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Aerohive NETWORKS

AeroHive AP250 802.11ac Wireless Access Point

High performance, general purpose 802.11ac Wave 2 Dual-Radio 3x3:3 access point with internal antennas.

As WLAN capacity requirements soar, AP250 is an excellent choice to provide instant adaption to ever-changing capacity needs. AP250 features dual radio, 3x3:3 MU MIMO, providing full 802.11ac technology performance with data rates up to 2.6 Gbps per access point using existing 802.3af PoE infrastructure. Software defined radio allows IT managers to enable 802.11ac performance on both radios to provide the best of coverage and capacity Wi-Fi design and protects the investment. Built-in BLE (Bluetooth Low-Energy) radio enables proximity, indoor location tracking and other location-based mobile engagement services. AP250 is powerful enough to provide all the enterprise-grade features including built-in application visibility and control, RADIUS , DHCP, Captive Web Portal, location services and Spectrum analysis.

Key Benefits

- Best balance of coverage, capacity and performance with software selectable radio and RF-IQ technology.
- Managed from public or private cloud -based HiveManager management platform.
- Upgrading your network to 802.11ac Wave 2 does not require you to upgrade your existing PoE infrastructure. Our advancements in energy efficiency allow the AP250 full 3-stream, 2.4/5 GHz 802.11ac and 5/5 GHz performance while using existing 802.3af PoE infrastructure
- Integrated BLE (BlueTooth Low-Energy) and USB interface for IoT readiness
- Application Visibility and Control functionality, including reporting, stateful firewall, and powerful Aerohive Quality of Service (QoS) on the access point
- Enterprise software features including RADIUS, DHCP server, location services and spectrum analysis are combined with hardware assisted security and zero-touch deployment.

Features

- Wave 2 802.11ac Access Point with MU-MIMO capability
- RF-IQ antenna and radio technology
- Software configurable radios allowing either two 5 GHz 802.11a/n/ac radios (for High Density High Capacity deployments) or concurrent 802.11a/n/ac and 802.11b/g/n radios
- Full 3x3, 3 spatial streams in SU-MIMO and MU-MIMO and dual 5 GHz performance with IEEE 802.3af power
- Built-in Bluetooth Low Energy for iBeacon and other beacon technologies
- IoT readiness with USB port for other wireless technologies to connect seamlessly

Advanced Features

- Integrated application visibility and control (AVC)
- Advanced Automatic Channel Selection Protocol (ACSP) for optimum radio performance.
- On-device RADIUS Server with directory integration support (max 256 concurrent authentications), Captive Web Portal, DHCP server (max 512 DHCP clients per AP), and spectrum analysis
- Automatic or dedicated mesh backup

Security Features

- Trusted Platform Module (TPM)– Hardware-based key storage and encryption
- Wireless privacy & authentication Wi-Fi CERTIFIED WPA and WPA2, private PSK
- Granular user profile-based management defines traffic and security policies for groups of users or individual users
- Encryption: AES/CCMP, TKIP, and RC4 (WEP only)
- Classifying, Marking and Policing–WMM (802.11e) for wireless, 802.1p and/or DiffServ for wired
- WMM Certified
- WMM Power Save (U-APSD) Certified

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AP250 Product Specifications

Included Mounting Options

- Wall Mount
- Ceiling Tile flush 15/16" and Wall Mount locking accessory included with AP

Mounting

- Desktop
- Ceiling Tile Recessed 15/16", 3/8", 9/16" sold as an accessory
- Ceiling Tile flush 3/8", 9/16" sold as an accessory
- Suspend Mount sold as an accessory
- Plenum Mount sold as an accessory
- Silhouette and Interlude sold as an accessory

Antennas

- 6 + 2 internal Wi-Fi antennas for spatial and polarisation diversity
- 1x BLE internal antenna Interfaces
- Two Autosensing 10/100/1000 Base-T Ethernet ports. PoE (Power over Ethernet 802.3af) capability on one of the ports
- RJ-45 console port

Physical

- WxDxH: 7.25" x 7.25" by 1 7/8" tall (plus .25" for the mounting hardware) – 2.12" (5.4 cm) high total

Environmental

- Operating: 0 to +40°C, Storage: -40 to +70°C
- Humidity: 95%

Environmental Compliance

- UL2043

Power Specifications

- IEEE 802.3af PoE Power: Full 3x3:3 802.11ac MU-MIMO performance, BLE and Dual 5 GHz. No USB port, no 2nd

Ethernet port.

- IEEE 802.3at PoE Power: full set of features (all of the above plus USB port and 2nd Ethernet port).
- 2.4 GHz typical power draw 17 dBm, max 22 dBm
- 5 GHz typical power draw 18 dBm, max 23dBm

Contact Krome today on 01932 232345 to learn how your organisation can benefit from an Aerohive wireless LAN architecture.

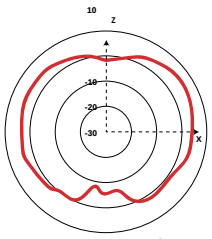
Aerohive Power Table

2.4 GHz	Data Rate	Power dBm
11b	1,2,5.5,11	17/20
11g	54 Mbps	15/17
	48 Mbps	16/18
	36 Mbps	17/19
	6 Mbps	17/19
11n HT20	MCS7,15,23	15/17
	MCS6,14,22	16/18
	MCS5,13,21	17/19
	MCS0,1,2,3,4	17/19
	MCS8,9,10,11,12	
	MCS16,17,18,19,20	
5 GHz	Data Rate	Power dBm
11a	54 Mbps	15/17
	48 Mbps	16/18
	36 Mbps	17/19
	6 Mbps	17/19
11n HT20	MCS7,15,23	15/17
	MCS6,14,22	16/18
	MCS13,21	17/19
	MCS0,2,3,4,8,9,10,11	17/19
	MCS12,16,17,18,19,20	
11n HT40	MCS7,15,23	15/17
	MCS6,14,22	16/18
	MCS5,13,21	17/19
	MCS0,1,2,3,4,8	17/19
	MCS9,10,11,12,16	
	MCS17,18,19,20	
11ac VHT	256QAM@3/4 Code Rate	12/14
	256QAM@5/6 Code Rate	11/13

