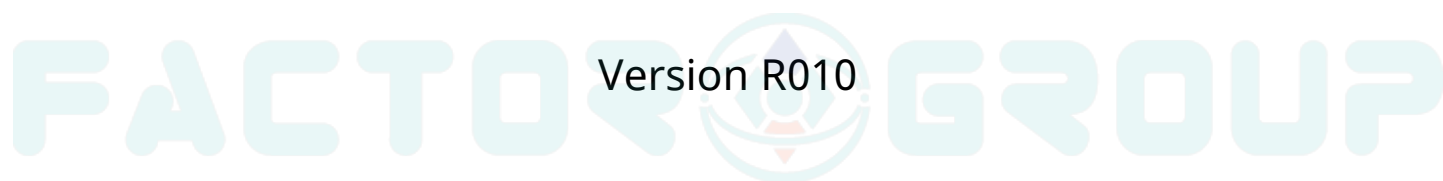


# APNOS for AP

## Release Note

Version R010



# 1.Introduction

The purpose of this document is to provide important information about the released software version, including but not limited to the following information: running platform, important components, main features, key updates.

## Target Audience

This manual is primarily intended for following engineers.

Software Developers

Software Testers

Customer Site Implementers



## 2.Modification of Records

| Date       | Versions | Modify Remarks              |
|------------|----------|-----------------------------|
| 2026-07-15 | V1.0     | APNOS version-R010 released |



### 3. Image Information

| Type     | MD5                              | Image                              |
|----------|----------------------------------|------------------------------------|
| AP6020   | c94b0ca1a838cd3eede2a86a361e5e9f | AsterAPNOS-AP6020-V4. 2R010. tar   |
| AP6020F  | d9733ab984e0b51ce4ccb8cf96462aac | AsterAPNOS-AP6020F-V4. 2R010. tar  |
| AP6020W  | f3689dcc8c82a326526abac14e733ef8 | AsterAPNOS-AP6020W-V4. 2R010. tar  |
| AP6031   | 6e7a6ac6b78d88bfdc20dcd4cb40523f | AsterAPNOS-AP6031-V4. 2R010. tar   |
| AP6240   | d6f67b4091f2d4ce689b1dc24b12cb3d | AsterAPNOS-AP6240-V4. 2R010. tar   |
| AP6241E  | 85912ccebe494a346449ccad633b1336 | AsterAPNOS-AP6241E-V4. 2R010. tar  |
| AP7330   | d40e0dd98458d7c6cf1dac62a971cf33 | AsterAPNOS-AP7330-V4. 2R010. tar   |
| AP7360   | f6584638a774f1901f67273d2eaf0d77 | AsterAPNOS-AP7360-V4. 2R010. tar   |
| AP7341E  | 0a5c24c646dbbaf78fbea2f7719c56f4 | AsterAPNOS-AP7341E-V4. 2R010. tar  |
| AP6020WF | 28a9e6dc64f186886d3af3c294db9d0e | AsterAPNOS-AP6020WF-V4. 2R010. tar |



## 4. Dependent Components

| Components | Versions  |
|------------|-----------|
| OpenWiFi   | 4.2.0     |
| OpenWrt    | 23.05     |
| Kernel     | 5.4 & 6.1 |



## 5.Update Records

### 5.1 New Feature & Enhance

Supports CAP15000 wireless bridges

Default registration/onboarding to the controller [wifi.asternos.com](http://wifi.asternos.com) (also supports configuring a custom default onboarding path at the factory)

Supports reporting critical events to the controller

RF-related events: Enable, Disable, DFS, ACS, channel switching, etc.

