Technology brief

HPE aruba networking

HPE Aruba Networking instant mode

Wi-Fi with the controller built-in

HPE GreenLake

Key benefits

- Available on all HPE Aruba Networking AP platforms
- Policy Enforcement Firewall, a Cyber Catalyst designated solution
- Patented ClientMatch technology
- Local RADIUS server option
- Choice of local, cloud and on-premises management

Cloud-based services, IoT connectivity, and high-performance applications have transformed Wi-Fi into the primary means of access for organizations of all sizes. This is driving the need for high performance, reliable networking with an enhanced quality of service (QoS), and simpler IT management capabilities.

Wi-Fi throughput that's cost effective

HPE Aruba Networking Wi-Fi 6 and Wi-Fi 5 access points (APs) in Instant Mode offer enterprise-class performance and features with simplicity and affordability. The same HPE Aruba Networking Wireless Operating System feature set available when using HPE Aruba Networking Mobility Controllers and Gateways now provides IT with the same role-based access controls and AI-powered RF optimization features, without the added hardware and cost.

No licenses required

HPE Aruba Networking Instant Mode delivers full feature access without any additional licensing. It also provides free access to new software releases for the lifecycle of the hardware.

Limited lifetime warranty

All HPE Aruba Networking access points are built to last and include a Limited Lifetime Warranty. Learn more about HPE Aruba Networking's product warranties here.

Advantages of Wi-Fi simplicity

To optimize the setup and management of HPE Aruba Networking APs, we've made it easy to install, optimized the user experience, and keep your network safe.

Zero Touch Provisioning

It's never been easier to get a network up and running. Simply plug an AP into an available Ethernet port and an interactive wizard will take care of the rest. Zero Touch Provisioning can also work in a distributed environment where all your config changes are managed from a central location.

HPE Aruba Networking ClientMatch

AI-powered RF optimization technology called ClientMatch, is a patented technology that gathers user or client session metrics to intelligently steer clients to the best-performing AP. This is based on a variety of factors such as Wi-Fi signal strength, band, traffic load, and whether or not a user is running a latency-sensitive application (e.g. video or voice).

Wi-Fi 6: Multi-user aware features

For the best experience, ClientMatch identifies and groups Wi-Fi 6 and MU-MIMO-capable APs together to ensure users experience the full capabilities of the OFDMA and MU-MIMO capabilities. This is a unique feature that helps segment new devices from older ones that could impede network performance.

Role-based access control

HPE Aruba Networking APs in Instant Mode offer HPE Aruba Networking's Policy Enforcement Firewall (PEF), a unique built in capability that dynamically segments users and devices and their traffic based on their role. A deep packet inspection (DPI) feature also enables IT to use application, device, and location-based QoS for policy enforcement per role. This context can automatically apply the appropriate access policies for employees, guests, contractors, or printers and surveillance cameras. PEF has been recognized as effective in reducing cyber risk by Marsh, and designated as part of the Cyber Catalyst℠ program.

HPE Aruba Networking Air Slice™

Another unique feature to HPE Aruba Networking Wi-Fi 6 APs is Air Slice, which allows IT to offer SLA-grade performance by allocating dedicated radio resources to specific traffic. Using data from PEF, traffic can be optimized based on time, frequency and the number of spatial streams needed to offer a high degree of performance. Non-Wi-Fi 6 clients can also benefit. Air Slice requires HPE Aruba Networking Central for management. Controller-based APs will be supported in a future software release.

Guest access

All HPE Aruba Networking APs in Instant Mode include a simple-to-use guest access captive portal for visitors and temporary workers.

Integration with social media logins such as Facebook Wi-Fi is also supported.

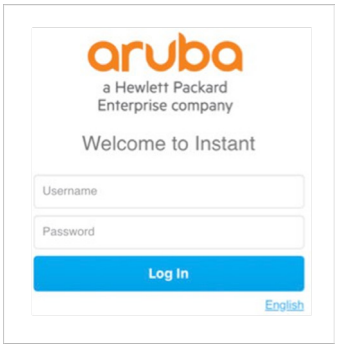

Figure 1. Guest Portal

Seamless roaming (Layer 2)

Mobile users and clients can move freely from AP to AP without impacting network connectivity. With ClientMatch, HPE Aruba Networking Instant can also proactively eliminate "sticky client" issues.

While network mobility domains can achieve massive scale, HPE Aruba Networking also supports Layer 3 roaming with the deployment of a Mobility Controller or Gateway in the network. In this deployment mode, all AP sessions and traffic terminate centrally to ensure uninterrupted network access as users move between floors.

Simple Wi-Fi management with choices

To meet the need for a wide range of enterprise architectures, HPE Aruba Networking Instant provides flexible management options.

Local management

The built-in GUI provides access to live monitoring and traffic visibility, while network configuration provides full customization of SSIDs, roles, guest access, and more. For extended historical reporting, HPE Aruba Networking Central can be added.

HPE Aruba Networking Central

HPE Aruba Networking Central, is a cloud-based AI-powered operations, analytics, and security platform for APs deployed in one or multiple locations. Centralized configuration and monitoring, and advanced troubleshooting and API integration are also provided. HPE Aruba Networking Central also supports HPE Aruba Networking switches and SD-WAN gateways and offers access to AI-powered analytics for fast troubleshooting.

HPE Aruba Networking AirWave

HPE Aruba Networking AirWave, an on-premises platform, provides IT with the ability to manage controller-based APs and those running in Instant Mode. HPE Aruba Networking AirWave is also useful for multi-vendor environments where legacy wired and wireless infrastructure still requires attention but does not warrant a separate tool.

High resiliency and uptime

Wi-Fi is a critical utility today, which means the network must have the ability to recover quickly.

