



Fusion Wireless LAN Solution for SMBs

Data Sheet

U4EA Technologies' Fusion 300 and Fusion 50 Provide the Best Value in Wi-Fi for Small to Medium Businesses (SMBs)

The Fusion 300 is the ideal WLAN Controller for next generation Wi-Fi networks for the small to medium sized business (SMB), providing an unmatched voice and data mobility solution.

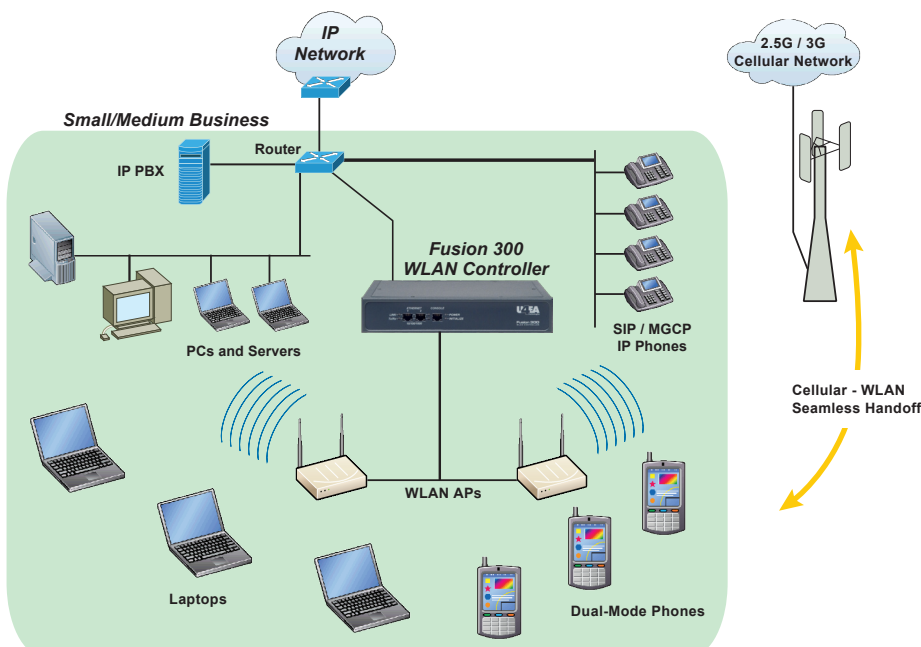
The Fusion 300 is easy to deploy and manage, is 802.11n ready, provides enterprise-grade security, and provides toll-quality voice and seamless roaming for Wi-Fi capable phones.

The solution consists of two main components: the Fusion 300 Wireless LAN Controller and Fusion 50 Access Points (APs), which combine to allow the fastest and most cost effective entry to the rapidly growing Wi-Fi mobility market.



The Fusion 300 is optimized for environments that may have limited in-house IT or wireless expertise and scales seamlessly from a few users up to 250 users. EasyPoint™ provides plug-and-play set-up, usually within 15 minutes, and automatic RF optimization. Clarion™ Voice provides out-of-the-box support for toll-quality voice and fast, seamless roaming.

The Fusion 300 WLAN Controller Integrates Seamlessly into Any SMB LAN



Product Highlights

Unified Communications Support

- Interoperable with U4EA's Fusion Multi-Service Business Gateways (MSBGs)
- Fixed Mobile Convergence (FMC) for voice, video, and data
- Best end-to-end quality of experience with U4EA's patented GoS™ and Clarion™ Voice

EasyPoint Makes It Simple

- Simple setup – generally within 15 minutes
- Template-driven administration
- Automatic RF optimization
- Automatic channel selection and power level for new APs

Clarion Voice Makes It Clear

- Toll-quality Voice over Wi-Fi
- Fast roaming, even across switch and router boundaries
- Continuous authentication for WPA2 clients

Easy to Upgrade

- 802.11n-ready
- Seamless controller scalability up to 250 users and 25 APs

Unified Communications

The Fusion 300 WLAN Controller is ideally deployed with a Fusion Multi-Service Business Gateway (MSBG) to provide a comprehensive Fixed Mobile Convergence solution for voice, video, and data (see the figure below).

U4EA MSBGs are GoS™-enabled, providing an industry leading nine QoS classes that guarantee wireline bandwidth and control packet loss and delay for VoIP and other mission-critical applications and hosted services.

GoS combined with the Fusion 300's Clarion Voice provide the best end-to-end quality of experience for Unified Communications solutions.

The Fusion 300 WLAN Controller can also be deployed as a stand-alone solution (see the figure on page 1), integrating seamlessly into any SMB LAN.

