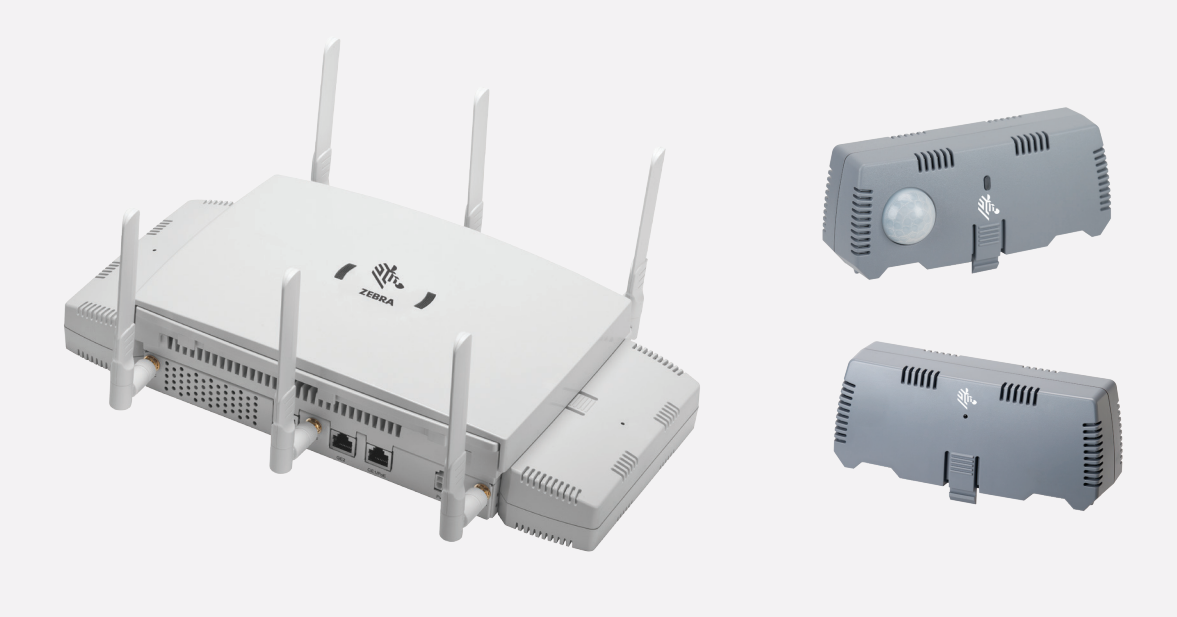
FUTURE PROOF YOUR WIRELESS LAN WITH MODULAR ACCESS POINT ARCHITECTURE

AP 8X32 access points



THE CHALLENGE: CONSTANTLY CHANGING TECHNOLOGIES AND BUSINESS NEEDS

Choosing which access points to deploy is always a difficult decision. The technology you choose needs to last for at least five to seven years in order to obtain a reasonable return on investment (ROI) — yet the technology landscape is always changing, along with your business needs.

THE SOLUTION: A NEW MODULAR ACCESS POINT ARCHITECTURE

To address these issues, Zebra has developed a new type of access point — the modular access point. With two standard USB ports —one on either side — you can easily add new functionality whenever you need it. The modularity is based on an open, well-recognized standard platform — the widely used USB interface — to maximize the developer pool and pave the way for a large partner channel and a large portfolio of modules. The result is a future-proof design that allows you to continually update existing access points with the technologies of tomorrow. In addition, modularity greatly reduces the cost of implementing new technologies into your business. For example, you can incorporate environmental sensors or IP security cameras by simply snapping a module onto our modular access points. No need to purchase higher cost standalone infrastructure or pull cable — instead, you simply leverage the WLAN infrastructure and cable runs you already have.

In addition, our modular access points simplify purchasing. You simply buy the base model and purchase the modules you want. No need to choose from a large array of specific SKU numbers — just mix and match to meet your business needs.

THE MODULES

Today, there are three types of modules available:

Dedicated network sensor module: Boost network security and turn network data into actionable intelligence

Our dual-band 802.11n USB module provides around-the-clock sensing on the 2.4 GHz and 5 GHz bands, opening up a world of network security and management capabilities — without the major expense of deploying a standalone layer of network sensors. Just snap on the network sensor to collect the network information required to enable up to three key capabilities provided by the Zebra AirDefense Services Platform:

- **Security and compliance.** The three features of the AirDefense Security and Compliance software suite collect the necessary information from this sensor to detect and neutralize rogue devices, enforce policies, prevent intrusion and ensure regulatory compliance. Wireless Intrusion Prevention System (WIPS) accurately detects wireless vulnerabilities and unusual network activities. Wireless Vulnerability Assessment utilizes an industry-first patented technology to log on to sensors to test for and identify vulnerabilities, enabling proactive action to ensure network security. Advanced Forensics collects 325 data points every minute for every identified wireless device, including the dedicated network sensor, providing the rich historical information required to troubleshoot network issues.
- **Network assurance.** Several features in the AirDefense Network Assurance software suite provide full control of your WLAN operational performance, delivering the solid network reliability and uptime required to fully realize the benefits of mobility. Access Point Testing utilizes sensors to simulate wireless clients to perform end-to-end testing of network connections to proactively detect network issues. Testing can be run automatically or on demand. Spectrum Analysis utilizes the sensor to troubleshoot interference issues without the need to dispatch a technician to the physical location.
- **Proximity awareness and analytics.** Easily leverage this sensor to deploy robust locationing with AirDefense Proximity Awareness and Analytics software. This tool detects, analyzes and acts on the data collected from this sensor, able to identify whether a customer is present or in a specific zone of the facility as well as insight into customer behavior patterns based on Wi-Fi usage.

