aruba
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Enterprise company

Aruba Air Pass Cellular Roaming Service
Deliver the 5G Experience Today with Wi-Fi Calling and Passpoint®

EVOLUTION OF INDOOR CELLULAR COVERAGE

Due to the prevalence of low-emission glass, energy-efficient construction materials, as well as evolving building codes, indoor wireless coverage from outdoor cellular networks has become increasingly challenged – resulting in inconsistent experiences for mobile users who may lose signal when they roam in and out of corporate offices, hotels, conference centers, and other indoor locations. These problems are compounded with 5G at higher frequencies that do not penetrate as far indoors as 4G or 3G.

For decades, distributed antenna systems (DAS) have been used in large public venues like airports, hospitals, stadiums and shopping malls. More recently, indoor femtocell networks are being deployed by individual mobile network operators (MNOs) but unlike DAS a separate layer of equipment is required for each MNO. Both DAS and small cells are complex, very costly and are rarely cost effective for facilities with less than 200,000 ft^2 (20,000 m^2) which are the bulk of commercial properties worldwide. As a result, over 150 MNOs in nearly 50 countries have embraced Wi-Fi Calling. And now that 5G includes support for integrating Wi-Fi 6 as a radio access network (RAN), enterprises no longer need to choose. Wireless LANs instantly become the premier and most economical method of choice to onramp indoor cellular devices.

With the Aruba Air Pass roaming service, Wi-Fi 6 becomes important in accelerating enterprise 5G initiatives – automating mobile onboarding and roaming with the added benefit of enterprise-grade security.

WHAT IS ARUBA AIR PASS?

Aruba Air Pass is the industry's first seamless cellular roaming solution designed to unify enterprise and mobile network experiences. Delivered by Aruba WLAN and managed by Aruba Central, Air Pass uses prenegotiated agreements with MNOs that support the widely supported Wi-Fi CERTIFIED Passpoint standard to access cellular SIM credentials for automated Wi-Fi roaming – no captive portals, user names, or passwords are required. ClearPass adds

KEY FEATURES

- Enable 5G experiences with Wi-Fi 6
- Automatically enable cellular devices to connect to Aruba WLAN
- Provides role-based control and onboarding using enterprise security
- Powered by Wi-Fi CERTIFIED Passpoint®, enabled in the vast majority of mobile devices
- Works with Aruba Air Slice for carrier-grade application Quality of Service
- Uses WPA2/3-Enterprise wireless security
- Works with ClearPass for AI-powered insights and access control
- Compatible with existing Aruba Wi-Fi 4/5 WLANs to enable cellular roaming today without hardware upgrades

network access control so that public and private resources remain secure and separate. Mobile subscribers (as well as Passpoint capable IoT devices) are then able to roam between cellular and Wi-Fi, while enterprise IT maintains policy compliance.

Air Pass marks an end to indoor cellular coverage gaps, an end to insecure open guest networks, and an end to the friction and hassle of manually hunting for Wi-Fi networks and jumping through the hoops of captive portals. But it also marks the beginning of a new kind of relationship between private enterprises and mobile network operators.

GIVE GUESTS A BETTER WI-FI EXPERIENCE

Air Pass is especially useful for schools, universities hotels, retail stores, hospitals, and other indoor venues that provide public Wi-Fi hotspots – giving guests an uninterrupted Wi-Fi experience as well as the benefits of Aruba AI and RF enhancements to maintain SLA-grade assurance.

Organizations can also integrate their guest or loyalty programs using Aruba's open APIs for complete visibility into the connectivity experience.

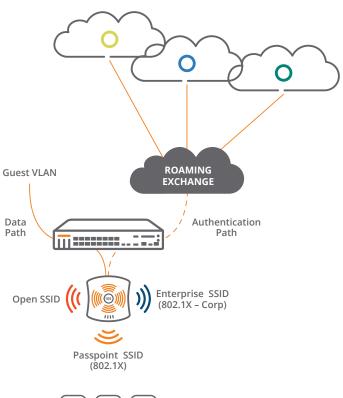## INCREASE THE ROI FOR ENTERPRISE WLAN

Services such as IoT and UCC are accelerating cloud adoption – meaning that the role of the WLAN has become increasingly mission-critical in the workplace. With Air Pass, the WLAN can now deliver 5G experiences for mobile subscribers while increasing business value.

