WIRELESS LAN SOLUTIONS

AT-A-GLANCE

Wireless LAN Solutions

ARE YOU READY TO MOBILI ZE YOUR WORKFORCE ? UNLOCK THE FULL VALUE OF YOUR WIRELESS SOLUTIONS

Give your workers high-performance anytime access to the information they need to act as efficiently as possible with our unrivaled WLAN solutions. Our flexible portfolio lets you build a wireless network that meets the needs of your users, your business and your budget, regardless of whether you have a single small retail store or a global corporation with sites of all sizes all over the world. You get features and functionality that set the bar for WLAN infrastructure, delivering a truly wireless enterprise. And only Zebra can give you the seamless indoor and outdoor coverage you need to extend your network to literally every inch of your facility — inside your four walls, out in the yard, between buildings and in the expansive outdoor areas common in oil and gas, education and other industries.

More Capacity. More Coverage. More Resilience and More Satisfied Users.

GET THE LESS COMPLEX AND LESS EXPENSIVE WIRELESS LAN THAT GIVES YOU MORE.

When you choose Zebra you get a network that is more intelligent, more reliable, more secure and more manageable, with a reduction in infrastructure requirements and operational costs. You simply have less equipment to purchase and less equipment to manage.

MORE INTELLIGENCE

Zebra delivers a truly intelligent WLAN. With our new distributed architecture, every point in your network — every single access point and controller — is completely network aware, automatically choosing the best possible route for all wireless traffic. Network performance and the user experience are preserved — regardless of whether users are making VoWLAN calls, accessing back-end business applications or the Internet or using streaming video to watch a training presentation.

UNMATCHED RELIABILITY

You count on your wireless network to keep your business up and running — so we loaded our WLAN infrastructure with features that provide a wireless connection that is every bit as dependable as your wired connections. Our access points adapt to the ever-changing RF environment, able to identify and automatically correct network issues before they impact network performance — without administrator intervention.

UNMATCHED SECURITY

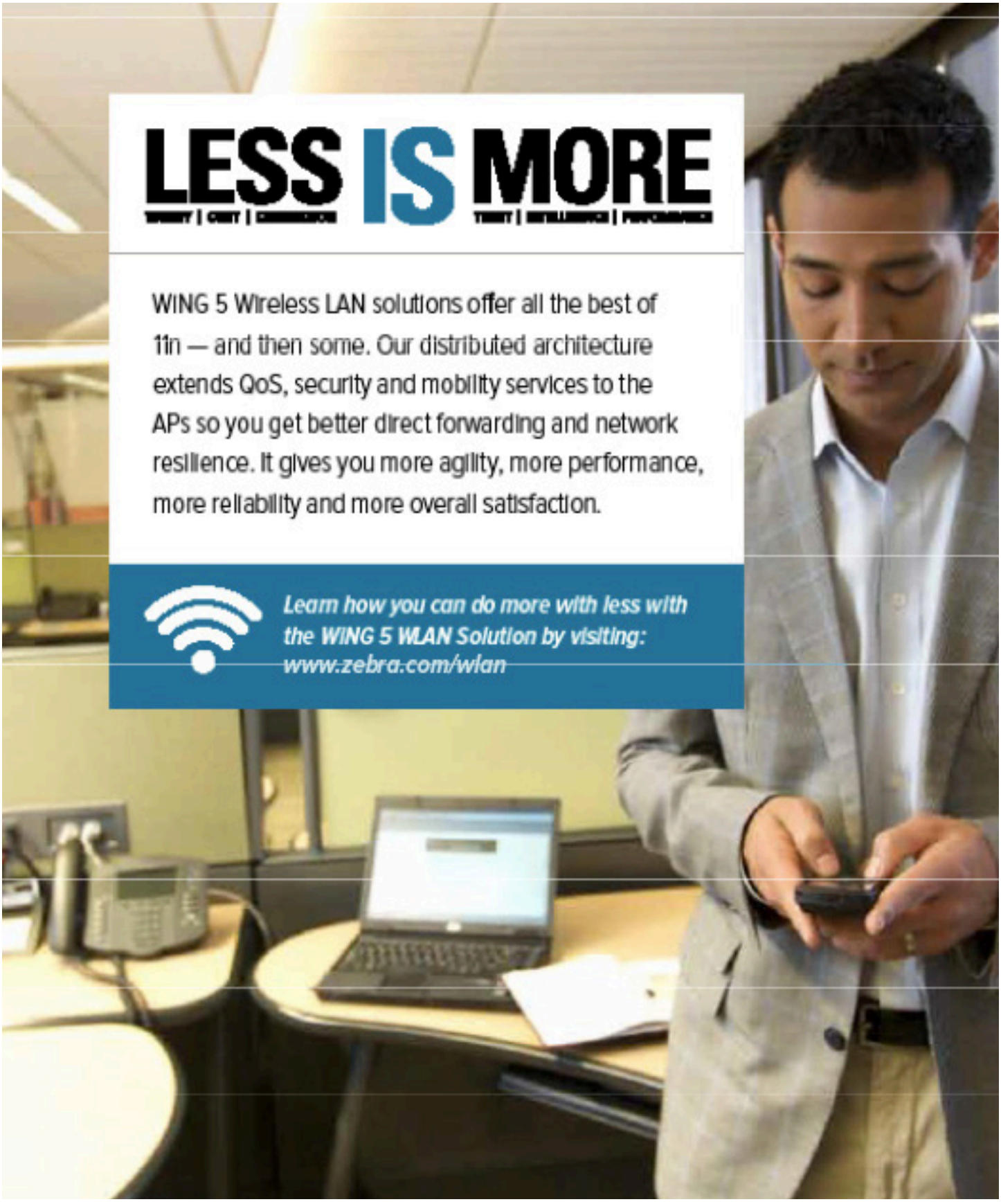
Our hardware and software security solutions work together to create a fortress around your wireless network, protecting the wired and wireless network and your data from unauthorized access. The Layer 2 firewall on our access points adds an extra layer of protection as your data travels from sender to recipient. And since our WLANs automatically detect and respond instantly to any wireless threat — from rogue devices to network vulnerabilities — security has never been easier nor compliance with government regulations more cost-effective, from HIPAA to PCI.

UNMATCHED MANAGEABILITY

While the self-healing capabilities of Zebra's adaptive wireless networks automatically spot and address many network problems before they impact service quality, other network issues do require human intervention to troubleshoot and resolve. Zebra's AirDefense Network Assurance solution allows IT to proactively and remotely optimize, identify and resolve network issues — often eliminating the need to dispatch a technician to the site. The result? Network availability and reliability with minimal management effort and cost. get more out of your Zebra mobile computers. Our WLANs work hand-in-hand with our mobile computers to provide your users with a superior wireless experience. Fast roaming keeps users connected as they move throughout your facility. And sinceour WLANs prevent the delivery of irrelevant traffic to our mobile computers, the resulting reduction in processing requirements extends battery life and improves device performance.