Wireless Wide Area Network (WWAN) module: Flexible 4G LTE cellular backhaul

The flexible Sierra Wireless 313U 4G LTE module can meet a wide variety of backhaul needs:

- **Primary network access.** It can provide your primary network access quickly and easily — no need to run cabling, just plug it into one of our modular access points and you're up and running.
- **Temporary network access. I**t can also provide instant temporary connectivity in areas where wired network connectivity is planned but not yet available — ideal when moving into a new facility.
- **Redundant network access.** It can provide a redundant connection in the event your T1/E1 link fails, providing the fast 4G cellular backhaul that will enable business as usual, despite a network outage.
- **Traffic segmentation.** It can provide valuable traffic segmentation that can allow specific types of traffic to be instantly routed directly to the Internet instead of through the company network, such as guest traffic (customers browsing on the Internet) or credit card transactions.

ABOUT WIRELESS WIDE AREA NETWORK CARDS

A WIRELESS WIDE AREA NETWORK (WWAN) CARD IS A SPECIALIZED NETWORK INTERFACE CARD THAT ALLOWS A DEVICE TO CONNECT, TRANSMIT AND RECEIVE DATA OVER A CELLULAR WIDE AREA NETWORK. THE WWAN CARD USES POINT-TO-POINT PROTOCOL (PPP) TO CONNECT TO THE INTERNET SERVICE PROVIDER (ISP) AND GAIN ACCESS TO THE INTERNET. PPP IS THE PROTOCOL USED FOR ESTABLISHING INTERNET LINKS OVER DIAL-UP MODEMS, DSL CONNECTIONS, AND MANY OTHER TYPES OF POINT-TO-POINT COMMUNICATIONS. PPP PACKAGES THE NETWORK'S TCP/IP PACKETS AND FORWARDS THEM TO THE SERIAL DEVICE, WHERE THEY CAN BE PUT ON THE NETWORK. PPP IS A FULL-DUPLEX PROTOCOL THAT CAN BE USED ON VARIOUS PHYSICAL MEDIA, INCLUDING TWISTED PAIR OR FIBER OPTIC LINES OR SATELLITE TRANSMISSION. IT USES A VARIATION OF HIGH SPEED DATA LINK CONTROL (HDLC) FOR PACKET ENCAPSULATION.

OUR MODULAR ACCESS POINT FRAMEWORK CAN PROVIDE YOUR WIRELESS LAN WITH EVER-EXPANDING POSSIBILITIES — ABLE TO SUPPORT NEW CAPABILITIES, EASILY AND COST-EFFECTIVELY.

Environmental sensing module: Collect and act on environmental data inside your facility

This module allows you to detect, collect and act on a variety of types of environmental information. Typically you would need to deploy a separate standalone network of environmental sensors that would require the purchase and installation of the equipment as well as cabling. Now, you can just snap this module into the access point — or mount wherever required with the included mounting bracket. Types of data you can capture with this module include:

- **Light.** There is rarely a need for the WLAN to be operating while nobody is in a facility, yet typically, the WLAN remains at full power when the office is closed. With light sensing, the AP can be placed into a low-power mode when a no-light/low light situation is detected. Low power mode can reduce AP power consumption by as much as 50 percent, helping meet "green" initiatives and reducing power costs. Enabling this feature is easy. First, two thresholds are set that allow the AP to determine a "lights off" and "lights on" situation. When the ambient light falls below the "lights off" level, the AP will be automatically placed into a low power state (Wi-Fi radios off, no RF access). When the ambient light is within the "lights on" level, the AP is automatically returned to its full operational state.
- **Temperature and humidity.** By integrating this sensor with HVAC monitoring systems, you can collect temperature and humidity data to control the facility environment as well as ensure freezers and coolers remain at the proper levels, without deploying an expensive separate proprietary sensor system. Since the sensor comes with its own mounting bracket, it can be deployed separately from the AP for locations where WLAN coverage is not required, such as a freezer or a meat locker.
- **Motion.** Motion sensing can be utilized in a variety of ways. You can automatically power lights on or off when motion (or a lack of motion) is detected. Integration into security systems can provide immediate alerts of a potential intruder. And integration with customer-targeted signage allows signage to be activated when customers are in the vicinity, and automatically deactivated when no customers are present, helping reduce utility bills.

LOOKING FORWARD

Our modular access point framework can provide your wireless LAN with ever-expanding possibilities to support new capabilities, easily and cost-effectively. For example, cameras could be added for use in video analytics or CCTV solutions, without requiring Ethernet cable or clogging the wireless spectrum with video backhaul. Nascent technologies such as Bluetooth Low Energy and ZigBee could be rolled out as needed with ease. And since our modular access points offer dual radios plus two modular USB ports, each modular access point can provide up to four different functions: client access and around-the-clock intrusion sensing on the dual integrated radios, plus two additional functions via plug-in modules. The result? Unprecedented value.

IMPROVE THE FLEXIBILTY AND RETURN ON INVESTMENT FOR YOUR WIRELESS LAN WITH OUR MODULAR ACCESS POINTS.

For more information on Zebra modular access points, please visit www.zebra.com/wlan or locate your local Zebra representative in our contacts directory at www.zebra.com/contact