

# Aphelion 600AG / 605AG

## 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

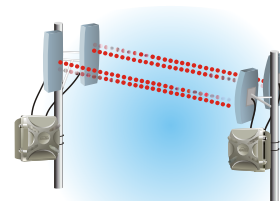
- Certified IP68 sturdy water-tight housing
- Built-in automatic thermal sensor and regulator module to facilitate deployment in cold regions
- PoE module

### System Management

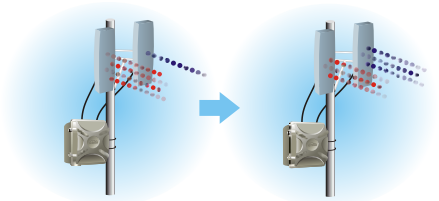
- Firmware upgrade through TFTP, FTP
- Interface status display
- SSH Telnet
- Syslog
- SNMP v1/v2
- Easy Configuration backup

### Simple Installation and Deployment

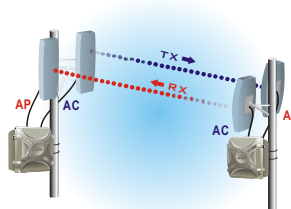
- Software Alignment / Deployment Tools



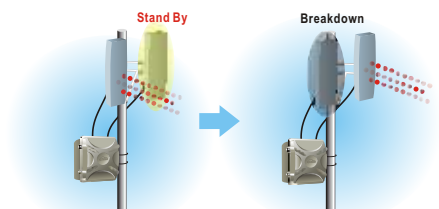
■ Trunking



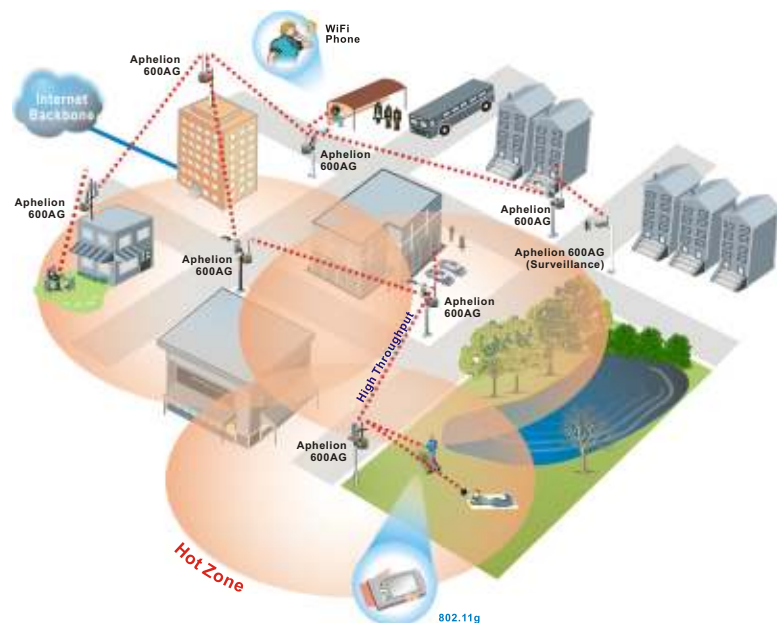
■ Smart Traffic Load Balance



■ One Way Transmit



■ Failover



■ Robust & Seamless Hot Zone through Sequential Hopping

# Specifications

## Standard Support

Wireless	IEEE802.11a, 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	Full Duplex: 100Mbps (100Base), 10Mbps (10Base)
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## Wireless Security

SSID	<ul style="list-style-type: none"> <li>Support Enable / Disable Broadcast</li> <li>Support Multi-ESSID</li> </ul>
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 Client and Server
RADIUS	Support RADIUS Client
WPA	Wi-Fi Protected Access (EAP, TKIP)
WPA2	AES / 802.11i
MAC	Support MAC Address Filtering

