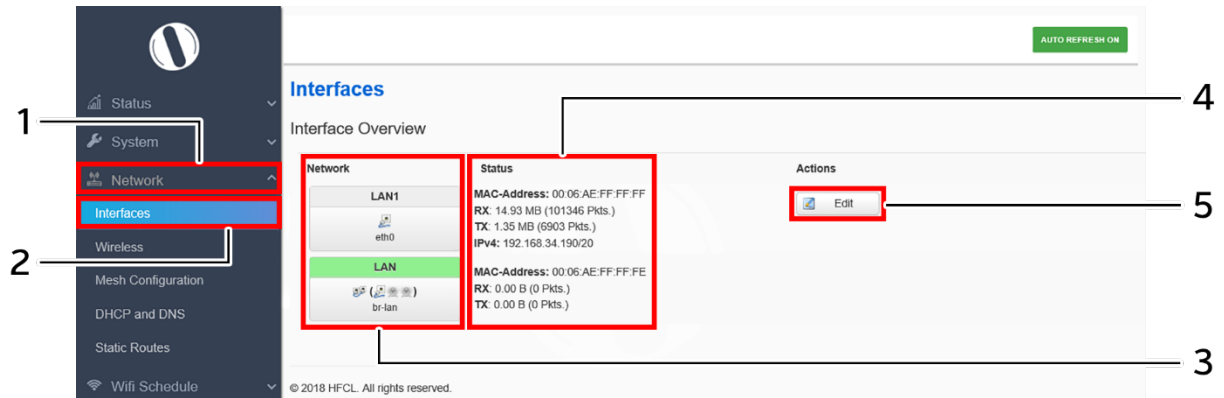


Figure 46: Basic overview of the interface configuration screen for thick AP

Follow the steps given below to view/edit the interface configuration of thick AP:

Table 32: List of actions to view/edit the network configuration of thick AP

Callout	Name	Description
1.	Network	Click on “Network” dropdown
2.	Interfaces	Click on “Interfaces” option
3.	Network/Interface overview	Displays the type of network interface available in the device. The above figure shows the LAN interface overview
4.	Status	Displays the status of the LAN interface with the respect to the parameters shown in above figure
5.	Edit	Click on “Edit” option to configure the LAN-interface settings

The user can click on “edit” option to further modify the following configurations:

1. General setup
2. Advanced settings



16.1 General Network interface setup configuration for thick AP

The default IP address of the access point is set to 192.168.1.1. The user can change the current static IP address of the device from this screen. DHCP client (DHCP client or DHCPv6 client) option is to get the dynamic IP address from reachable DHCP server in the network. Once the protocol is set to DHCP client or DHCPv6 client, the device will automatically get the IP address (IPv4 or IPv6) from the DHCP server.

Click on the “Edit” option in interface screen as shown in “Figure 46: Basic overview of the interface configuration screen for thick AP”. A basic overview of the network interface setup configuration screen to switch network protocol is given below:

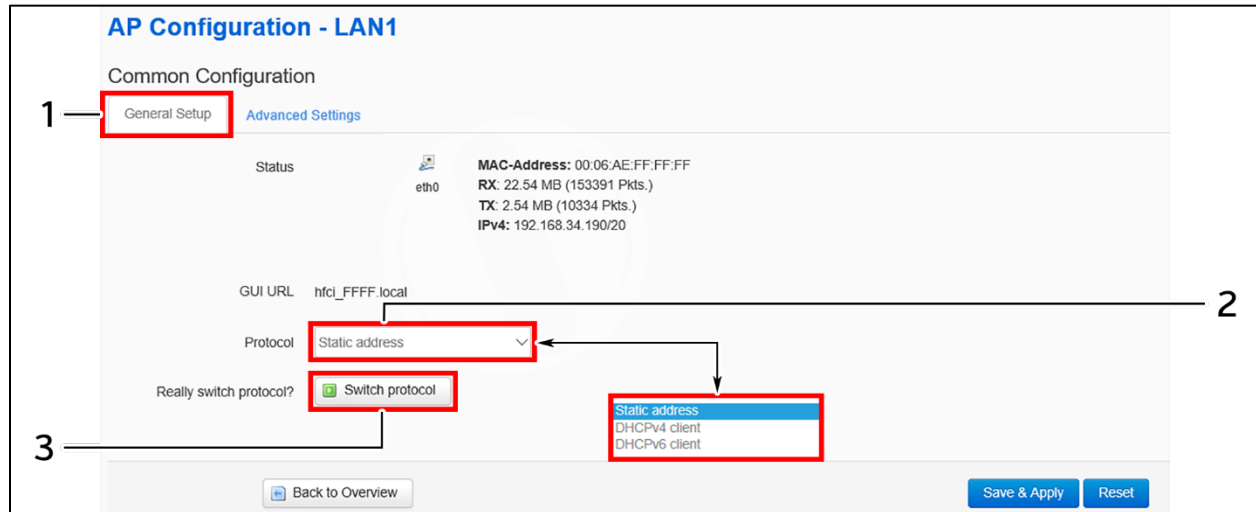


Figure 47: Basic overview of the network interface setup configuration screen to switch protocol for thick AP

Follow the steps given below to switch network protocol:

Table 33: List of actions to switch network protocol for thick AP

Callout	Name	Description
1.	General Setup	Click on “General Setup” option
2.	Protocol	Select the protocol desired protocol from the dropdown list (Static address/DHCP client/DHCPv6 client)
3.	Really switch protocol	Click on “Switch protocol” to confirm the protocol switch



16.1.1 Static IP configuration for thick AP

The default IP address of the access point is set to 192.168.1.1. User can change the default IP address with an unused IP address. Refer “Figure 47: Basic overview of the network interface setup configuration screen to switch protocol for thick AP” and set the protocol to static address.

Refer the figure below to provide the static address parameters:

Figure 48: Basic overview of static address parameters for general network interface setup for thick AP

Follow the steps given below to provide static address parameters for thick AP:

Table 34: List of actions to provide static address parameters for thick AP

Callout	Name	Description
1.	Protocol	The protocol is set to “Static address”. Enter the following parameters for the same
2.	Protocol Selection	Set the static address protocol to IPv4/IPv6/IPv4 & IPv6. Below parameters are shown with respect to IPv4 & IPv6 protocol selection
3.	IPv4 address	Enter the “IPv4 address”. This is a unique address of the Host/Device eg.192.168.100.10
4.	IPv4 netmask	Enter the “IPv4 netmask”. This specifies the number of bits for network part and host part e.g.255.255.255.0



Callout	Name	Description
5.	IPv4 gateway	Enter the “IPv4 gateway”. Gateway address is given to reach other network device e.g.192.168.100.254
6.	IPv4 broadcast	Enter the “IPv4 broadcast”. Broadcast address is to broadcast message in a network e.g. 192.168.100.255
7.	Use custom DNS servers	Enter the “DNS server”. Click on add icon to add multiple DNS servers. DNS server is to resolve the transition of domain name to IP and IP to domain name
8.	IPv6 prefix length	Specify the prefix length for IPv6 address. Specifies the number of bits that belong to network part. The prefix-length specifies a range of devices e.g. IPv6 prefix length = 64 means range of IP addresses between 2001:0DB8:ABCD:0012:0000:0000:0000:0000 and 2001:0DB8:ABCD:0012:FFFF:FFFF:FFFF:FFFF. Provide below parameters if IPv6 prefix length is set to disabled
9.	IPv6 address	Enter the “IPv6 address”. Unique address of the Host/Device e.g.2001:11::100
10.	IPv6 gateway	Enter the “IPv6 gateway”. Gateway address is given to reach other network device e.g.2001:11::1

Click “Save” to save the general network setup configuration or click “Reset” to configure the same again.



16.1.2 DHCPv4 client configuration for thick AP

If the protocol is set to DHCPv4 client, the device will automatically get the IPv4 address from the DHCP server. Refer “Figure 47: Basic overview of the network interface setup configuration screen to switch protocol for thick AP” and set the protocol to DHCPv4 client.