EasyPoint

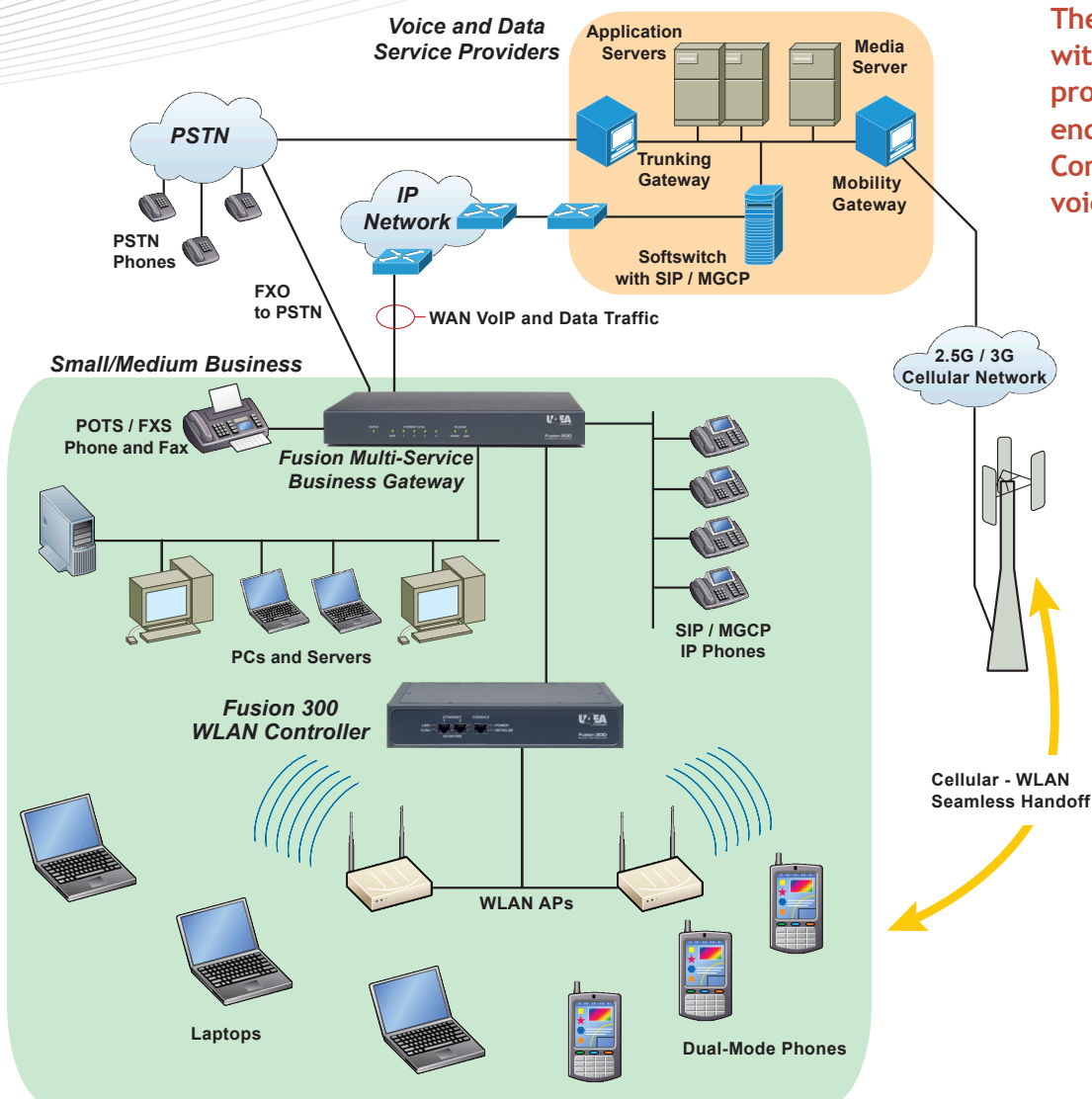
With EasyPoint, almost the entire burden of configuring a wireless network is lifted from the shoulders of IT. The administrator can simply assign an IP address to the controller, a name to the wireless network, and some simple security parameters to have a secure network up and running – typically in less than 15 minutes.

Everything else is handled automatically – from enabling individual radios, to creating BSSes, to scanning for rogues. The system even automatically detects VLAN and network topology and creates the proper configuration to allow users to roam seamlessly.