LOW TOTAL COST OF OWNERSHIP (TCO)

Our WLANs are designed to minimize infrastructure requirements and management time, lowering the overall cost of purchasing and managing your WLAN. With higher power and receiver sensitivity, fewer access points can now cover the same area. Since a hub and spoke architecture is no longer required, as controller-like services are available at your remote branches / distributed locations, your WAN utilization costs are low in addition to required hardware at each facility – which reduces your energy costs. In addition, you actually have higher wireless network capacity at the remote site with APs securely forwarding and bridging traffic with enforcement of all policies at the network edge for a fully site-survivable network. In addition, we give you more license-free native features, from RADIUS servers and firewalls to wireless IPS, VPN gateways, DHCP servers, and zero port controllers for redundancy that do not require 2x licences to be purchased unline other solutions in the marketplace. No need to purchase additional equipment that must be integrated into your network and managed separately, further reducing capital and operational network costs.[1]


LESS IS MORE
WING 5 Wireless LAN solutions offer all the best of 11n — and then some. Our distributed architecture extends QoS, security and mobility services to the APs so you get better direct forwarding and network resilience. It gives you more agility, more performance, more reliability and more overall satisfaction.
Learn how you can do more with less with the WING 5 WLAN Solution by visiting: www.zebra.com/wlan

The Zebra WLAN portfolio

Zebra's comprehensive integrated portfolio of wireless products meets virtually any wireless networking need. Unlike typical point solutions, our WLAN product line offers everything required to create, install and easily manage an end-to-end wireless enterprise. And our entire portfolio offers the proven interoperability, simplifying and reducing the cost of your mobility deployments — from our access points and controllers to mesh, integrated services platforms, wireless IPS and Voice-over-WLAN solutions.

Everything you need — hardware, software, services and a world of expertise

WIRELESS CONTROLLERS

Our controllers deliver the most features for one price, including wireless network control, scalability, security, and reliability. The result is a flexible, cost-effective wireless solution that meets the needs of any size organization — from small offices to the largest distributed global enterprises.

INTEGRATED SERVICES PLATFORMS

Are you prepared to manage the explosion of wireless devices and mobile applications in your enterprise? Our integrated services platforms provide one management interface through which your entire distributed network can be controlled – for both your access points and guest access services, mobile applications and the mobile devices in the hands of your workforce.

INDOOR AND OUTDOOR WIRELESS ACCESS POINTS

No matter where you need wireless connectivity, we have an access point ready to do the job — from indoor carpeted spaces to dusty warehouses and even outdoors in campus-style environments. Our access points can operate in standalone or adopted modes, providing maximum networking flexibility. With our powerful adaptive technology, Zebra wireless controllers can adopt Zebra access points, providing the best of both worlds — the ease of centralized and remote management as well as the ability to deliver uninterrupted wireless service in the event of a WAN link outage.

A POWERFUL WIRELESS NETWORK MANAGEMENT TOOLKIT

We offer all the tools required to better plan and manage every aspect of your WLAN. LANPlanner is a powerful WLAN planning tool that allows you to easily architect a high-performance and highly-reliable WLAN. Zebra's AirDefense Services Platform (ADSP) provides a suite of tools that allows you to easily monitor, manage and secure all your WLAN infrastructure — including Zebra and non-Zebra equipment.

WORLD-CLASS SERVICE AND SUPPORT

Our engineers have installed WLANs in practically every industry and in businesses of all sizes. Our comprehensive services allow you to put this vast storehouse of experience to work for you. We can help you with any aspect of your WLAN implementation — from planning and integration to post-deployment support.

INTEGRATED SERVICES PLATFORMS

	NX 9500 INTEGRATED SERVICES PLATFORM	NX 4500 / 6500 INTEGRATED SERVICES PLATFORM
Product Overview	The NX 9500 is a single appliance providing one management interface through which your entire distributed network can be controlled — for both your access points and guest access services, mobile applications and the mobile devices in the hands of your workforce. The NX 9500 feature set includes centralized management of initial and ongoing configurations, security policies, remote troubleshooting, hotspot management and DHCP, Radius AAA and FTP services.	The NX 4500/6500 is a single flexible appliance that delivers rich, secure and high-performance voice and data services to branch locations. The set of standard services includes a router, firewall, Virtual Private Network (VPN), AAA Radius server to authenticate users, as well as a DHCP/DNS server delivering wireless services with trusted always-on wired network reliability. Branch IP Communications services enable cost effective telephony services on wired SIP desksets and wireless voice-enabled devices. You can also seamlessly integrate additional optional Zebra services into your existing mobility solution for extraordinary workforce collaboration, regardless of whether workers are inside or outside the facility. Services include enterprise push-to-talk (PTT) and texting between Zebra mobile computers, business Voice over WLAN smartphones, two-way radios and third-party smartphones — including the iPhone® and Droid™. And these services can be delivered over Wi-Fi or cellular networks.
General Characteristics	• Complete visibility of the entire distributed deployment One point of configuration; WiNG 5 provides comprehensive management and multiple points of control for up to 10,240 multi-vendor network elements; provides granular control plane management • Guest access analytics Analytics and reports on device-user browsing behavior provide insight into the usage of guest access network; usage data includes date and duration of use, device and user profile and websites visited • BYOD services Fingerprinting, analytics and identity management help manage and secure user-owned devices with differential access and based on user roles and different devices per user on the network, along with time based statistics on user behavior on the hotspot.	• Unified Management at Branch Manage all branch services from a single interface • Converged Wired and Wireless Networking WiNG 5 Wireless Controller; 24-port PoE Ethernet switch; WAN Router (T1 and Ethernet interfaces); Firewall and VPN; AAA services; DHCP/DNS; Wireless IDS/IPS • Centralized Management and Control by NX 9500 Entire network of distributed branch sites can be controlled and managed at the NOC so IT resources can be minimized. The NX Platform can also deliver services directly from the NOC/ private cloud and provide resiliency for local branch services
Distributes Intelligence		
QoS	Voice prioritization; wireless bandwidth management and user bandwidth contracts; WMM AC; SpectraLink voice prioritization; SIP CAC	
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference	
WiNG 5 AP with Site Survivability and Mesh	Zebra's independent access points (all four-digit) can be deployed at remote locations yet centrally managed in the Network Operations Center (NOC) by any of the WiNG controllers. Access points are site survivable and deliver secure uninterrupted wireless service — providing unparalleled resiliency to survive a WAN link outage, with advanced RF and Networking Services with WiNG v5.	
SMART BAND Control	Allows for load balancing of clients between bands, and between channels in the congested bands for optimal RF Performance	
Handles More		
Authentication	Access Control Lists (ACLS); pre-shared keys (PSK); 802.1x/EAP — transport layer security (TLS), tunneled transport layer security (TTLS), protected EAP (PEAP); Kerberos Integrated AAA/RADIUS Server with native support for EAP-TTLS, EAP-PEAP (includes a built in user name/password database; supports LDAP), and EAP-SIM	
Encryption	WEP 40/128 (RC4), KeyGuard, WPA—TKIP, WPA2-CCMP (AES), WPA2-TKIP	
IDS/IPS	Multi-mode rogue AP detection, rogue AP containment, 802.11n rogue detection, ad-hoc network detection, Denial of Service protection against wireless attacks, client blacklisting, EAP Flood, Fake AP Flood, ID theft, ad-hoc advertising authorized SSID	
Keeps Running		
Guest Access	User redirected to Captive Portal, Single Sign In; On-Boarded for future sessions and no need to re-login; Analytics	
24x7 Monitoring for Premium Security	Secure guest access on AP 621, AP 622, AP 650, AP 6511, AP 6521, AP 6522, AP 6532, AP 7131, AP 7161 and AP 7181	
IPSec VPN	Supports DES, 3DES and AES-128 and AES-256 encryption, with site-to-site and client-to-site VPN capabilities	
NAC Support	NAC support with third party systems from Microsoft®, Symantec®, Bradford, Infoexpress, Forescout, and Packetfence	
Recovers Quickly		
Role-based Wired/Wireless Firewall	Role-based wired/wireless firewall with stateful inspection for wired and wireless traffic protects against IP spoofing and ARP cache poisoning	
Geofencing	Location based access provides physical security as an additional parameter to network security	
Zebra Value Adds	Pre-emptive roaming; fast roaming with opportunistic channel scan; load balancing; Power Save Polling (PSP); Virtual AP and location-based access control	
Gives Flexibility		
Integrated Network Services	PoE switching, AAA server, DHCP server, NAT, wired and wireless firewall, intrusion and rogue protection, and VPN — all built-in at no additional cost	
Ease of Installation	Plug-and-play deployments for L2 and L3 saves installation time and ongoing maintenance costs	
Services		
Warranty	Hardware — 1 year; Software — 90 days	
Recommended Services	Service from the Start Advance Exchange Support; Wireless Infrastructure Device Software Support	

