

# Data Sheet



## E(z)RF Location Manager With E(z)RF Location Firewall



Service Appliance SA1000

### Key Product Benefits:

- Real-time location management system for 802.11 Meru networks, with room level accuracy of 99% in under 30 seconds
- Ability to simultaneously track up to 4000 devices without special hardware or software on tracked devices.
- Web Services location API enables seamless integration with existing and emerging customer applications.
- Add-on E(z)RF Location Firewall application for location-based access control and policy enforcement for securing WLANs.
- Location Services for multi-level floor plans and variety of tracked devices including
  - WiFi-enabled laptops
  - PDA's
  - VoIP handsets
  - Medical Devices
  - Forklifts

### Scalable, Secure Location Tracking System for Large Converged Voice and Data Wireless Networks

The Meru E(z)RF Location Manager is a highly accurate system that provides precise location tracking and device management capabilities along with a new layer of physical location-based security for enterprise wireless LAN networks. Part of the Meru E(z)RF Application Suite, the E(z)RF Location Manager running on the Meru Service Appliance SA1000, provides the capability to automatically track the physical location of thousands of 802.11 WLAN devices including wireless enabled laptops and PDAs, VoIP wireless handsets, managed APs, asset tags, rogues APs and rogue clients.

The E(z)RF Location Manager is a scalable application that uses the Meru WLAN System to collect RF data for its location and security capabilities. Because of Meru's unique, 4th generation architecture, accuracy in detecting clients is assured within three to five meters. Assuming an identical number of AP's are installed in a Meru or conventional WLAN system, each tracked client has typically three times as many RF data points available with a Meru system. This higher level of accuracy is achieved because AP's are deployed on a single channel span in Meru's Virtual Cell™ architecture, compared to the three alternating channels used by conventional systems.

With Meru E(z)RF Location Manager device location is visualized on a floor plan via a client-installed dashboard. Visualization can include a floor plan, all tracked devices, and/or 802.11 signal strength from one or multiple devices providing a "weather map" of 802.11 signal strength. With quick and easy set up, the visualization tool enables one to see the location of all 802.11 devices and signals in a single glance.

### E(z)RF Location Manager Product Overview



E(z)RF Location Manager Dashboard

- Scalable dashboard provides graphical display of device movements in real-time.
- For large enterprises with multiple E(z)RF Location Managers, the dashboard provides an aggregate view of the network.
- Automatically generates alerts (email, syslog) for discovered rogue APs or client devices.
- Location History - Stores location history for tracked devices for 30 days.
- Accurately locates devices within three to five meters while maintaining Meru Virtual Cell architecture.
- Customized, on-demand scheduled reporting can be easily generated for real-time trend analysis and capacity management.
- Support for asset tags and tracking through partner Newbury Networks 'Active Asset' application.

About Meru Networks

Meru Networks develops and markets wireless infrastructure solutions that enable the All-Wireless Enterprise. Its industry-leading innovations deliver pervasive, wireless service fidelity for business-critical applications to major Fortune 500 enterprises, universities, healthcare organizations and local, state and federal government agencies. Meru's award-winning Air Traffic Control technology brings the benefits of the cellular world to the wireless LAN environment, and its WLAN System is the only solution on the market that delivers predictable bandwidth and over-the-air quality of service with the reliability, scalability and security necessary to deliver converged voice and data services over a single WLAN infrastructure. Founded in 2002, Meru is based in Sunnyvale, Calif. For more information, visit [www.merunetworks.com](http://www.merunetworks.com) or call (408) 215-5300.



# E(z)RF Location Manager

## System Requirements

For more information about the Meru E(z)RF High-Fidelity Location Manager, visit: [www.merunetworks.com](http://www.merunetworks.com)

For ordering information or questions, email: [info@merunetworks.com](mailto:info@merunetworks.com)

### Web Services Application Programming Interface (API)

The E(z)RF™ Location Manager provides location information via SOAP and XML application programming interfaces. These API's allow a wide range of applications to access device location information – applications like security, asset tracking, content delivery, etc. The E(z)RF™ Location Manager can be used with Newbury Networks' location-aware applications, or custom application can be created that use the E(z)RF™ Location Manager's™ location information.

### E(z)RF Location Firewall

The E(z)RF™ Location Firewall is add-on application for E(z)RF Location Manager that provides access control and policy enforcement for WLANs. It creates a secure perimeter around your facilities by preventing neighboring users or malicious hackers from getting unauthorized access to your WLAN.

### E(z)RF Location Firewall Product Overview

#### Location-based Access Control

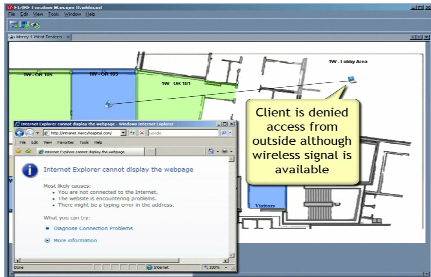
- Create a virtual location-based firewall around the enterprise facilities
- Prevents unauthorized access from hackers using high-gain antennas, spoofed MAC addresses, stolen credentials and stolen devices
- Prevents common external ,systematic attacks on enterprise networks by using location as a part of the authentication procedures.

#### Location-based Policy Enforcement

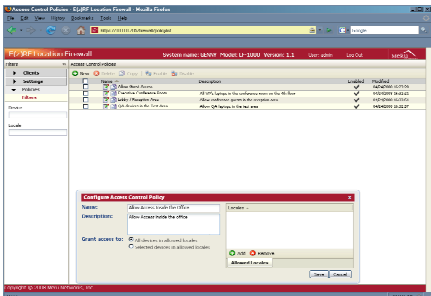
- Define, manage and control a hierarchy of network security policies
- Define strict access and authentication policies based on physical boundaries to distinguish between inside from outside, public spaces and no access areas.
- Create and centrally manage security policies for different user groups, different devices and different times of the day and enforce across various locations, buildings

#### Reports and Authentication History

- Tracks user and 802.11-based device movements based on authentication requests
- Displays a complete, history of all devices on the network including attempts to connect to the network



E(z)RF Location Firewall client denied access



E(z)RF Location Firewall client denied access



Meru Networks  
Corporate Headquarters  
894 Ross Drive  
Sunnyvale, CA 94089 USA  
P 408.215.5300  
F 408.215.5301

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HARDWARE SPECIFICATIONS	MANAGED DEVICES
Mini 2U rack-mount server – dimensions(H x W x D) 3.5" x 17" x 22"	Meru Networks Controllers
2 x Gigabit Ethernet ports	Meru Networks Access Points
1 Serial console port	Any 802.11 Wireless device (laptop, PDA, VoIP Wireless handset, etc.)
Power: 110-240v, 50-60Hz to 250 watts	
Operating Temperature: 10° C to 35° C (50° F to 95° F)	
Compliance: EMC FCC Part 15/CES-003 Class A; Japan VCCI Class A; EU EN55022 and EN55024	
Safety: cUL60950-1; IEC/EN 60950-1; CB Scheme and report with national deviations.	