Refer the figure below and switch the protocol to DHCPv4 client for thick AP:

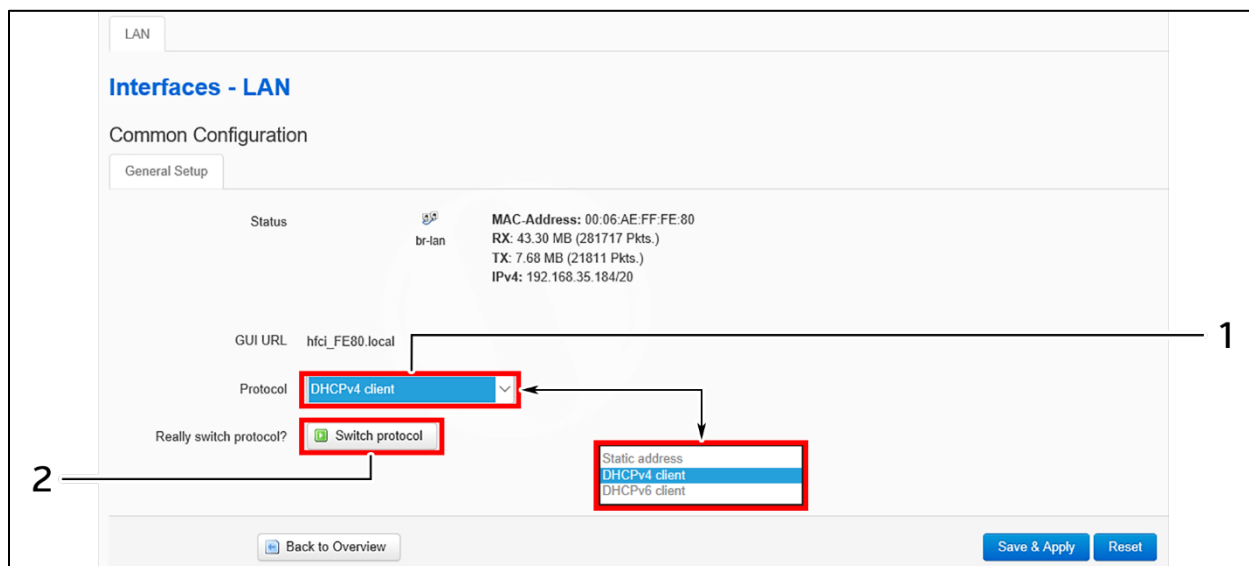


Figure 49: Basic overview of network interface screen to set the protocol to DHCPv4 for thick AP

Follow the steps given below to set the protocol to DHCPv4 for thick AP:

Table 35: List of actions to set the protocol to DHCPv4 for thick AP

Callout	Name	Description
1.	Protocol	Set the protocol from the dropdown list (Static address/DHCPv4 client/DHCPv6 client) to DHCPv4
2.	Really switch protocol	Click on “Switch protocol” to confirm the protocol switch

Click “Save” to save the general network setup configuration or click “Reset” to configure the same again.



16.1.3 DHCPv6 client configuration for thick AP

If the protocol is set to DHCPv6 client, the device will automatically get the IPv6 address from the DHCP server. Refer “Figure 47: Basic overview of the network interface setup configuration screen to switch protocol for thick AP” and set the protocol to DHCPv6 client.

Refer the figure below and switch the protocol to DHCPv6 client for thick AP:

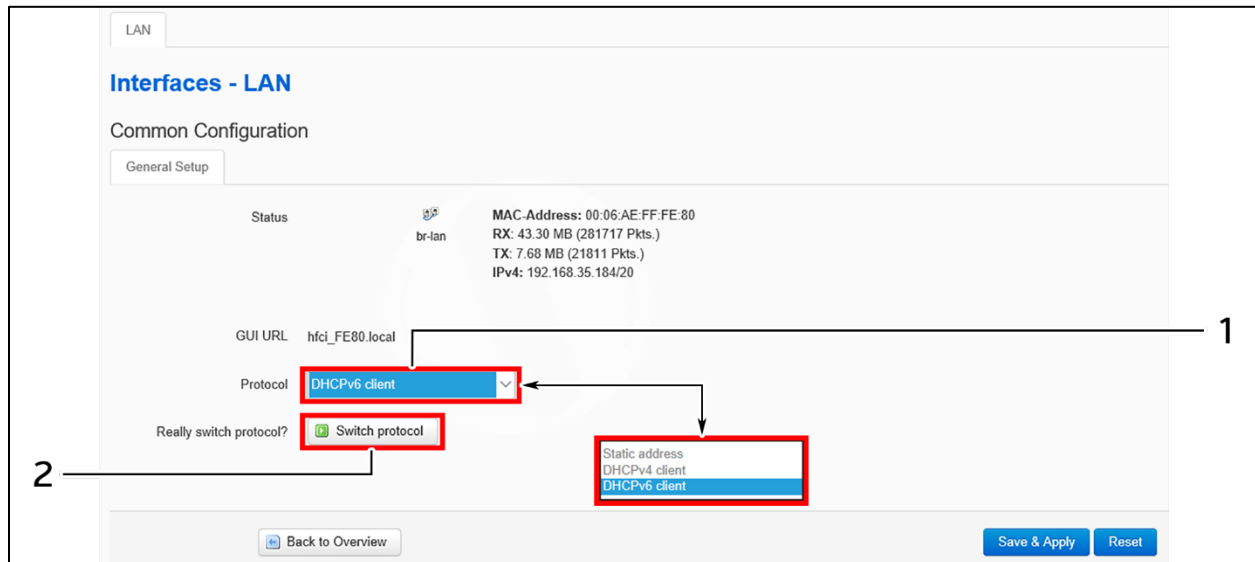


Figure 50: Basic overview of network interface screen to set the protocol to DHCPv6 for thick AP

Follow the steps given below to set the protocol to DHCPv6 for thick AP:

Table 36: List of actions to set the protocol to DHCPv6 for thick AP

Callout	Name	Description
1.	Protocol	Set the protocol from the dropdown list (Static address/DHCPv4 client/DHCPv6 client) to DHCPv6
2.	Really switch protocol	Click on “Switch protocol” to confirm the protocol switch

Click “Save” to save the general network setup configuration or click “Reset” to configure the same again.



16.2 Advanced Network interface setup configuration for thick AP

Switch between Ethernet port and fiber port from this screen. Click on the “Edit” option (5) in interface screen as shown in “Figure 46: Basic overview of the interface configuration screen for thick AP”. A basic overview of the advanced network interface setup configuration screen is given below:



Figure 51: Basic overview of the advanced network interface setup configuration screen

Follow the steps given below for advanced network interface setup configuration:

Table 37: List of actions for advanced network interface setup configuration

Callout	Name	Description
1.	Advanced Settings	Click on “Advanced Settings” option
2.	Port Mode	Set the port to either Ethernet port mode or to Fiber port mode. If the mode is set to Fiber port mode, make sure that the SFP is connected



16.3 Network/Wireless/Radio and SSID configuration of thick AP

The wireless configuration screen of thick AP GUI enables the user to view and configure radio and SSID parameters. Multiple SSID can be added separately for 2.4 and 5 GHz radio. Radio configuration remains same for all SSIDs operating at the respective 2.4 and 5 GHz radio. All clients associated with respective SSID are also listed in a tabular form in this screen along with some basic information.

A basic overview of the wireless configuration screen for thick AP is given below:

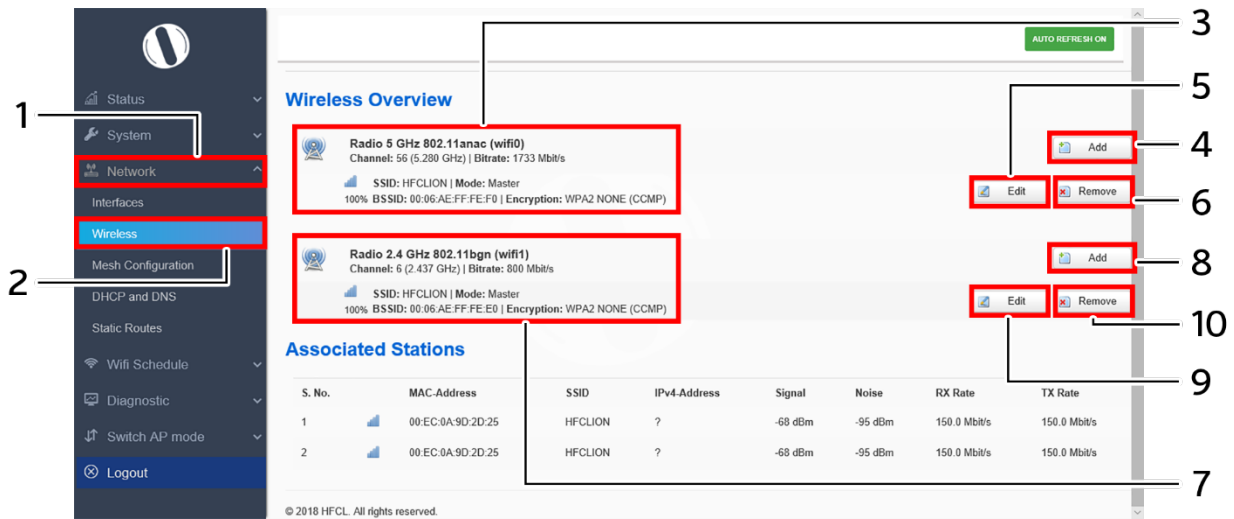


Figure 52: Basic overview of the wireless configuration screen for thick AP

Follow the steps given below to view the wireless configuration of thick AP:

Table 38: List of actions to view the wireless configuration of thick AP

Callout	Name	Description
1.	Network	Click on “Network” dropdown
2.	Wireless	Click on “Wireless” option
3.	5 GHz overview	Displays the overview of 5 GHz radio along with the list of associated SSIDs as shown in the above figure
4.	Add SSID/Radio Configuration	Click on the “Add” option to configure a new SSID or to update the radio configuration parameters at 5 GHz
5.	Edit SSID	Click on “Edit” option to modify the parameters of respective SSID configuration at 5 GHz
6.	Remove SSID	Click on “Remove” option to delete the respective SSID at 5 GHz
7.	2.4 GHz overview	Displays the overview of 2.4 GHz radio along with the list of associated SSIDs as shown in the above figure
8.	Add SSID/Radio Configuration	Click on the “Add” option to configure a new SSID or to update the radio configuration parameters at 2.4 GHz
9.	Edit SSID	Click on “Edit” option to modify the parameters of respective SSID configuration at 2.4 GHz
10.	Remove SSID	Click on “Remove” option to delete the respective SSID at 2.4 GHz



16.3.1 5 GHz radio configuration

This screen provides the user with options to configure the 5 GHz radio parameters such as channel bandwidth, respective channel or the channel selection process, and the power for the radio signal transmission. Refer the “Figure 52: Basic overview of the wireless configuration screen for thick AP” and click on Add SSID/Radio Configuration option (4) to configure 5 GHz radio parameters.

A basic overview of the 5 GHz radio configuration screen is given below:

Figure 53: Basic overview of the 5 GHz radio configuration screen

Follow the steps given below and for 5 GHz radio configuration of thick AP:

Table 39: List of actions for 5 GHz radio configuration of thick AP

Callout	Name	Description
1.	General Setup	Click on “General Setup” option
2.	Radio Status	Enable or disable the 5 GHz radio with this option
3.	Tx Power (dBm)	Enter the “Tx Power” value. The wireless radio signal will be transmitted with the specified Tx power value. The user can set the Tx power value from the range of 14 dBm to 23 dBm



Callout	Name	Description
4.	Mode	Select the radio operating mode from the dropdown list (802 11a/ac/a+n). Channel width and channel list varies with respect to the selected mode (802 11a/ac/a+n)
5.	Channel Width	Select the “Channel Width” from the dropdown list (20 MHz/40 MHz-Lower/40 MHz -Upper/80 MHz/ 80+80 MHz/160 MHz)
6.	Channel	Select the “Channel” from the dropdown list. The device will choose the channel by itself, if “auto” channel is selected. For 20 MHz channel width, available channels are: 36/40/44/48/52/56/60/64/149/153/157/161/165/169/173. For 40 MHz Lower channel width, available channels are: 40/48/56/60/64/153/161. For 40 MHz Upper channel width, available channels are: 36/44/52/60/149/157. For 80 and 80+80 MHz channel width, available channels are: 42/58/155. For 160 MHz channel width, available channel is 50

Click “Save & Apply” to save the 5 GHz radio configuration of thick AP or click “Reset” to configure the same again.