WIRELESS CONTROLLERS

	RFS 7000 WIRELESS SERVICES CONTROLLER	RFS 6000 WIRELESS SERVICES CONTROLLER	RFS 4000 WIRELESS SERVICES CONTROLLER
Product Overview	The RFS 7000 delivers unmatched performance, security, resiliency, scalability and manageability for the large wireless enterprise/campus/warehouse, providing a single platform capable of delivering carrier-grade wireless voice and data for 16,000 users. A FIPS 140-2 certified version of this product is also available (RFS7000-GR)*.	The RFS 6000 provides a single platform capable of delivering carrier-grade wireless voice and data inside and outside the enterprise for medium to large organizations with 4,000 users.	The Zebra RFS 4000 802.11n wireless services controller features Zebra's next generation Wi-NG operating system and integrates wired, wireless and security networking features into a compact and easy-to-use form factor, enabling organizations to create survivable branch networks using a single platform. The RFS 4000 is also available with an integrated dual radio dual band 802.11n access point that features extensive coverage and performance — meeting all the needs of SME/SMB.
General Characteristics	• Supports up to 1,024 802.11a/b/g/n access points per controller • Supports up to 256 WLANs • PCI/HIPAA/SOX capable out-of-the-box WiNG 5 • Distrubuted Architecture	• Supports up to 256 802.11a/b/g/n access points per controller • Supports up to 32 WLANs • ExpressCardTM slot for redundant broadband wireless connection & PoE+ Switching • PCI/HIPAA/SOX capable out-of-the-box	• Supports up to 36 802.11a/b/g/n access points per controller • Supports 24 WLANs with 500 users per controller • Redundancy: Active:Standby; Active:Active and N+1 redundancy with access point and MU load balancing; Critical resource monitoring • 5 POE Plus (802.3at) switch ports,1 Express Card, 1 USB • Supports PCI,HIPAA, and SOX right out of the box
Distributes Intelligence			
QoS	Voice prioritization; wireless bandwidth management and user bandwidth contracts; WMM AC; SpectraLink voice prioritization; SIP CAC		
High Availability Networks and Clustering	Supports active-active and active-standby configurations. Ensures high availability networks with single console management that provides multiple levels of redundancy, increased scalability and failover capabilities. Flexible license sharing enables HA deployment of cost-effective networks.		
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference		
WAN Backhaul		3G cellular backhaul for primary access or failover	
WiNG 5 AP with Site Survivability and Mesh	Zebra's adaptive MESH access points (AP51X1** a/b/g and AP 7131 a/b/g/n) can be deployed at remote locations yet centrally managed in the Network Operations Center (NOC) by any of the WiNG controllers. Remote Site Survivability (RSS) mesh access points deliver secure uninterrupted wireless service — providing unparalleled resiliency to survive a WAN link outage, with advanced RF and Networking Services with WiNG v5.		
Handles More			
Authentication	Access Control Lists (ACLS); pre-shared keys (PSK); 802.1x/EAP—transport layer security (TLS), tunneled transport layer security (TTLS), protected EAP (PEAP); Integrated AAA/RADIUS server with native support for EAP-TTLS, EAP-PEAP (includes a built in user name/password database; supports LDAP) and EAP-SIM**		
Encryption	EAP (PEAP); Integrated AAA/RADIUS server with native support for EAP-TTLS, EAP-PEAP (includes a built in user name/password database;		
Guest Access	Supports LDAP) and EAP-SIM**		
Keeps Running			
24x7 Monitoring for Premium Security	Supported on the AP 621, AP 622, AP 650, AP 6511, AP 6521, AP 6522, AP 6532, and AP 7131		
IPSec VPN	Supports DES, 3DES, AES-128 and AES-256 encryption; supports site-to-site and client-to-site VPN capabilities		
NAC Support	NAC support with third party systems from Microsoft®, Symantec®, Bradford, Infoexpress, Forescout, and Packetfence		
Recovers Quickly			
Role-based Wired/Wireless Firewall	Identity based stateful L2-L7 firewall provides protection against DHCP spoofing and ARP cache poisoning		
Geofencing	Location based access provides physical security as an additional parameter to network security		
Zebra Value Adds	Pre-emptive roaming; fast roaming with opportunistic channel scan; load balancing; Power Save Polling (PSP); virtual AP and location-based access control		
Gives Flexibility			
Integrated Network Services	PoE switching***, AAA server, DHCP server, Advanced Wireless Intrusion Protection, VPN, NAT, wired and wireless firewall		
Ease of Installation	Plug-and-play deployments with NO pre-staging installation time and ongoing maintenance costs		
SMART License Sharing	Clustering capabilities allow for virtual license sharing among controllers to provide highly scalable high availability networks		
Services			
Warranty	Hardware — 1 year; Software — 90 days		
Recommended Services	Service from the Start Advance Exchange Support; Wireless Infrastructure Device Software Support		