Critical process abnormal restart events

Added new alarm events:

Device reboot

Abnormal file system status

Uplink port link rate below 1G

Supports dual partitions (Qualcomm platform)



## 6.Feature List

| Features          | Level 1                                               | Level 2                                                  |
|-------------------|-------------------------------------------------------|----------------------------------------------------------|
| Wireless features | OFDMA (Orthogonal Frequency Division Multiple Access) |                                                          |
|                   | MU-MIMO (Multi-User, Multiple-Input, Multiple-Output) |                                                          |
|                   | BSS Coloring                                          |                                                          |
|                   | multicast/broadcast to unicast conversion             |                                                          |
|                   | SSID                                                  | Chinese SSID                                             |
|                   |                                                       | Hidden SSID                                              |
|                   | Roaming                                               | 802.11 k                                                 |
|                   |                                                       | 802.11 v                                                 |
|                   |                                                       | 802.11 r                                                 |
|                   |                                                       | Sticky Client Steering                                   |
|                   | Isolation                                             | VLAN-based isolation                                     |
|                   |                                                       | isolation between VAPs                                   |
|                   |                                                       | isolation based on SSID                                  |
|                   | WI-FI 7                                               | 802.11be                                                 |
|                   |                                                       | Multi-RU                                                 |
|                   |                                                       | 4096-QAM modulation                                      |
| Network features  | DHCP Client                                           |                                                          |
|                   | VLAN                                                  | tagged                                                   |
|                   |                                                       | untagged                                                 |
|                   | VXLAN                                                 | Establish VXLAN tunnels in centralized gateway scenarios |
|                   | ACL                                                   | MAC address-based whitelist and blacklist                |
|                   | LLDP (Link Layer Discovery Protocol)                  |                                                          |
|                   | DHCP Server                                           |                                                          |
|                   | LAN Port                                              | Assigning different VLANs                                |

|                            |                                      |                                             |
|----------------------------|--------------------------------------|---------------------------------------------|
|                            | Fiber Module Monitor                 | RX Power, ONU State, SN                     |
| Radio frequency management | Dynamic Frequency Selection (DFS)    |                                             |
|                            | Auto Channel Selection (ACS)         | Automatic channel scanning                  |
|                            |                                      | Automatic channel adjustment                |
|                            | Manually disable RF                  |                                             |
|                            | Maximum number of connected stations | 100+                                        |
|                            | Maximum number of SSIDs per radio    | 8                                           |
| Security features          | WPA-PSK                              |                                             |
|                            | WPA2-PSK                             |                                             |
|                            | WPA-PSK + RADIUS (MAC)               |                                             |
|                            | WPA-PSK/WPA2-PSK Personal Mixed      |                                             |
|                            | WPA-Enterprise                       | RADIUS                                      |
|                            | WPA2-Enterprise EAP-TLS              |                                             |
|                            | WPA-Enterprise-Mixed                 |                                             |
|                            | SAE                                  |                                             |
|                            | WPA2/WPA3 Transitional               | Simultaneous Authentication of Equals (SAE) |
|                            | WPA3-Enterprise EAP-TLS              |                                             |
|                            | WPA3-Enterprise-Mixed                |                                             |
|                            | Vendor-based Access Control          |                                             |
|                            | Portal Authentication                | Built-in/Local Portal Authentication        |
|                            |                                      | External Portal Authentication              |
|                            |                                      | Portal + Radius                             |
|                            |                                      | Portal 2.0                                  |
|                            |                                      | support redirect https                      |
|                            | AAA                                  | RADIUS Authenticated SSID                   |
|                            |                                      | RADIUS MAC-Auth (MAB)                       |
|                            |                                      | Dynamic VLAN                                |