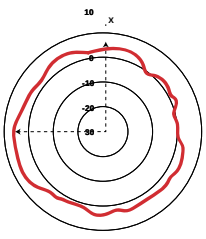
Aerohive Power Table

2.4 GHz	Data Rate	Sensitivity
11b	1 Mbps	-100
	11 Mbps	-93
11g	6 Mbps	-95
	36 Mbps	-86
	48 Mbps	-82
	54 Mbps	-80
11n HT20	MCS0, 8, 16	-95
	MCS5,13, 21	-81
	MCS6,14, 22	-79
	MCS7, 15, 23	-77
5 GHz	Data Rate	Sensitivity
11a	6 Mbps	-95
	36 Mbps	-86
	48 Mbps	-81
	54 Mbps	-80
11n HT20	MCS0, 8, 16	-91
	MCS5, 13, 21	-78
	MCS6, 14, 22	-76
	MCS7, 15, 23	-74
11n HT40	MCS0, 8, 16	-88
	MCS5, 13, 21	-75
	MCS6, 14, 22	-73
	MCS0,7, 15, 23	-71
11ac HT20	Code Rate 3/4	-65
	Code Rate 5/6	-63
11ac HT40	Code Rate 3/4	-62
	Code Rate 5/6	-60
11ac HT80	Code Rate 3/4	-59
	Code Rate 5/6	-57

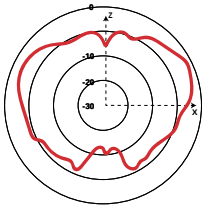
Radiation Patterns



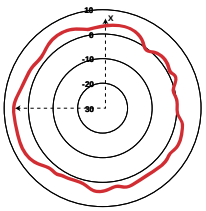
Vertical 2.4GHz Dual-band



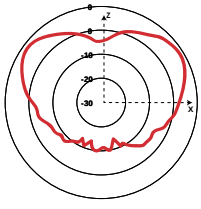
Horizontal 2.4GHz Dual-band



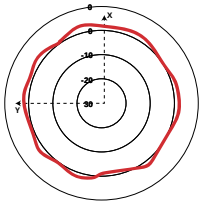
Vertical 5GHz Dual-band



Horizontal 5GHz Dual-band



Vertical 5GHz antennas



Horizontal 5GHz antennas

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Krome Wireless Deployment Planning Service

We can deliver you a Wireless solution that caters for your individual business, and specific site requirements.

To create a WLAN solution that works effectively, there are several considerations that have to be made, the multiple client device and application types that are required to perform over the wireless infrastructure is just the start, in addition to that you need to add the speed and complexity of 802.11n, the variety of potentially high demanding applications or high-density environments and the security risks, with so many factors to consider tricky deployment scenarios can easily arise, causing unexpected challenges to the success of your Wireless deployment.

Krome offer a comprehensive wireless deployment planning service to fully assess and effectively plan the solution prior to installation.

Assessing Your Requirements

To get started with your WLAN installation, Krome will examine the requirements of your implementation, including departmental, individual user, site, and application requirements, gaining a basic overview of what your Wireless network will need to support. We will identify mission critical applications, paying special attention to those that generate high levels of traffic and those requiring deterministic behavior. Once we have identified such applications we can then evaluate the expected service levels.

Effective Planning

Whether you are upgrading from an existing WLAN or planning a completely new greenfields site Krome can fully evaluate and plan the deployment by using a WLAN planning tool and building floor plans. The planning tool is designed to help scope and plan a WiFi Deployment to determine the number of APs required to achieve an intended coverage, AP placement and data rates. This tool calculates the loss in signal strength as it passes through open air and various materials to show predicted coverage.

Upgrading from Existing Wi-Fi

If you are upgrading your existing WLAN, you already have plenty of data about how your current network is performing. Krome will initially perform a quick site survey with the existing access points in place, evaluating the current coverage, capacity, and type of APs (access points). Using the survey information allows us to make informed decisions about your new implementation. Krome will provide a report on how to achieve optimal results and performance with your new deployment, along with the quickest and most effective way to migrate systems.

New WLAN Deployment

In a new, or greenfield, WLAN deployment; when you do not have the benefit of an existing network for testing and analysis, the planning stage is more complex. Determining the scope of your WLAN deployment will have a major impact on capacity and coverage. Krome will evaluate users, applications, interference's, devices and performance requirements, along with building plans and site information. Site plans and blueprints are hugely beneficial for planning as we are able to evaluate the building characteristics; location of elevators, load-bearing walls and material of walls. With this information loaded into the planning tool combined with our analysis of your service requirements we are able to comprehensively plan for your deployment.

Deploying with Confidence

Moving a large enterprise, or even a small one, to a WLAN for the very first time need not be daunting; with proper planning in place, you can prevent poor performance and eliminate unforeseen solution costs. By engaging with highly experienced Wireless deployment partner Krome Technologies to effectively assess and plan your deployment you can be assured that your WLAN solution is a success.

Find Out More

If you're interested in learning more about Aerohive Networks WLAN solutions or our deployment planning service please do get in touch with one of our Business Managers, we'd love to share our experiences, and help you to plan and deliver your Aerohive WLAN solution.

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