

# Aphelion 600AG

## 802.11a/b/g Intelligent Sequential Outdoor Wireless Access Point



The Aphelion 600AG is an Intelligent Outdoor Wireless Access Point built with ruggedized and weatherized industrial design to withstand harsh outdoor environments. Available in both licensed exempt 5GHz and 2.4GHz spectrums, the Aphelion 600AG is designed with enhancements to avoid congestion and remain stable with high throughput under noisy wireless environment. Using Aphelion's patented Intelligent Sequential OS, multiple 600AG units can be daisy chained over the wireless interfaces to provide even greater coverage without a wired connection, forming large metro area Hotzones. Due to our breakthrough technology innovations, the Aphelion 600AG offers network scalability, extended wireless coverage, expansion in network capacity, powerful routing engine, ease of installation and management. The Aphelion 600AG is the most ideal candidate for Service Providers looking to deliver carrier class wireless services to multiple market segments such as campuses, hospitality, healthcare, warehousing and wider metropolitan area deployments.

### Low Latency and High Throughput over Multiple Hops

- Daisy chained wireless Hot Zones
- Low latency and high throughput upon multiple wireless hops
- Reliable performance when deploying multiple nodes in bridged or routed environments.
- Bandwidth control module at subscriber level

### Comprehensive Security Features

- WPA with TKIP/AES support
- 802.1x EAP support (Client and Server modes)
- 64/128/152 bits Dynamic WEP keys
- Radius client
- Hide ESSID
- MAC address filtering
- NAT

### Dynamic WAN Interface Configuration

- Flexible assignments of any wired or wireless interfaces as WAN links to adapt to different network topologies
- Bandwidth aggregation by logically combining multiple RF links to achieve super trunk mode for high bandwidth deployments
- Smart traffic load balancing across multiple RF links
- Configurable Transmit-only and Receive-only mode per RF interface
- 1+1 and N+1 interface protection schemes that meets high availability carrier grade deployments
- Flexible wireless network distribution system

### Harsh Outdoor Environments to Keep Operation

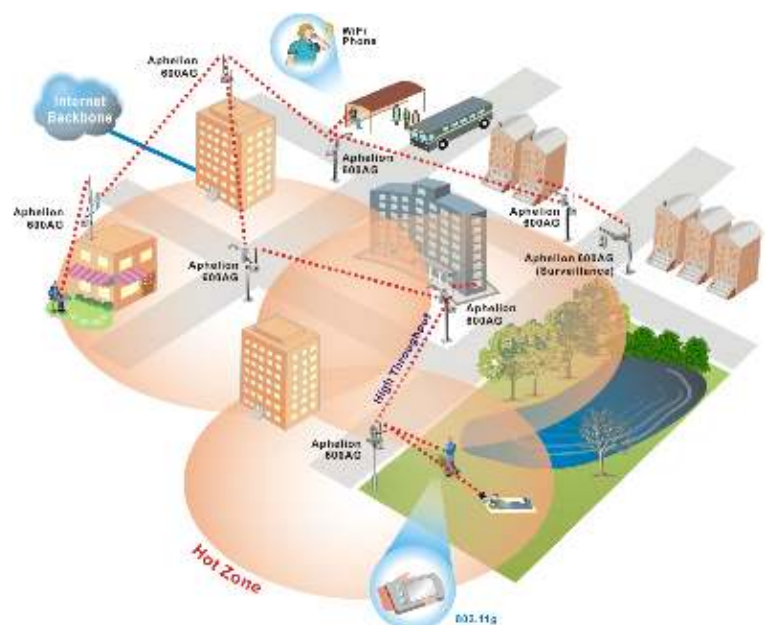
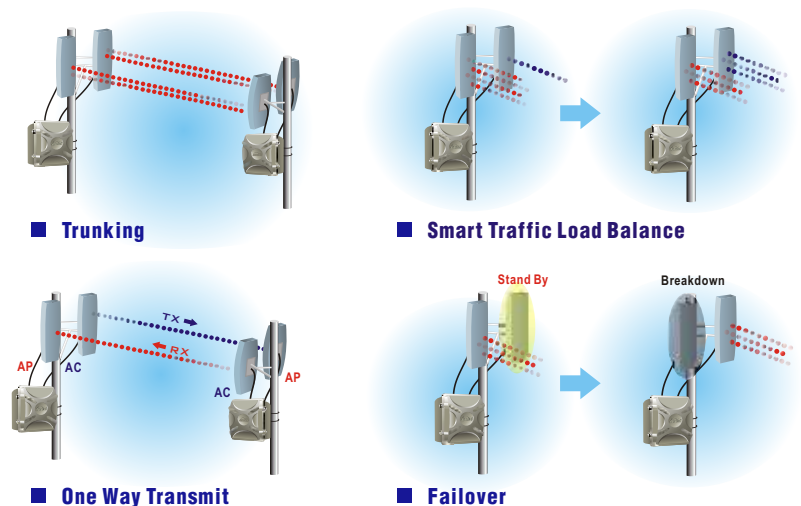
- Certified IP68 sturdy water-tight housing
- Built-in automatic thermal sensor and regulator module to facilitate deployment in cold regions
- PoE module

