A smart building is an instrumented structure in which applications are cognizant of the contextual status of the environment, occupants, energy requirements, service needs, security, and safety. Devices in the Internet of Things (IoT) act as the eyes and ears of a smart building, generating the logical representations of physical data like temperature, enthalpy, power, and presence. These data are supplemented with contextual information that is generated by the building’s Aruba access network, such as identity, location, and applications in use. The combination of data and context enables smart buildings to become cognizant of, and responsive to, the occupants and their environment. The richer the set of data and context, the more adaptive the building can become.

Hyperaware buildings are more productive for the occupants and more economical to run. McKinsey4 estimates that monitoring and optimizing human activity thru smart workspaces can increase productivity by 5%, energy monitoring can reduce costs by 20%, and intelligent building security should yield a 20-50% reduction in labor costs. Achieving these results requires edge data from devices thru which intelligent building applications can deduce status, infer occupant needs, and adjust control systems. Aruba has partnered with EnOcean, a market leader in energy harvesting wireless sensor solutions, and members of the EnOcean Alliance ecosystem to network more than 5,000 different lighting, temperature, air quality, security, safety, and power monitoring sensors and actuators and create fully instrumented buildings.

**WHY ARUBA AND TITANIUM?**
- Easily retrofitted to existing Aruba networks without a rip-and-replace
- Fast bring-up of hyper-aware smart buildings using cloud-based monitoring and control application
- Enterprise-class network and IoT connectivity and security
- Supports more than 5,000 available EnOcean lighting, comfort control, air quality, energy, security, and metering devices
- Scales to address multi-location and multi-region deployments

**ARUBA & TITANIUM**
Titanium Intelligent Solutions is an EnOcean Alliance member that builds distributed cloud-based IoT building management applications to monitor, control, and analyze hyper-aware intelligent buildings. The extensible platform supports standalone, multi-tenant, multi-use, and multi-site buildings, and includes predictive analytics to optimize building performance.

A powerful user interface manages devices and provides a comprehensive floor plan overview, powerful metrics analytics, system and site visualization, and an audit log of all user behavior. Role-based access by function and location enforces proper governance over system operation and configuration, while rule-based operation provides fine grained control over edge device operation on a per device, floor, location, or regional basis.
Aruba and Titanium have partnered to deliver intelligent building automation applications that leverage the vast ecosystem of EnOcean device vendors. Customers with existing Aruba deployments can easily add EnOcean devices by plugging an 800 or 900MHz EnOcean USB adapter into already deployed Aruba access points, and pointing the secure data stream to the Titanium cloud. No additional on-site networking infrastructure or gateways are required. Existing Titanium customers can enhance visibility and create truly hyper-aware buildings by supplementing their Titanium system with Aruba’s networks.

Greenfield deployments can substantially lower design, installation and life-cycle costs by converging all of the IT, IoT, and operational technology (OT) systems within Aruba’s Edge Services Platform in conjunction with Titanium cloud services and EnOcean smart building devices. The resulting hyper-aware platform requires fewer devices and less infrastructure than a traditional building automation systems, yet is future-proof and ready to support tomorrow’s energy, smart space, security, and safety requirements.

**DEPLOYMENT MODEL**

We’ve taken the guesswork out of deploying this joint solution by certifying the interoperability of the Titanium system with Aruba infrastructure. Set-up is also a breeze:

1. Install sensors (or edge devices);
2. Install or use existing Aruba Wi-Fi 5 or Wi-Fi 6 access points with a USB port and AOS 8.7;
3. Insert the USB stick into the Aruba access point and configure the IP address of the Websocket connection; and
4. Titanium automatically searches for sensors and completes the commissioning process to establish communication.
SUMMARY
Aruba and Titanium deliver the business benefits of hyper-aware smart buildings existing Aruba secure infrastructure and rapidly-deployed Titanium cloud-based monitoring and control applications. The solution supports more than 5,000 available lighting, comfort control, air quality, energy, security, and metering devices from more than 400 EnOcean Alliance partners, and scales to address both multi-location and multi-region deployments.

To learn more about Aruba’s hyper-aware smart building solution please go to https://www.arubanetworks.com/solutions/internet-of-things/

For additional information on Titanium cloud-based applications please visit https://titaniumintelligentsolutions.com/

DEPEND ON TITANIUM
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