|             |                           |                                                                                 |
|-------------|---------------------------|---------------------------------------------------------------------------------|
|             |                           | Accounting                                                                      |
|             |                           | Escape                                                                          |
| Management  | Time settings             | Network Time Protocol (NTP)                                                     |
|             |                           | TimeZone                                                                        |
|             | Standalone design         | Continue working after controller disconnection                                 |
|             | Device reboot             |                                                                                 |
|             | Device upgrade            |                                                                                 |
|             | Restore factory settings  |                                                                                 |
|             | remote terminal (rtty)    |                                                                                 |
|             | Remote commands/scripts   |                                                                                 |
|             | Telemetry                 | wifi-frame                                                                      |
|             |                           | dhcp                                                                            |
|             |                           | state                                                                           |
|             | ZTP                       | Connect to controller by OpenWIFI Cloud Discover Service                        |
|             |                           | connect to controller by DHCP option 138/224                                    |
|             |                           | Built-in default controller URL in Flash                                        |
|             |                           | Default contrller URL: <a href="http://wifi.asternos.com">wifi.asternos.com</a> |
|             |                           | Manually set the FQDN of controller(via web or SSH)                             |
|             | SSH                       |                                                                                 |
| Maintenance | Device status information | host name                                                                       |
|             |                           | IP Address                                                                      |
|             |                           | version                                                                         |
|             |                           | MAC Address                                                                     |
|             |                           | Memory                                                                          |
|             |                           | CPU                                                                             |
|             |                           | Uptime                                                                          |
|             | Radio Information         | Channel Utilization: Historical Average, Real-time                              |
|             |                           | DFS Status, CAC Status                                                          |

|  |                                                                |                                                                                  |
|--|----------------------------------------------------------------|----------------------------------------------------------------------------------|
|  |                                                                | Radio Statistics: Normal and Abnormal Packet Statistics, Beacon Statistics, etc. |
|  | Stations information                                           | Real-time rate                                                                   |
|  |                                                                | Accumulated traffic                                                              |
|  |                                                                | Roaming information                                                              |
|  |                                                                | SNR (Signal-to-Noise Ratio)                                                      |
|  |                                                                | Associated AP (Access Point)                                                     |
|  |                                                                | IP address                                                                       |
|  |                                                                | MAC address                                                                      |
|  |                                                                | Current channel                                                                  |
|  |                                                                | Bandwidth                                                                        |
|  |                                                                | wifi HW mode                                                                     |
|  |                                                                | Hostname                                                                         |
|  |                                                                | Terminal type                                                                    |
|  |                                                                | Terminal model                                                                   |
|  |                                                                | Vendor information                                                               |
|  |                                                                | DHCP process                                                                     |
|  | Health data reporting                                          |                                                                                  |
|  | Capture packets remotely through the cloud management platform |                                                                                  |
|  | log                                                            | System Administration                                                            |
|  |                                                                | Station Key Information Reporting                                                |
|  | syslog client                                                  |                                                                                  |
|  | Station Key Event                                              | wifi event                                                                       |
|  |                                                                | dhcp event                                                                       |
|  |                                                                | reject by ACL or Radius                                                          |
|  |                                                                | Association greater than max number                                              |

|         |                                         |                                                               |
|---------|-----------------------------------------|---------------------------------------------------------------|
|         |                                         | Reject for low wifi signal                                    |
|         |                                         | Reject by Vendor Access List                                  |
|         |                                         | Portal Event                                                  |
|         | Device Key Event                        | Configure Application Events                                  |
|         |                                         | Radio Events: Enable, Disable, Radar DFS, ACS, Channel Switch |
|         |                                         | Abnormal restart of the process                               |
|         | Inspection                              | Association List                                              |
|         |                                         | Usage of wifi radio bandwidth                                 |
|         | Warning                                 | Device                                                        |
|         |                                         | Service                                                       |
|         | GPS                                     | Support reporting GPS data                                    |
|         |                                         | Controller connection status                                  |
|         |                                         | License status                                                |
|         | LED                                     | Air interface status                                          |
|         |                                         | Factory reset                                                 |
|         |                                         | Positioning                                                   |
|         | tech support                            |                                                               |
|         | Network Connectivity Monitoring Service |                                                               |
|         | Rescue Hotspot                          | SSID is based on device MAC and hidden                        |
|         | support dual boot                       |                                                               |
| QoS     | Rate Limit                              | Bandwidth throttling based on SSID                            |
|         | priority                                | DSCP mapping based on port                                    |
|         |                                         | DSCP mapping based on DNS                                     |
|         |                                         | WMM (Wi-Fi Multimedia)                                        |
| License | License control                         | License management for radio frequency                        |

|                       |                         |  |
|-----------------------|-------------------------|--|
| Sync with<br>OpenWIFI | synced with latest V4.2 |  |
|-----------------------|-------------------------|--|

