Aphelion 3300AG

802.11a/b/g Dynamic Expansion Outdoor Wireless Access Point

WiFi 3xRF





The Aphelion 3300AG is a carrier class Outdoor Wireless Access Point which offers customer a robust and high performing solution for PTP/PTMP/Hotzone applications in both license-free 2.4GHz and 5GHz bands.

The Aphelion 3300AG 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 wireless hops

- Dynamic Expansion 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
- TCP/UDP Port and DSCP Level QoS

Comprehensive Security Features

- WPA-PSK / WPA-EAP with TKIP/ CCMP WPA Encryption Type support
- 802.1x EAP-TLS / MD5 WEP Key support (Client and Server modes)
- 64/128/152 bits Dynamic WEP keys
- Radius client
- MAC address filtering
- Hide ESSID
- 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
- Flexible wireless network distribution system

System Management

- Firmware upgrade through TFTP, FTP
- Batch firmware upgrade tool for Windows PCs
- Interface status display
- Easy Configuration backup
- SMT Menu and Command Line via console (RS-232) and Telnet
- SSH Telnet
- Syslog
- SNMP v1/v2

Harsh outdoor environments to keep operation

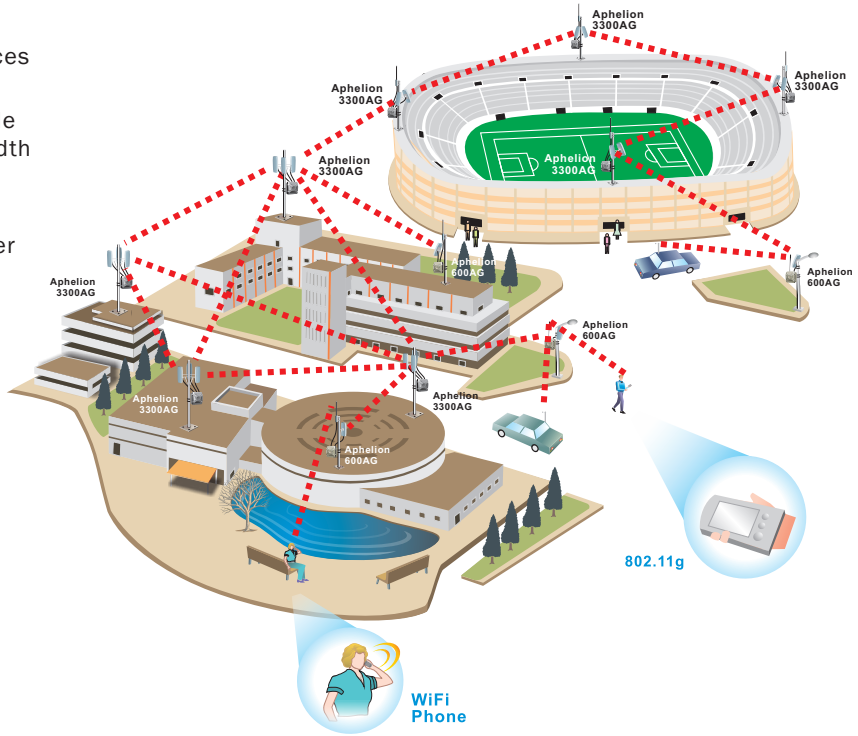
- Certified IP68 sturdy water-tight housing
- Built-in automatic thermal sensor and regulator module to facilitate deployment in cold regions

Simple Installation and Deployment

- Software Alignment / Deployment Tools
- Access Points Site Survey

Advanced Features

- Daisy Chain Mesh
- Trunking, Smart Traffic Load Balance, One Way Transmit, Failover
- Multi-ESSID VLAN
- Wireless Client Access Control
- Multi-Cast Filter



Daisy Chain Mesh

Specifications

Standard Support

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

Interface

Consol	RS 232 Port
Wireless	Antenna Connector: 3 x Reversed Female N-type
Ethernet	1x10/100 Base-T RJ-45 Power over Ethernet (PoE)

Memory

SDRAM	64 Mbyte
Flash	32 Mbyte

Ethernet

Max. Bandwidth	Full Duplex: 100Mbps (100Base), 10Mbps (10Base)
	Half Duplex: 50Mbps (100Base), 5Mbps (10Base)

Physical Spec.