Always-on availability

In a cluster, HPE Aruba Networking APs in Instant Mode elect a single AP (or parent) within the group to act as a virtual controller for the entire cluster. This makes it easy to perform configuration changes on one device and push the change to all APs. If connectivity is lost to the parent, the election process will instantly choose another AP to take over — ensuring seamless network access.

A separate feature allows IT to configure a single AP to act autonomously (or standalone) from an existing cluster for specific use cases (e.g, for multi-tenancy, lab environments, or physical network separation).

Cloud-based live upgrades

HPE Aruba Networking Central adds the ability for IT to schedule firmware upgrades without impacting network connectivity. This means that users will enjoy 24x7, uninterrupted network access.

Multiple WAN uplink options

HPE Aruba Networking APs in Instant Mode support multiple WAN uplink options using Ethernet or cellular USB. For a list of compatible 3G/4G LTE USB modems, please view the interoperability list here.

Wi-Fi security: led by visibility

Rich intelligence and enforcement capabilities require APs to see and understand what is connecting to them, what apps are being used and if their behavior changes to maintain secure network connectivity.

HPE Aruba Networking PEF recognized by Marsh & McLennan

As a Cyber Catalyst℠ designated solution, PEF is viewed by leading cyber insurers as effective in reducing cyber risk. Participating insurers include Allianz, AXIS, Beazley, Munic Re, and Zurich North America. Microsoft is a technical advisor to the program.

Application visibility and control

In addition to the thousands of apps recognized by HPE Aruba Networking's deep packet inspection (DPI) technology previously described, using HPE Aruba Networking Central's Unified Communications (mobile UC) dashboard provides call quality metrics for video and voice applications like Teams, FaceTime, and Wi-Fi calling.

Web content filtering

The WebCC Bundle is an add-on subscription that classifies websites by content category and rates them by reputation. It can also block, mirror and log web content, and apply QoS and bandwidth-limits.

WIPS/WIDS and rogue containment (Air Monitor)

HPE Aruba Networking Instant can also enable an AP to scan the air for better channels, monitor for wireless intrusion detection system (IDS) events, listen for clients, search for rogue devices and perform rogue containment when needed.

This can be enabled on the AP in either a hybrid client-serving and background monitoring mode, or as a dedicated air monitor that is not client-serving.

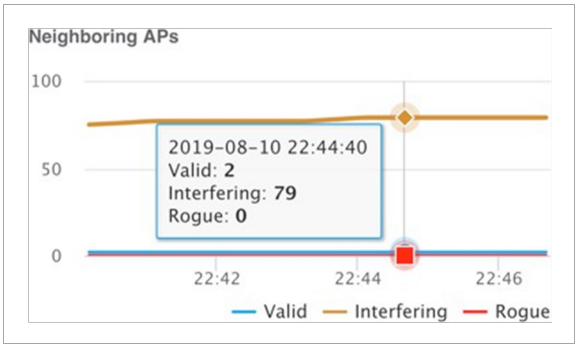

Figure 2. Monitoring dashboard

WPA3, Enhanced Open and enhanced WPA2

The HPE Aruba Networking Wireless Operating System software includes support for WPA3, which brings stronger encryption and authentication methods. Enhanced Open provides the ability to automatically encrypt the traffic for each device on a guest network. Using HPE Aruba Networking ClearPass, IT has access to WPA2-MPSK, which enables simpler passkey management for WPA2 devices.

VPN services

HPE Aruba Networking APs in Instant Mode can establish an IPSec tunnel with a Mobility Controller in order to allow users to access shared network services. This is known as an IAP-VPN architecture.

Intelligent RF optimization

HPE Aruba Networking Instant includes advanced RF technologies to optimize the network based on changing Wi-Fi conditions.

Adaptive Radio Management (ARM)

ARM is a patented built-in RF optimization technology that automatically adjusts the RF environment to maximize performance. This includes providing airtime fairness, adapting AP power and channel assignments to reduce co-channel interference, and identifying coverage gaps.

For larger environments, APs can be converted to controller mode and utilize HPE Aruba Networking AirMatch. This feature takes the capabilities of ARM and applies machine learning principles to centrally manage RF intelligently across the entire network.

Spectrum analysis and load balancing (Spectrum Monitor)

HPE Aruba Networking APs in Instant Mode includes integrated spectrum analysis, which allows the APs to classify and identify Wi-Fi and non-Wi-Fi interference sources — such as microwaves, AC units, or other electronics that can impact network performance. Spectrum load balancing assigns clients to less loaded channels, balancing them across channels among all Instant APs.

This can be enabled on the AP in either a hybrid client-serving and background monitoring mode, or as a dedicated spectrum monitor that is not client-serving.

Additional features

Wireless mesh support

In an environment without easy access to a wired port, dual-radio Instant APs can utilize a single radio to extend network connectivity through an all-wireless backhaul. In this configuration, at least 2 APs are required — one connected to a wired connection and acting as a mesh portal, and one without a wired connection acting as a mesh point. Up to 8 mesh points can connect to a single mesh portal.

Advanced security

HPE Aruba Networking APs in Instant Mode can utilize centralized policies and AAA services provided by the HPE Aruba Networking ClearPass Policy Manager. For enterprises with distributed sites and limited IT resources, HPE Aruba Networking ClearPass provides a simple way to centralize policy management — and leverage extensive device profiling and simple to use BYOD onboarding services.

Available on all HPE Aruba Networking access point models

For ordering information on specific APs and the range of use cases supported, please refer to HPE Aruba Networking's access point portfolio webpage.

Make the right purchase decision.
Contact our presales specialists.

Contact us

Visit **ArubaNetworks.com**

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