DEPENDENT ACCESS POINTS

	AP 650 ACCESS POINT	AP 621 / AP 622 ACCESS POINT
Product Overview	The AP 650 is a dependent multi-purpose 802.11a/b/g/n access point designed to lower thecost of deploying and operating a secure, reliable 802.11n wireless LAN (WLAN) in branch offices or headquarters facilities. Either of the two radios can be used as a sensor for dual-band security or network troubleshooting, either fixed or repurposed in real time.	The AP 621 and AP 622 are dependent multi-purpose access points designed to lower the cost of deploying and operating a secure, reliable 802.11n wireless LAN (WLAN) in branch offices or headquarters facilities. These access points feature a 2x2:2 MIMO radio, superior receive and transmit sensitivity, and a GigE WAN uplink port. The AP 621 and AP 622 are easily managed remotely by a Zebra RFS 7000 or other wireless controllers. The embedded WiNG 5 intelligence ensures that traffic is locally forwarded along the most efficient paths without sacrificing quality of service and security implemented at the access point itself. Perfect cost effective solution for providing data connectivity, Mesh and/or IPS sensing. The AP 621 and AP 622 can also be used as a sensor for both 2.4 Ghz and 5.0 Ghz frequency bands for multi-band intrusion protection or troubleshooting.
General Specifications	• 802.11a/b/g/n; DSSS and OFDM • Dual or single radio options • 802.3af Power-over-Ethernet (PoE) • Plenum-rated housing option • 32°F to 122° F/0°C to 50° C • Wall, above drop and under-ceiling • Powerful 24 dBm radios, 2x3:2 MIMO • Use any radio as dual-band sensor • Dual-band (band unlocked) radios for concurrent 2.4 and 5.0 gHz sensing	• 802.11a/b/g/n; DSSS and OFDM • AP 621: Dual-band single radio option • AP 622: Dual radio • 802.3af Power-over-Ethernet (PoE) • Plenum-rated housing option • 32°F to 104° F/0°C to 40° C • Wall, above drop and under-ceiling • Powerful 24 dBm radios, 2X2:2 MIMO • Dual-band (band unlocked) radio for concurrent 2.4 and 5.0 gHz sensing
Distributes Intelligence		
Adaptive AP with Site Survivability (With Local Controller)	Full featured access point for local or remote edge deployments is centrally managed by controller on dependent APs with Remote Site Survivability (RSS) options and full network and security services at the edge	
Failover Adaptive Network Services at the Edge	Layer 3 routing; 802.1Q VLAN trunking and tagging; AAA Server; DHCP services; Dyn DNS; PPPoE	
QoS	Voice prioritization; WMM; WMM uAPSD; 802.1p; DiffServ/TOS	
Mesh Networking (Dual Radio)	Stand-alone MESH; adaptive MESH; self-healing MESH failover; layer 2 wired MESH failover	
Handles More		
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference	
SMART BAND Control	Allows for load balancing of clients between bands, and between channels in the congested bands for optimal RF performance	
Keeps Running		
24x7 Wireless IPS Sensing	Supports gap-free detection and security with 24x7 dual band WIPS sensing when used as a sensor	Supports gap-free detection and security with 24x7 dual band WIPS sensing and concurrent client access
Authentication	Pre-shared keys (PSK); 802.1x/EAP – transport layer security (TLS); tunneled transport layer security (TTLS); protected EAP (PEAP)	
Encryption	WEP 40M28 (RC4); WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2	
Guest Access	Secure Guest Access with onboard or external RADIUS authentication	
Recovers Quickly		
IPSec VPN	Supports DES, 3DES, AES-128 and AES-256 encryptions; supports site-to-site VPN capabilities	
Stateful Firewall	Stateful Layer 3 packet inspection; Stateful L2-L7 wireless firewall available in Adaptive AP mode with Wi-NG platforms; Access Control Lists	
PCI	Out-of-the-box PCI capable	
Gives Flexibility		
Integrated Network Services w/ Network-in-a-Box	Routing, security and network services integration eliminates point products and appliances, saving significant capex and opex	
802.3af Dual Radio High Performance	Eliminates costly upgrades to PoE infrastructure	
Mesh Networking with MeshConnex	Eliminates expensive PoE infrastructure in greenfield deployments and cost of cabling in hard-to-cable areas	
Easy to Provision and Deploy	Takes up to 75% less time to configure than comparable enterprise AP offerings in the market, reducing deployment and management overhead	
Services		
Warranty	Hardware — Limited Lifetime; Software — 90 days	
Recommended Services	Software Only Support; Wireless Infrastructure Device Software Support; Spares Pool	

WALLPLATE ACCESS POINTS

	AP 6511 802.11N WALLPLATE ACCESS POINT
Product Overview	Designed to 'hide in sight', the AP 6511 is a sleek and slim access point that can be installed in minutes over any category 5 or 6 structured wiring plate. It features an 802.11n radio, plus the modularity to easily snap-on three to four additional switched Ethernet ports or use the keystone port to snap-on any standard connector such as RJ11, RJ45, COAX f-connector and more. Designed to meet the wireless and wired needs of multi-dwelling units such as hotels, long-term healthcare, and dormitories. Native controller software enables one AP to provide control for 25 AP 6511s. AP 6511s can be adopted and controlled by a Zebra RFS controller. The AP 6511 packs enterprise wireless features and modular add-ons into a deceptively simple design.
General Specifications	• 802.11a/b/g/n; DSSS and OFDM • Single radio (Field select 2.4, 5.0 or dual-band sensor) • 802.3af Power-over-Ethernet (PoE) • Single hop mesh (available post Rev-A) • Adaptive AP support (available post Rev-A) • 32°F to 104°F/0°C to 40°C • Wall plate and wall mount • 20dBm radio, 2x2:2 MIMO • Integrated virtual controller support • 10/100 Mbps Ethernet Support
Distributes Intelligence	
Adaptive AP with Site Survivability	Full featured access point for local or remote edge deployments is centrally managed by controller with Remote Site Survivability (RSS) options and full network and security services at the edge; post Rev-A
Failover Adaptive Network Services at the Edge	L3 routing; 802.1Q VLAN trunk and tagging; DHCP server
QoS	Voice prioritization; WMM; WMM uAPSD; 802.1p; DiffServ/TOS
Mesh Networking	Standalone and adaptive Mesh available post Rev-A (single-hop Mesh)
Handles More	
WAN Connectivity/Failover	Single 10/100Mb uplink Ethernet port
3G WAN Backhaul	None
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference
SMART BAND Control	Allows for load balancing of clients between bands, and between channels in the congested bands for optimal RF performance
Keeps Running	
24x7 Wireless IPS Sensing	Can be adopted for opportunistic sensing or dedicated 24x7 dual-band sensing
Authentication	Pre-shared keys (PSK); 802.1x/EAP – transport layer security (TLS); tunneled transport layer security (TTLS); protected EAP (PEAP)
Recovers Quickly	
Encryption	WEP 40M28 (RC4); WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2
Guest Access	802.1x authentication on all wireless and wired interfaces via external RADIUS or Zebra RF Controller
IPSec VPN	Supports DES, 3DES, AES-128 and AES-256 encryption; supports site-to-site VPN capabilities
Stateful Firewall	Layer 2 and 3 packet inspection; Access Control Lists
PCI	Out-of-the-box PCI capable
Gives Flexibility	
Integrated Network Services w/ Networkin-a-Box	Basic routing, security and network services. Connect to RF Controller for additional features and more granular control
802.3af Dual Radio High Performance	N/A
Mesh Networking	Single hop Mesh
Easy to Provision and Deploy	Designed for rapid installation and fast configuration. Significant cost savings in deployment and operations
Services	
Warranty	Hardware — Limited Lifetime; Software — 90 days
Recommended Services	Software Only Support; Wireless Infrastructure Device Software Support; Spares Pool