## Configuration & Management

Software / Firmware	SMT management menu access via console, telnet and secure SSH telnet to implement including: System configuration & management, Firmware upgrade, Reset to default and configuration backup ...etc.
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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	1700g
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	
RF Interface Application	<b>Interface 1</b>	<b>Interface 2</b>
	<ul style="list-style-type: none"> <li>Access Point (AP)</li> <li>Access Point (AP)</li> <li>Wireless Station (Client)</li> </ul>	<ul style="list-style-type: none"> <li>Access Point (AP)</li> <li>Wireless Station (Client)</li> <li>Wireless Station (Client)</li> </ul>
	<ul style="list-style-type: none"> <li>Support Dynamic WAN Interface assignments</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>	
Channels Support	<ul style="list-style-type: none"> <li><b>802.11b/g</b> <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><b>802.11a</b> <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	<b>Model: 600AG</b>	<b>Model: 605AG (High Power RF)</b>
	<ul style="list-style-type: none"> <li>802.11b: 18 dBm</li> <li>802.11g: 18dBm @6Mbps</li> <li>15dBm @54Mbps</li> <li>802.11a: 17dBm @6Mbps</li> <li>13dBm @54Mbps</li> </ul>	<ul style="list-style-type: none"> <li>802.11b: 24 dBm</li> <li>802.11g: 24dBm @6Mbps</li> <li>21 dBm @54Mbps</li> <li>802.11a: 20dBm @6Mbps</li> <li>16dBm @54Mbps</li> </ul>
Wireless Other Setting	<ul style="list-style-type: none"> <li>Enable / Disable Broadcast ESSID</li> <li>802.1q VLAN-Multi SSID (ready on Q2,2006)</li> <li>MAC Address Filtering</li> <li>Bandwidth Control of Wireless Client</li> <li>DHCP Client / Server, Fixed IP</li> <li>NAT      • Static Routing      • SNMP v1&amp;v2      • RIP v1&amp;v2</li> <li>Dual Image (backup)</li> <li>Trunk: Trunking, Smart Traffic Load Balance, One Way Transmit, Failover</li> <li>MS NetBIOS IP Filter Enable / Disable</li> <li>802.11h - Dynamic Frequency Selection (DFS) &amp; Transmit Power Control (TPC)</li> <li>802.11e WiFi QoS (ready on Q2,2006)</li> <li>Wireless Station Fix AP MAC Address Optional</li> <li>Software Alignment / Deployment Tools</li> </ul>	
Receiver Sensitivity	<ul style="list-style-type: none"> <li><b>Receiver Sensitivity:</b> (PER &lt; 8% for 11b; PER &lt; 10% for 11g &amp; 11a)</li> <li><b>802.11b Sensitivity:</b> <ul style="list-style-type: none"> <li>DBPSK (1Mbps) -93dBm      • DQPSK (2.2Mbps) -92dBm</li> <li>CCK (5.5Mbps) -90dBm      • CCK (11Mbps) -88dBm</li> </ul> </li> <li><b>802.11g Sensitivity:</b> <ul style="list-style-type: none"> <li>BPSK(6Mbps) -89 dBm      • BPSK(9Mbps) -88 dBm</li> <li>QPSK(12Mbps) -86 dBm      • QPSK(18Mbps) -85 dBm</li> <li>16QAM(24Mbps) -83 dBm      • 16QAM(36Mbps) -80 dBm</li> <li>64QAM(48Mbps) -77 dBm      • 64QAM(54Mbps) -72 dBm</li> </ul> </li> <li><b>802.11a Sensitivity:</b> <ul style="list-style-type: none"> <li>BPSK(6Mbps) -88 dBm      • BPSK(9Mbps) -87 dBm</li> <li>QPSK(12Mbps) -85 dBm      • QPSK(18Mbps) -84 dBm</li> <li>16QAM(24Mbps) -82 dBm      • 16QAM(36Mbps) -80 dBm</li> <li>64QAM(48Mbps) -76 dBm      • 64QAM(54Mbps) -71 dBm</li> </ul> </li> </ul>	

# Package Contents

- Aphelion 600AG / 605AG 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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