Power	▪ DC 48Volt / 0.8A; AC Adapter 100V~240V ▪ Support Power over Ethernet (PoE)
Dimension	L x W x H: 226 x197 x 79 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	▪ Non Heater : -30˚C ~ 65˚C ▪ With heater : -40˚C ~ 65˚C ▪ Built-in heater module is option
Storage	-40˚C ~ 80˚C
Humidity	0% ~ 95% non-condensing

System Setting

Interface Operation Mode	Access Point (AP) / Wireless Station (AP Client)
System Operation Mode	Bridge / Transparent Bridge / Router
Modulation Technique	**802.11b/g** ▪ DSSS (DBPSK, DQPSK, CCK) ▪ OFDM (BPSK, QPSK, 16-QAM, 64-QAM) **802.11a** ▪ OFDM(BPSK, QPSK, 16-QAM, 64-QAM)
Channels Support	**802.11b/g** ▪ US/Canada: 11 (1~11) ▪ Major European country: 13 (1~13) ▪ France: 4 (10~13) ▪ Japan: 11b: 14 (1~13 or 14th), 11g:13(1~13) ▪ China: 13 (1~13) **802.11a** ▪ US/Canada: 12 non-overlapping channels (5.15~5.35GHz, 5.725~5.825GHz) ▪ Europe: 19 non-overlapping channel (5.15~ 5.35GHz, 5.47~5.725GHz, 5.745~5.825GHz) ▪ Japan: 4 non-overlapping channels (5.15 ~ 5.25GHz) ▪ China : 5 non-overlapping channels (5.725 ~ 5.85GHz)
Wireless Transmission Rate	802.11b/g: 11, 5.5, 2, 1 Mbps, auto-fallback, up to 54 Mbps 802.11a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps, auto-fallback
Transmitted Power	802.11b mode: 17dBm 802.11g mode: 17dBm @ 6Mbps, 15dBm @ 54Mbps 802.11a mode: 15dBm @ 6Mbps, 13dBm @ 54Mbps
Wireless Other Setting	▪ DHCP Client/Server, Fixed IP ▪ Routing Table Setting ▪ RIP v1&v2 ▪ Dual Image (Back up) ▪ MS NetBIOS IP Filter Enable/Disable ▪ Connecting Clients Isolation ▪ 802.11h- Dynamic Frequency Selection (Auto DFS) ▪ Wireless Station Fix AP MAC Address Optional
Receiver Sensitivity	**Receiver sensitivity:** (PER < 8% for 11b ; PER < 10% for 11g &11a) **802.11b Sensitivity:** ▪ DBPSK (1Mbps) -93 dBm ▪ DQPSK (2.2Mbps) -92 dBm ▪ CCK (5.5Mbps) -90 dBm ▪ CCK (11Mbps) -88 dBm **802.11g Sensitivity:** ▪ BPSK(6Mbps) -89 dBm ▪ BPSK(9Mbps) -88 dBm ▪ QPSK(12Mbps) -86 dBm ▪ QPSK(18Mbps) -85 dBm ▪ 16QAM(24Mbps) -83 dBm ▪ 16QAM(36Mbps) -80 dBm ▪ 64QAM(48Mbps) -77 dBm ▪ 64QAM(54Mbps) -72 dBm **802.11a Sensitivity:** ▪ BPSK(6Mbps) -88 dBm ▪ BPSK(9Mbps) -87 dBm ▪ QPSK(12Mbps) -85 dBm ▪ QPSK(18Mbps) -84 dBm ▪ 16QAM(24Mbps) -82 dBm ▪ 16QAM(36Mbps) -80 dBm ▪ 64QAM(48Mbps) -76 dBm ▪ 64QAM(54Mbps) -71 dBm

Package Contents

- Aphelion 3300AG 802.11a/b/g Dynamic Expansion 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.

Aphelion Communications Inc.
Tel: +886-3-452-3609
Fax: +886-3-434-5414
Email: sales@aphelions.com
http://www.aphelions.com
No.5, Tzu-Chiang 1st Road, Chungli Industrial Zone, Taoyuan Hsien, Taiwan

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