INDEPENDENT ACCESS POINTS

	AP 6521 / AP 6522 ACCESS POINT	AP 6532 ACCESS POINT
Product Overview	The AP 6521 and AP 6522 are multipurpose access points designed to lower the cost of deploying and operating a secure, reliable 802.11n wireless LAN (WLAN) in branch offices or headquarters facilities. These access points feature a MIMO radio, superior receive and transmit sensitivity, and a GigE WAN uplink port. The embedded WiNG 5 intelligence ensures that traffic is locally forwarded along the most efficient paths without sacrificing quality of service and security implemented at the access point itself. The AP 6521 and AP 6522 can also be used as a sensor for both 2.4 Ghz and 5.0 Ghz frequency bands for multi-band intrusion protection or troubleshooting.	The AP 6532 is a performance-focused 802.11n access point that offers higher throughput along with WiNG 5's direct forwarding, security, QoS services and site survivability. The second radio can be used for access or as a sensor for troubleshooting and security. With it's WiNG 5 intelligence, this access point can serve as a virtual controller and coordinate the operation of up to 23 neighboring access points.
General Specifications	• 802.11a/b/g/n; DSSS and OFDM • AP 6521: Dual-band single radio option • AP 6522: Dual radio • 802.3af Power over Ethernet (PoE) • MESH networking (dual radio) • Site survivable • Plenum-rated housing option • Up to 127 devices supported • 32°F to 104° F/0°C to 40° C • Wall; above drop and under-ceiling • Dual-band (band unlocked) radio for 2.4 and 5.0 gHz sensing • Powerful 24 dBm radios, 2X2:2 MIMO • Integrated virtual controller support • Console port • Dual WAN ports	• 802.11a/b/g/n; DSSS and OFDM • Dual radio • 802.3af Power over Ethernet (PoE) • MESH networking (dual radio) • Site survivable • Plenum-rated housing option • Up to 127 devices supported • 32°F to 122° F/0°C to 50° C • Wall; above drop and under-ceiling • Use either radio as dual-band sensor • Dual-band (band unlocked) radios for concurrent 2.4 and 5.0 gHz sensing • Powerful 24dBm radios, 2X3:2 MIMO • Integrated virtual controller support
Distributes Intelligence		
Standalone or Adaptive AP with Site\ Survivability	Full featured access point for local or remote edge deployments is centrally managed by controller with Remote Site Survivability (RSS) options and full network and security services at the edge without a controller for up to 64 APs	
Failover Adaptive Network Services at the Edge	Layer 3 routing; 802.1Q VLAN trunking and tagging; AAA Server; DHCP services; Dyn DNS; PPPoE	
QoS	Voice prioritization; WMM; WMM uAPSD; 802.1p; DiffServ/TOS	
Mesh Networking (Dual Radio)	Stand-alone MESH; adaptive MESH; self-healing MESH failover; layer 2 wired MESH failover	
Handles More		
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference	
SMART BAND Control	Allows for load balancing of clients between bands, and between channels in the congested bands for optimal RF performance	
Keeps Running		
24x7 Wireless IPS Sensing	Supports gap-free detection and security with 24x7 dual band WIPS sensing when used as a sensor	Supports gap-free detection and security with 24x7 dual band WIPS sensing and concurrent client access
Authentication	Pre-shared keys (PSK); 802.1x/EAP – transport layer security (TLS); tunneled transport layer security (TTLS); protected EAP (PEAP)	
Encryption	WEP 40M28 (RC4); WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2	
Recovers Quickly		
Guest Access	Secure Guest Access with onboard or external RADIUS authentication	
IPSec VPN	Supports DES, 3DES, AES-128 and AES-256 encryptions; supports site-to-site VPN capabilities	
Stateful Firewall	Stateful Layer 3 packet inspection; Stateful L2-L7 wireless firewall available in Adaptive AP mode with Wi-NG platforms; Access Control Lists	
PCI	Out-of-the-box PCI capable	
Gives Flexibility		
Integrated Network Services w/Networkin- a-Box	Routing, security and network services integration eliminates point products and appliances, saving significant capex and opex	
802.3af Dual Radio High Performance	Eliminates costly upgrades to PoE infrastructure	
Mesh Networking with MeshConnex	Eliminates expensive PoE infrastructure in greenfield deployments and cost of cabling in hard-to-cable areas	
Easy to Provision and Deploy	Takes up to 75% less time to configure than comparable enterprise AP offerings in the market, reducing deployment and management overhead	
Services		
Warranty	Hardware — Limited Lifetime; Software — 90 days	
Recommended Services	Software Only Support; Wireless Infrastructure Device Software Support; Spares Pool	

INDEPENDENT ACCESS POINTS (continued)