CARRIER-GRADE APPLICATION ASSURANCE

Within the nearly 20 billion square feet of real estate served by Air Pass-ready infrastructure worldwide, mobile users and IoT devices are increasingly accessing cloud services and other bandwidth-intensive applications like AR/VR, video conferencing, and gaming. To address burgeoning demands for connectivity, Air Pass is optimized for Aruba Wi-Fi 6 to deliver enhancements like Air Slice for SLA-grade application assurance. By dynamically allocating radio resources such as time, frequency, and spatial streams, Air Slice guarantees connectivity for specified users, devices, and applications. See the Air Slice technical brief for more information.

KEY SOLUTION COMPONENTS

The heart of Air Pass is a cloud-based roaming hub service provided by Aruba, with secure links to major global MNOs that support Passpoint with SIM credentials on their subscriber devices. On premise, Air Pass is delivered by Aruba access points, secured by ClearPass, and managed by Aruba Central.

Aruba Central Cloud-based Management

Aruba Central is a unified network operations, assurance, and security platform that simplifies the deployment, management, and orchestration of wireless, wired, and SD-WAN environments. This includes delivering 5G and Wi-Fi 6 to the network and customer edge, complete with built-in and third-party services.

Aruba Wi-Fi 6 Access Points

Ideal for enterprises of any size, Aruba Wi-Fi 6 APs deliver secure and reliable connectivity to mobile users, IoT devices, and latency-sensitive applications – even in crowded areas. These APs are in a class of their own with a purpose-built design and unmatched technical capabilities that bring 5G experiences to life in the most demanding enterprise environments.

Aruba ClearPass

ClearPass delivers AI-based profiling capabilities that automatically discover new devices as they connect to the enterprise network. Combined with ClearPass policy management capabilities, wired and wireless endpoints are assigned appropriate access policies.

Optional: Aruba CX Switches

From campus access, core, and to the data center, Aruba switches use a cloud-native design to provide the performance, scale, and intelligence needed to support growing network demands. IT can also ensure that end-users have reliable, uninterrupted network access.

Optional: Aruba SD-WAN with Threat Defense

Extend application assurance from the WLAN to the WAN so that you can optimize performance and health from end-to-end. Managed and orchestrated by Aruba Central, Aruba SD-WAN simplifies route and tunnel management over hybrid WAN circuits – it also includes Threat Defense capabilities like IDS/IPS for additional security. Aruba SD-WAN runs on Aruba Branch Gateways or Aruba SD-WAN Gateways.

Optional: HPE GreenLake for Aruba

HPE GreenLake for Aruba is designed to offer flexible Wi-Fi and 5G network-as-a-service (NaaS) options delivered from a scalable services platform.

360° SECURITY WITH AI-POWERED INSIGHTS

To help enterprises reduce cyber risk and maintain complete visibility, Aruba Zero Trust Security provides AI-based profiling, policy enforcement and management, and threat defense capabilities. This is especially important for mitigating threats posed by devices before they have a chance to act.

Using Wi-Fi 6 and WPA3, mobile connections are encrypted to the latest standards, while Aruba's Policy Enforcement Firewall (PEF) extracts intelligence about user role, device type, application, and network location to secure connectivity on a need-to-know basis.

HOW TO BUY

Please contact your Aruba sales representative for inquiries. The solution is subject to region availability.

SUMMARY

By deploying Aruba Air Pass, enterprises can unlock a versatile edge-to-cloud platform using Aruba Wi-Fi 6 technology to extend the 5G experience to the enterprise. Powered by Passpoint, the new Air Pass service ensures that mobile subscribers can securely and automatically roam onto participating Aruba enterprise WLANs by simply using SIM credentials. Organizations can deliver great user experiences with big cost savings by using the existing WLAN infrastructure for mobile wireless connectivity.

RESOURCES

For more information, please refer to the following resources, or contact your Aruba sales representative.

- Wi-Fi 6 and 5G web page
- Aruba Unplugged Podcast
- Aruba 5G Blog Series

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