### System Management

- Firmware upgrade through TFTP, WEB
- Interface status display
- SSH Telnet
- SNMP v1/v2

### Simple Installation and Deployment

- Deployment tools for RF analysis



### Robust & Seamless Hot Zone through Sequential Hopping

# Specifications

## Standard Support

Wireless	IEEE802.11a, IEEE802.11b, IEEE802.11g, IEEE802.11b/g
Ethernet	IEEE802.3, IEEE802.3u, IEEE802.3af

## Interface

Consol	RS 232 Port
Wireless	Antenna Connector: 2x Reversed Female N-type
Ethernet	1x10/100 Base-T RJ-45 Power over Ethernet(PoE)

## Memory

SDRAM	64 Mbyte
Flash	16Mbyte

## Ethernet

Max. Bandwidth	<ul style="list-style-type: none"> <li>Full Duplex: 200Mbps (for 100BaseTX), 20Mbps (for 10BaseT)</li> <li>Half Duplex: 100Mbps (for 100BaseTX), 10Mbps (for 10BaseT)</li> </ul>
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## Wireless Security

SSID	Support Enable / Disable Broadcast
WEP	<ul style="list-style-type: none"> <li>Support 64bit / 128bit / 152bit Data Encryption</li> <li>Authentication type: Open System / Shared Key</li> </ul>
802.1x	Support 802.1x-EAP Client and Server
Radius	Support Radius Client
WPA	Support Wi-Fi Protected Access (WPA) with AES / TKIP
MAC	Support MAC Address Filtering

## Configuration & Management

Software / Firmware	<ul style="list-style-type: none"> <li>System configuration interface: Console Menu configuration and Web-base UI via popular browser (MS IE, Netscape...)</li> <li>Firmware upgrade, Reset to default and configuration backup via Console Menu or System menu</li> <li>Support Telnet to Configurations</li> </ul>
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## Physical Spec.

Power	<ul style="list-style-type: none"> <li>DC 48Volt / 0.8A; AC Adapter 100V~240V</li> <li>Support Power over Ethernet (PoE)</li> </ul>
Dimension	226(L) x 197(W) x 79(H) mm
Weight	1800g
Dusty & Waterproof	IP68 Certified
Antenna	Reversed N-type (Option)

## Regulation and Compliance

US	FCC Part 15 Class B & C & E
Europe	ETS 300 328, ETS 301 489-1&17, ETS 301 893, EN 60950 compliant and CE Mark

## Environment Spec.

Operating Temp	<ul style="list-style-type: none"> <li>Non Heater: -30°C ~ 65°C</li> <li>With heater: -40°C ~ 65°C</li> <li>Built-in heater module is option</li> </ul>
Storage	-40°C ~ 80°C
Humidity	0% ~ 95% non-condensing