Once the system is up and running, the administrator will learn that he or she has tremendous power and flexibility at his disposal with the Fusion 300. But

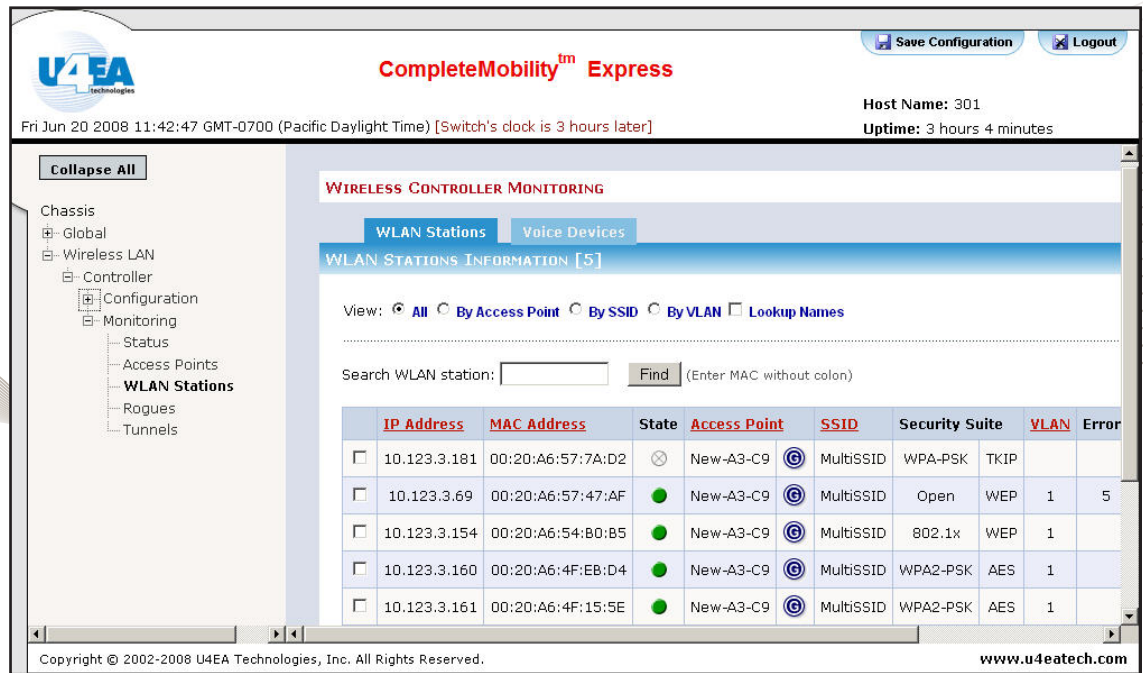
with its template capabilities, EasyPoint makes exercising that power very easy. Decisions over advanced features like load-balancing and beacon interval can be configured once, and that template is then always available to the administrator in the future.

Beyond just simplifying configuration, EasyPoint also ensures that the network is optimal. Understanding and optimizing Wi-Fi is not easy in a world where the wireless spectrum is “polluted” by everything from the Wi-Fi network of the café next door to the microwave oven in the kitchen. That’s why EasyPoint does the work. As new APs are attached to the network, the APs automatically select the best channel for each radio in each band, and set the power level to provide the best overall bandwidth to the largest possible coverage area – taking into account not just other



The Fusion 300, combined with a Fusion MSBG, provides a comprehensive, end-to-end Fixed Mobile Convergence solution for voice, video, and data

CompleteMobility™ Express supports multiple encryption mechanisms simultaneously and tracks data and voice clients.



system APs, but APs from neighboring businesses, and even RF noise from other devices.

Clarion Voice

Achieving acceptable voice quality in today's enterprise Wi-Fi networks is a great challenge. The Fusion 300 wireless controller rises to this challenge to support Vo-Fi (Voice over Wi-Fi) applications.

U4EA's Clarion Voice provides toll-quality voice for up to 60 simultaneous voice calls. And with its voice QoS template, the Fusion 300 provides this not only for 802.11e WMM capable

devices, but also for legacy devices that do not support QoS. By automatically assigning 802.1p or DiffServ priorities, it can even provide toll-quality voice end-to-end, especially when combined with U4EA's patented GoS.

Through Clarion Voice, the Fusion 300 also provides support for genuine mobility, allowing clients to roam freely, even across switch and router boundaries and irrespective of the subnet to which the AP is attached.

With 802.11i and pre-shared keys, Clarion even allows WPA2 clients to roam and remain authenticated within the 50 millisecond window required for

voice support – in fact, the average WPA2 authentication handoff with Clarion is 17ms.

Easy to Upgrade

The Fusion 300 WLAN Controller is future proof and designed to be simple to upgrade. The Fusion 300 is 802.11n-ready to handle the next generation of APs and Wi-Fi capabilities.