	AP 7131 ADAPTIVE ACCESS POINT	AP 8132 MODULAR ACCESS POINT
Product Overview	The AP 7131 is the industry's first high performance 802.11a/b/g/n adaptive access point that cost- effectively delivers secure and resilient network services and enables high performance mobility applications in a wireless enterprise. The AP 7131 in a stand-alone or switch-managed adaptive mode provides 24x7 dedicated dual-band wireless IPS sensing, high speed client access for data, voice and video and mesh networking. This integrated network-in-a-box delivers gap-free security services, unmatched reliability and high performance at the industry's lowest TCO. The AP 7131 is the only tri-radio solution that provides dual-band client access and wireless IPS sensing; all at the same time. In addition, the only 11n access point in the market that can provide WAN backhaul over 3G.	The AP 8132 is the industry's first modular access point, where its innovative design lets you simply snap on modules to extend functionality beyond that of traditonal access points. The AP 8132 is a 3-spatial stream access point with two radios, delivering data rates of up to 450 Mbps per radio over WiNG 5 architecture. Whether you're using voice, data, or bandwidth-intensive applications like HD video, you can be confident your network can handle the traffic and provide the optimum user experience.
General Specifications	• 802.11a/b/g/n; DSSS and OFDM • Tri, dual and single radio options • 3x3:2 MIMO • 802.3af and 802.3at Power over Ethernet (PoE) • 3G WAN backhaul option • MESH networking • Remote site survivability • Plenum-rated housing option • Up to 127 devices supported • 32°F to 122°F/0°C to 50°C • Wall; above drop and under-ceiling mounting options • Use any radio as dual-band sensor (under the Tri, dual, or single radio options) • Dual-band (band unlocked) radios for concurrent 2.4 and 5.0 gHz sensing • Powerful 23dBm (AP 7131N) and 20dBm (AP 7131) radios • Standalone, or adopted to a Controller	• 3x3:3 MIMO with 3 spatial streams • 20 MHz and 40 MHz channels • 450 Mbps data rates per radio • Packet Aggretation (AMSDU, AMPDU) • Reduced Interface Spacing • 802.11 DFS • Plenum-rated housing option • MIMO Power Save (Static and Dynamic) • Advanced forward error correction coding: STBC, LDPC • 32°F to 122°F/0°C to 50°C • Dual-band 2x2 USB radio (to be released soon) on expansion port for tri-radio operation • Smart antenna features with transmit beamforming • Standalone, or adopted to a Controller
Distributes Intelligence		
Adaptive AP with Site Survivability	Full featured access point for local or remote edge deployments is centrally managed by controller with Remote Site Survivability (RSS) options and full network and security services at the edge without a controller for up to 64 APs	
Failover Adaptive Network Services at the Edge	Layer 3 routing; 802.1Q VLAN trunking and tagging; AAA Server; DHCP services; Dyn DNS; PPPoE	
QoS	Voice prioritization; WMM; WMM uAPSD; 802.1p; DiffServ/TOS	
Mesh Networking with MeshConnex	Stand-alone MESH; adaptive MESH; self-healing MESH failover; layer 2 wired MESH failover	
Handles More		
WAN Connectivity/Failover	Dual Gigabit Ethernet for LAN/WAN connectivity and WAN failover options	
3G WAN Backhaul	3G backhaul or failover	
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference	
SMART BAND Control	Allows for load balancing of clients between bands, and between channels in the congested bands for optimal RF performance	
Keeps Running		
24x7 Wireless IPS Sensing	Supports gap-free detection and security with 24x7 dual band WIPS sensing and concurrent client access on both bands	
Authentication	Pre-shared keys (PSK); 802.1x/EAP – transport layer security (TLS); tunneled transport layer security (TTLS); protected EAP (PEAP)	
Recovers Quickly		
Encryption	WEP 40M28 (RC4); WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2	
Guest Access	Secure Guest Access with onboard or external RADIUS authentication	
IPSec VPN	Supports DES, 3DES, AES-128 and AES-256 encryption; supports site-to-site VPN capabilities	
Stateful Firewall	Stateful Layer 3 packet inspection; Stateful L2-L7 wireless firewall available in Adaptive AP mode with Wi-NG platforms; Access Control Lists	
PCI	Out-of-the-box PCI capable	
Gives Flexibility		
Integrated Network Services w/ Networkin-a-Box	Routing, security and network services integration eliminates point products and appliances, saving significant capex and opex	
802.3af Dual Radio High Performance	Eliminates costly upgrades to PoE infrastructure (single and dual radios only)	
Mesh Networking	Eliminates expensive PoE infrastructure in greenfield deployments and cost of cabling in hard-to-cable areas	
Easy to Provision and Deploy	Takes up to 75% less time to configure than comparable enterprise AP offerings in the market, reducing deployment and management overhead	
Single Platform with Adaptive ID for all environments	Industrial grade design with adaptive facade provides one platform with a single firmware to manage for all environments (carpeted or rugged) and all scenarios (campus, edge, remote deployments in standalone or adaptive mode), reducing complexity and overhead of deployment	
Services		
Warranty	Hardware — Limited Lifetime; Software — 90 days	
Recommended Services	Software Only Support; Wireless Infrastructure Device Software Support; Spares Pool	

INDEPENDENT ACCESS POINTS (continued)

	AP 7161 ACCESS POINT	AP 7181 MESH WIDE AREA NETWORK ACCESS POINT
Product Overview	The AP 7161, delivers ruggedized outdoor performance and the ability to defend your perimeters from intrusion. AP7161 brings together the latest in 802.11n 3x3 MiMO tri-radio design with 24x7 Intrusion protection system AirDefense both in software and dedicated sensor radio support. The AP 7161 has been optimized with the Zebra WiNG 5 platform to provide leading capacity, performance, and design and is ideal for industrial and enterprise campus, video surveillance, public safety, and smartgrid utility deployments. Runs on WiNG.	The AP 7181 is a high performance Mesh outdoor 802.11n wide area access point. It serves the needs of municipalities, enterprises and public safety, offering superior network capacity with a mesh data rate of 300 Mbps. Zebra's ADEPT (ADvanced Element Panel Technology) antenna system, developed exclusively for the AP 7181, provides an integrated MIMO (Multiple Input, Multiple Output) and software adjustable panel antenna system that features dual polarization and avoids notching and shadowing coverage problems associated with multi-stick solutions. The AP 7181 works with the Zebra WLAN 802.11n access point portfolio to provide seamless indoor/outdoor coverage including roaming and MESH. Runs on WiNG.
General Specifications	• 802.11a/b/g/n OFDM, 802.11b - DSS • Single, dual and tri-radio options • Integrated 802.3af Power Over Ethernet (PoE) out • Integrated virtual controller support • Mesh networking • IP67 rated, corrosion resistant enclosure • ASTM B117 salt, fog, and rust resistance and wind survivability> 160 mph • Operating: -40°F to 158°F/-40°C to 70°C • Storage: -40°F to 185°F/-40°C to 85°C • Operating Humidity: 5 to 100 % RH non-condensing • Maximum Transmit Power for 802.11b/g/n Radio: 26 dBm EIRP (Transmit power may vary based upon the deployed country.) Adjustable in 1 dB increments • Maximum Transmit Power for 802.11a/n Radio: 25 dBm EIRP (Transmit power may vary based upon the deployed country.) Adjustable in 1 dB increments	• 802.11a/b/g/n OFDM, 802.11b - DSS • Dual radio • Integrated 802.3af Power Over Ethernet (PoE) out • Integrated virtual controller support • Mesh networking • IP67 rated, corrosion resistant enclosure • ASTM B117 salt, fog, and rust resistance and wind survivability> 160 mph • Operating: -40°F to 131°F/-40°C to 55°C • Storage: -40°F to 185°F/-40°C to 85°C • Humidity: 5 to 95 % RH non-condensing • Maximum Transmit Power for 802.11b/g/n Radio: 36 dBm EIRP (Transmit power may vary based upon the deployed country.) Adjustable in 1 dB increments • Maximum Transmit Power for 802.11a/n Radio 32 dBm EIRP (Transmit power may vary based upon the deployed country.) Adjustable in 1 dB increments
Distributes Intelligence		
Failover Adaptive Network Services at the Edge	Layer 3 routing; 802.1Q VLAN trunking and tagging; AAA Server; DHCP services; Dyn DNS; PPPoE	
QoS	Voice prioritization; WMM; WMM uAPSD; 802.1p; DiffServ/TOS	
Mesh Networking with MeshConnex	Stand-alone MESH; adaptive MESH; self-healing MESH failover; layer 2 wired MESH failover	
Handles More		
Best Path Selection	Automatic neighbor detection and route determination	
Session Resilience	Self-healing enabled by dynamic path selection	
SMART RF	Self optimizing: dynamically tunes channels and power to eliminate RF and spectrum interference	
Keeps Running		
SMART BAND Control	Allows for load balancing of clients between bands, and between channels in the congested bands for optimal RF performance	
Recovers Quickly		
Client Security	WPA, WPA2-PSK, WEP, 802.11i, RADIUS, 802.1X (includes EAP-TLS, EAP-TTLS)	
Encryption	WEP, AES-CCM, TKIP	
Intra-Mesh Encryption	Secure Mesh with AES	
Authentication	802.1x (Infrastructure/Client) and MAC address hardware authentication	
Gives Flexibility		
Integrated Network Services w/ Networkin-a-Box	The AP 7161 has an Integrated Wireless IPS sensor option allowing enterprises to deploy the most robust solution while saving money – the cost to purchase, deploy and manage a dedicated sensor is eliminated.	The electronic down-tilt can be remotely adjusted up or down 15 degrees via the AP 7181 web console, saving the time and expense required to adjust fixed antenna beam patterns, and secure bucket trucks and technician labor to facilitate antenna replacement.
802.3af Dual Radio High Performance		
Mesh Networking		
Easy to Provision and Deploy		
Single Platform with Adaptive ID for all environments		
Services		
Warranty	Hardware — 1 year; Software — 90 days	
Recommended Services	Software Only Support; Wireless Infrastructure Device Software Support; Spares Pool	