## System Setting

Standard	AP / AP Client / Bridge / Router
Interface Application	<ul style="list-style-type: none"> <li>Support Dynamic WAN Interface assignments</li> <li>Provide AP/ client Operation Mode Including: <ul style="list-style-type: none"> <li>Two AP Mode</li> <li>One AP Mode and One client Mode</li> <li>Two clients Mode</li> </ul> </li> </ul>
Frequency Range	<ul style="list-style-type: none"> <li>USA: 2.400~2.483GHz, 5.15~5.35GHz, 5.725~5.825Ghz</li> <li>Europe: 2.400~2.483GHz, 5.15~5.35GHz, 5.47~5.725GHz</li> <li>Japan: 2.400~2.483GHz, 4.90~5.091GHz, 5.15~5.25GHz</li> <li>China: 2.400~2.483GHz, 5.725~5.85GHz</li> </ul>
Modulation Technique	<ul style="list-style-type: none"> <li>802.11b/g <ul style="list-style-type: none"> <li>DSSS (DBPSK, DQPSK, CCK)</li> <li>OFDM (BPSK, QPSK, 16-QAM, 64-QAM)</li> </ul> </li> <li>802.11a <ul style="list-style-type: none"> <li>OFDM (BPSK, QPSK, 16-QAM, 64-QAM)</li> </ul> </li> </ul>
Channels Support	<ul style="list-style-type: none"> <li>802.11b/g <ul style="list-style-type: none"> <li>US/Canada: 11 (1 ~ 11)</li> <li>Major European country: 13 (1 ~ 13)</li> <li>France: 4 (10 ~ 13)</li> <li>Japan: 11b: 14 (1~13 or 14th), 11g: 13 (1 ~ 13)</li> <li>China: 13 (1 ~ 13)</li> </ul> </li> <li>802.11a <ul style="list-style-type: none"> <li>US/Canada: 12 non-overlapping channels (5.15 ~ 5.35GHz, 5.725 ~ 5.825GHz)</li> <li>Europe: 19 non-overlapping channel (5.15 ~ 5.35GHz, 5.47 ~ 5.725GHz)</li> <li>Japan: 4 non-overlapping channels (5.15 ~ 5.25GHz)</li> <li>China: 5 non-overlapping channels (5.725 ~ 5.85GHz)</li> </ul> </li> </ul>
Wireless Transmission Rate	<ul style="list-style-type: none"> <li>802.11b/g: 11, 5.5, 2, 1 Mbps, auto-fallback, up to 54 Mbps</li> <li>802.11a: 54, 48, 36, 24, 18, 12, 9, 6Mbps, auto-fallback</li> </ul>
Transmitted power	<ul style="list-style-type: none"> <li>802.11b: 18 dBm</li> <li>802.11g: 18dBm @6Mbps <ul style="list-style-type: none"> <li>15dBm @54Mbps</li> </ul> </li> <li>802.11a: 17dBm @6Mbps <ul style="list-style-type: none"> <li>13dBm @54Mbps</li> </ul> </li> </ul>
Wireless Other Setting	<ul style="list-style-type: none"> <li>IEEE 802.11 a/b/g Mode Selection</li> <li>Enable / Disable Broadcast ESSID</li> <li>MAC Address Filtering</li> <li>Bandwidth Control of Wireless Client</li> <li>DHCP Client / Server, Fixed IP</li> <li>NAT</li> <li>Static Routing</li> <li>SNMP v1&amp;v2</li> <li>RIP v1&amp;v2</li> <li>Dual Image (back up)</li> <li>Trunk</li> <li>Roaming</li> </ul>
Receiver Sensitivity	<ul style="list-style-type: none"> <li>Receiver Sensitivity: (PER &lt; 8% for 11b; PER &lt; 10% for 11g &amp; 11a) <ul style="list-style-type: none"> <li>802.11b Sensitivity: <ul style="list-style-type: none"> <li>DBPSK (1Mbps) -93dBm</li> <li>CCK (5.5Mbps) -90dBm</li> <li>DQPSK (2.2Mbps) -92dBm</li> <li>CCK (11Mbps) -88dBm</li> </ul> </li> <li>802.11g Sensitivity: <ul style="list-style-type: none"> <li>BPSK(6Mbps) -89 dBm</li> <li>QPSK(12Mbps) -86 dBm</li> <li>16QAM(24Mbps) -83 dBm</li> <li>64QAM(48Mbps) -77 dBm</li> <li>BPSK(9Mbps) -88 dBm</li> <li>QPSK(18Mbps) -85 dBm</li> <li>16QAM(36Mbps) -80 dBm</li> <li>64QAM(54Mbps) -72 dBm</li> </ul> </li> <li>802.11a Sensitivity: <ul style="list-style-type: none"> <li>BPSK(6Mbps) -88 dBm</li> <li>QPSK(12Mbps) -85 dBm</li> <li>16QAM(24Mbps) -82 dBm</li> <li>64QAM(48Mbps) -76 dBm</li> <li>BPSK(9Mbps) -87 dBm</li> <li>QPSK(18Mbps) -84 dBm</li> <li>16QAM(36Mbps) -80 dBm</li> <li>64QAM(54Mbps) -71 dBm</li> </ul> </li> </ul> </li> </ul>

# Package Contents

- Aphelion 600AG 802.11a/b/g Intelligent Sequential Outdoor Wireless Access Point
- PoE Power Injector, Power Adapter & AC Power Cord
- 30M MIL-C-5015 IP68 Cat-5 Ethernet Cable
- 2M MIL-C-5015 IP67 RS-232 Consol Cable
- Consol Port Waterproof cover

- Wall Mounting Kit & Screw
- Mast Mounting Kit & Screw
- CD: User Manual
- Quick Installation Guide
- Grounding Wire

\*\*If any of the above items are missing, please contact your reseller.



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