The Fusion 300 solution supports environments as small as a few users and two APs, but can easily scale as your business grows to as many as 250 users and 25 APs.

The following table summarizes key features, functions, and benefits of the Fusion 300 Wireless Gateway:

Feature	Function	Benefit
EasyPoint™ Plug-and-Play Configuration	Automatic assignment of ESS, radio and other parameters; 802.11ab support; improved automatic channel selection and transmit-power level	Provides the simplest out-of-box experience, allowing the system to be up and running in under 15 minutes
Clarion™ Voice	Guaranteed mean opinion-score with multiple simultaneous voice and data connections; support for automatic voice-VLAN assignment and legacy phone support	Assures toll-quality voice and fast roaming
Security	Built in RADIUS and captive portal functionality, 802.1x authentication, separate guest networks, prioritized traffic	SMBs can deploy genuinely secure networks without the burden of running separate authentication servers or other complicated network devices.

Technical Specifications

Scalability, Resiliency, and Redundancy

- Client load balancing
- Automatic coverage healing around failed APs
- Directly Managed APs 25
- Clients 250
- Clients/radio 60
- ESS 8
- BSS/switch 128
- BSS/radio 16
- VLANs 4,096
- VLANs/AP 100
- Local EAP users 256

Management

- Plug-and-Play set-up with automatic provisioning of APs (including AP discovery; radio and BSS configuration; RF parameters of channel and transmit power level; and local VLAN with 802.1ab)
- Template based AP configuration
- Dynamic transmit power control
- Automatic channel selection on start-up with on-going map of optimal channel selections, allowing administrators to rebalance the network as needed
- Full manageability through SNMP and enterprise MIBs
- Management across IP networks with pre-standard CAPWAP, including automatic AP software upgrade, and mutual AP-controller authentication with secure key exchange
- Web-based GUI over HTTPS
- CLI
- Comprehensive statistics for APs and clients

Mobility

- Voice ESS providing the highest QoS levels, including support for legacy clients
- Automatic detection of voice clients with 802.1ab

- QoS remarking between 802.11e and both 802.1p and DiffServ, allowing end-to-end quality of service
- Support for mixed-use networks, with data and toll-quality voice on the same BSS
- Configurable voice-optimized load balancing
- Inter-subnet mobility
- Fast roaming with 802.11i pre-authentication and cached PMK
- Distributed Data Forwarding for minimized latency

Wireless Security and Intrusion Detection/Prevention

- 802.1x authentication for WEP, WPA, and WPA2 security
- Shared key authentication for WEP, WPA, and WPA2 security; 40 and 104 bit effective key lengths for WEP
- 802.1x support for MAC based authentication
- EAP types supported: EAP-TLS, EAP-TTLS, EAP-SIM, PEAP MS-CHAP v2, PEAP-GTC
- Rogue AP detection and mitigation, and ad-hoc-networking detection, with SNMP notification to allow wired port blocking or quarantining
- Simultaneous user services and intrusion detection
- MAC address control lists (permit and deny)
- Simultaneous support for all 802.11 security types on the same BSS
- Suppress broadcast probe response
- Mutual switch-AP authentication
- Separate VLAN per SSID and security type
- Captive portal for guest users
- Per-user VLANs: AAA assigned VLANs (via RFC3580)

Standards & Certifications

- Wi-Fi Alliance b, g certified
 - Wi-Fi Alliance WPA and WPA2 certified
 - Wi-Fi Alliance EAP certified
 - Wi-Fi Alliance WMM certified
- Fusion 50 AP*
- 802.11b/g
 - 802.11n ready
 - 802.11d Country Code Support
 - 802.11e / WMM Class of Service
 - 802.11i Security

Interoperability

Client Interoperability

- Meetinghouse client
- DeviceScape client
- Windows XP client
- Juniper Odyssey client

RADIUS Server Interoperability

- Meetinghouse server
- Microsoft Win2000 server
- Microsoft Win2003/.NET server
- Juniper Odyssey server
- DeviceScape

Physical - Fusion 300

Power

- Input: 100-127V/200-240V-50/60Hz, 0.5/0.3A

Dimensions

- Free-standing
- Width 9.62" (24.43 cm)
- Depth 7.50" (19.05 cm)
- Height 1.50" (3.82 cm)

Connections

- Two Ethernet, auto-sensing, 10/100/1000 Mbps, RJ-45
- One Console, RJ-45

Regulatory Compliance

Safety

- cTUVus 60950 USA/Canada
- IEC60950-1 EU

EMC/EMI

- FCC part 15 Class A USA/Canada
- En55022 Class A EU
- En55024 Immunity EU