BRIDGES

	CB 3000 WIRELESS BRIDGE
Product Overview	The CB 3000 provides robust, enterprise-class wireless connectivity for Ethernet-enabled devices such as printers, scales and point-of-sale equipment without card slots or native wireless capabilities.
WLAN	• 802.11a/b/g
Security	• WEP 40/128 • WPA and AES encryption • 802.1x support with PEAP • EAP/TLA • EAP/TTLS authentication
Features	• Work group bridge with support for up to 16 client devices • Point-of-Sale support for IBM, NEC and others • Ad hoc mode (CB 3000 to CB 3000) for easy sharing of printers and other peripherals • Embedded secure web server for anywhere, anytime management • SNMP v2 support for easy integration with standard management systems
Warranty	Hardware — 1 year; Software — 90 days
Recommended Services	Software Only Support; Wireless Infrastructure Device Software Support; Spares Pool

MULTIVENDOR MANAGEMENT FOR NETWORK, SECURITY AND ASSURANCE

Zebra's powerful set of management applications enable administrators to easily execute end-to-end design and management of wireless LANs.

Zebra LANPlanner®

Ensure that your wireless LAN is designed to deliver maximum performance and value with Zebra LANPlanner — regardless of whether you are adding a new wireless LAN, expanding an existing wireless network or need to plan your migration to an 802.11n network. This comprehensive tool enables the design and deployment of wireless networks that meet the specific capacity, reliability and performance requirements in your environment. The ability to predict and visualize the impact of construction materials, network usage and the potential impact of co-channel interference enable the rapid design of wireless networks that provide superior wireless performance, superior quality of service (QoS) — and superior total cost of ownership (TCO). Post deployment reporting enables validation that the network is performing to meet expectations.

AirDefense Services Platform

The AirDefense Services Platform (ADSP) offers seamless integration of a 24x7 Wireless Intrusion Prevention System (WIPS) with built-in compliance reporting, multi-vendor WLAN infrastructure management, as well as a full-suite of network assurance tools designed to centrally troubleshoot user connectivity issues and fix WLAN performance problems. The AirDefense Services Platform is the industry's first comprehensive service-oriented platform that can be leveraged by enterprise IT to dramatically reduce the TCO and achieve quicker ROI from their WLAN. The platform provides organizations with a cost effective and simplified way to fully customize their wireless management and monitoring solutions to meet organizational needs or industry requirements. Solutions offered under the platform include:

AirDefense Security and Compliance Solution

The AirDefense Security and Compliance solution provides complete protection against wireless threats, policy compliance monitoring, robust performance monitoring, and location tracking that can scale to the needs of large global organizations. Powered by the industry's most advanced intrusion detection system (IDS) engines, the solution allows users to identify hackers, network attacks and vulnerabilities, and instantly terminate any connection to a rogue device. The system uses collaborative intelligence with secure sensors that work in tandem with a hardened purpose-built server appliance to monitor all 802.11 (a/b/g/n) wireless traffic in real time. The innovative add-on modules integrated in the Security & Compliance Solution include:

- Wireless Intrusion Prevention — Provides comprehensive detection and prevention of wireless intrusion attempts by analyzing existing and day-zero threats in real-time against historical data. The system is able to accurately detect all wireless attacks and anomalous behavior and can automate responses to mitigate threats.
- Wireless Vulnerability Assessment — Offers patented technology that provides remote wireless security testing using AirDefense sensors. This tool circumvents the need to send personnel or consultants to remote offices or stores to manually conduct testing.
- Advanced Forensics — Stores and manages hundreds of data points for every wireless device on the network, allowing administrators to rewind and review detailed records of wireless activity that can assist in a forensic investigation.
- Mobile Workforce Protection — Protects the mobile workforce (inside or outside the corporate network) from the wireless-specific risks that could expose private data and confidential transactions. Enforces corporate polices for all types of wireless networks, including Wi-Fi, EVDO, 3G, GPRS and many more.
- Legacy Encryption Protection — Employs patented technology that provides protection for wireless infrastructure secured by legacy encryption protocols.

MULTIVENDOR MANAGEMENT FOR NETWORK, SECURITY AND ASSURANCE (continued)

AirDefense Infrastructure Management Solution

The AirDefense Infrastructure Management solution offers centralized management and control for the wireless enterprise — a single console for multi-vendor, multiarchitecture, multi-generation and multi-version WLAN management. The solution's vendor and device agnostic user interface ensures consistency in configuration, compliance with policies, while reducing device and model specific expertise required by network administrators. Instead of managing multiple systems, administrators have a centralized management console to update device configurations and firmware, monitor device status, capture faults, audit, and automatically correct device configuration issues, gather network statistics, generate trend and compliance reports, etc. The innovative add-on modules integrated in the AirDefense Network Assurance suite include:

- WLAN Management — Provides administrators with a single, centralized console for muti-vendor deployments, simplifying management and providing consistent configuration across the network. This tool will enhance the visibility and control of wireless infrastructure for organizations with diverse WLAN deployments consisting of multiple vendors and equipment models.
- Centralized Management Console — Gives administrators and IT staff a single holistic view into the wireless network. For large scale deployments which require thousands of sensors and/or tens of thousands of managed devices, the CMC provides aggregated views of the data on multiple appliances and a single point for configuration changes.

AirDefense Network Assurance Solution

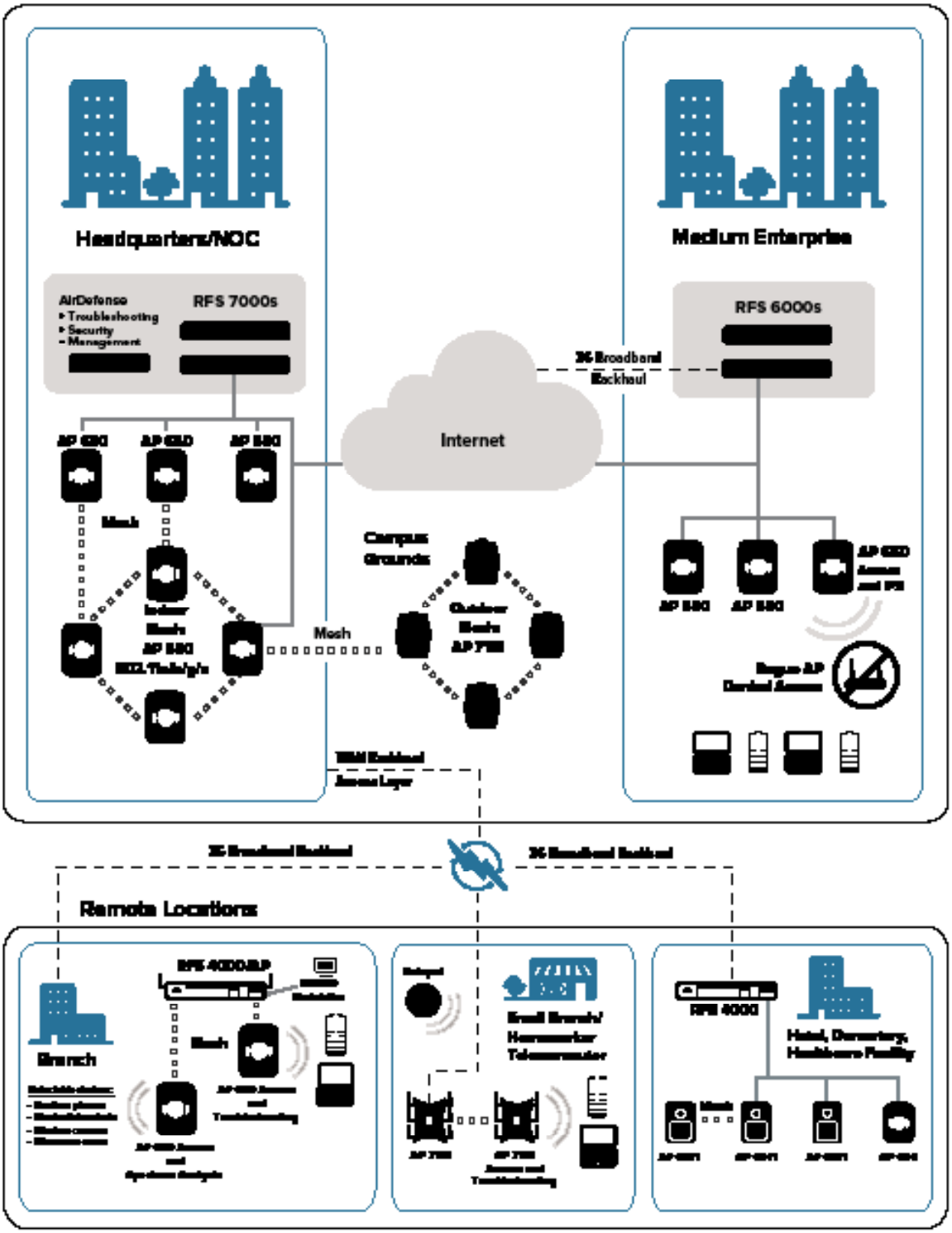
The AirDefense Network Assurance solution offers a unique set of tools for vendor agnostic, WLAN performance monitoring and remote troubleshooting of RF problems. The solution uses a dedicated network of RF sensors that continuously monitor the airwaves — intelligently scanning different frequencies over time and space to detect WLAN performance problems and policy violations. The remote sensors serve as the "eyes and ears" of the WLAN, observing network behavior 24x7 and allowing an administrator to "look into" a wireless issue from any location with network access. Zebra analyzes traffic flow to interpret WLAN performance and to identify common characteristics that may impede network performance such as interference from neighboring WLANs, channel overlap, over-utilized APs & channels, network congestion, and performance degradation. By providing a view of all WLAN traffic, the Network Assurance tools enable network administrators to remotely troubleshoot problems, identify and respond to network mis-configurations, and monitor network availability. The innovative add-on modules integrated in the AirDefense Network Assurance suite include:

- Advance Troubleshooting — Performs expert analysis of wireless connectivity issues and performs end-to-end network testing from the wireless perspective. The tool allows administrators to perform both client connectivity troubleshooting and access point connectivity testing across the entire WLAN, remotely using AirDefense sensors or Zebra access points.
- Spectrum Analysis — Offers the industry's first software only SA solution that can remotely view the physical layer of an enterprise WLAN using distributed sensors (without requiring specialized hardware). The tool allows network administrators to identify and classify possible sources of interference in the 2.4 and 5 GHz WLAN frequency bands.
- LiveRF — Provides a remote assessment of network coverage and real time visualization of the wireless network. Administrators can view live heat maps to help understand the current coverage and impact of network changes and interferences sources.
- Advanced Forensics —Gives administrators a detailed view of wireless activity. Real-time views or historical records of activity are used to remotely troubleshoot problems or proactively improve network performance

AirDefense Mobile

AirDefense Mobile is a laptop-based solution that gives enterprises a mobile product that provides a real-time snapshot of all WLAN infrastructure and activity (802.11 a/b/g/n). With over 175 alarms, Mobile provides the most advanced mobile security tool in the market today. The tool provides wireless device inventory, threat index analysis, location tracking, advanced rogue management and automated protection. A flexible notification engine ensures that critical alerts are communicated in a timely manner. Use Mobile to locate rogue access points and stations, identify mis-configured devices and to take proactive steps to close any security holes as part of a WLAN policy compliance program. Mobile also provides diagnostic tools and signal interference measurements for network troubleshooting thereby ensuring the health of the wireless LAN. AirDefense Mobile has a simple intuitive user interface and along with the Services Platform, provides a comprehensive view of the wireless network security and health. The mobile analyzer is fully integrated into the AirDefense Services Platform, enabling synchronization of authorized and rogue wireless devices for a specified location. Hence, Mobile is an essential security and network management tool that gives IT professionals a holistic view into their wireless network and provides everything they need to quickly resolve any network issues and mitigate threats.

Scalable enterprise wireless infrastructure



Zebra's family of enterprise WLAN and wireless broadband infrastructure easily scales to meet the needs of any enterprise. Extend cost-effective wireless voice and data throughout your literal and virtual environment with this diverse portfolio — from large enterprise campus environments to mid-size and smaller remote sites.

GET THE FLEXIBILITY YOU NEED TO PROVIDE A TRUE ANYWHERE AND ANYTIME WIRELESS CONNECTION

ABOUT ZEBRA

Zebra Technologies Corporation is a global leader respected for innovation and reliability. Zebra offers an extensive range of asset-tracking technologies incorporating mobile computing, data capture, barcode, wireless LAN, RFID, location systems and Zatar™, the cloud-based Internet of Things (IoT) platform. These technologies make businesses as smart and connected as the world we live in. Zebra's tracking and visibility solutions transform the physical to digital, creating the data streams businesses need in order to simplify operations, know more about their business, and empower their mobile workforce.

Zebra's products and solutions are used around the world by industries including healthcare, retail, transportation and logistics, manufacturing and sports—for a variety of applications from improving patient safety; to eliminating checkout lines with mobile devices; to streamlining warehouse operations and adding a new dimension to professional sports and entertainment with real-time information.

TO LEARN MORE ABOUT ZEBRA'S WING 5 WLAN SOLUTIONS, VISIT WWW.ZEBRA.COM/WING5

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