



MC500/MC1000/MC3000

## Controller Family

### Intelligent Architecture for Converged Voice and Data Wireless LAN

#### Enabling Today's Converged Voice and Data Wireless LAN Network

Today's enterprises are moving rapidly to a single IP network for data and voice applications. At the same time, many are implementing wireless LAN to provide any time, anywhere access to business critical applications. Meru not only delivers all required elements for today's larger wireless LAN deployments, but goes farther by future proofing the network for toll quality voice over Wi-Fi.

- Centralized configuration and management for ease of deployment
- Multi-layer security approach
- Eliminates channel planning and co-channel interference problems
- Integrates easily with existing infrastructure
- Scalable solution set for large enterprise to branch offices

#### Support Wireless VOIP with Toll Quality

Wireless VOIP is a rapidly emerging application that increases corporate productivity and efficiency while reducing costs. Customers and partners can easily reach your employees where cell phone coverage may be spotty or unusable indoors, even when away from their offices.

- Air Traffic Control deterministically schedules voice traffic to avoid contention
- Meru's Cellular-like coordination across multiple APs allows zero hand off times
- Automatic flow recognition of SIP, H.323, Spectralink and Vocera voice protocols
- Users experience glitch-free toll quality voice

#### Ensure Corporate Data Privacy with Multi-Layer Security Policies

Security concerns are primary in the mind of network administrators deploying wireless LANs. Meru understands this and addresses these concerns through a multi-layer approach. Security policies follow users as they roam, without reauthentication or degradation of performance.

- Wi-Fi Alliance Certified™ for WPA
- Automatic rogue access point detection and prevention without degradation of client traffic
- Multiple ESSIDs with individual security policies to ensure separation of different user groups

#### Unsurpassed Performance in High Density Environments

High densities of wireless clients are common in many environments, including conference centers, hospital emergency admitting rooms and university libraries and auditoriums. The Meru WLAN Controller brings new methods to deal with the bandwidth demands and increased contention that a rapidly growing client population will bring.

- Air Traffic Control technology delivers intelligent contention management
- Removes direct and indirect sources of contention which causes back off
- Results in 10-fold increase in client density
- Removes need for complex channel planning

#### Deliver True Wireless Quality of Service for Multiple Applications, User Groups

Today's wireless LAN systems provide quality of service only in the downstream direction – from the access point to the client. The reverse direction - traffic from the client to the access point - is unmanaged, so high priority traffic or latency sensitive applications like voice have no method to guarantee access the channel in a timely manner. Meru uniquely solves this problem with Air Traffic Control™ technology.

- Guaranteed high priority traffic delivery for mission critical applications
- Upstream and downstream quality of service
- Quality of service prioritizes traffic from clients to access point
- No client software required
- Interoperable with any Wi-Fi certified device

#### Centralized Management for Ease of Deployment

Wireless LAN deployments are larger and more complex than just a few years ago. They are not only in the corporate office, but spread out to remote and branch offices. Meru greatly simplifies deployment and ongoing management for global deployments.

- Auto discovery and configuration of access points
- RF intelligence automatically selects best power and channel settings
- Centralized intelligence automatically load balances clients for consistent, reliable throughput

#### Key Product Benefits:

- Centralized control for easy configuration and management
- Effortless AP deployment with no need for channel planning or complex site surveys
- Toll quality voice even in dense client environments
- Seamless client mobility across subnets
- Multi-layered security including WPA, 802.11i, automatic rogue access point prevention and location-based access policies

# Controller Family

## Technical Specifications

### About Meru Networks

Meru Networks is a global leader in Wireless Voice over IP (VoIP) infrastructure solutions. With its innovative, award-winning Air Traffic Control technology that brings the benefits of the cellular world to the wireless LAN environment, Meru's WLAN System is the only solution on the market that offers the reliability, scalability, and security necessary to deliver converged voice and data services over a single WLAN infrastructure.

APPLICATION SUPPORT AND OVER-THE-AIR QoS	
SIP and H.323 support	Support for SIP and H.323v1 applications and codecs
QoS Rules	Configurable Dynamic QoS Rules Over-the-air upstream and downstream resource reservation Automatic, stateful flow detectors for SIP, H.323, Cisco SCCP, Spectralink SVP and Vocera User-configurable static and dynamic QoS rules per application (user-defined) and per user (stations, users, and port numbers)
SECURITY	
Authentication	Combination of VPN, 802.1x and open authentication 802.1X with EAP-Transport Layer Security (EAP-TLS), Tunneled TLS (EAP-TTLS), Protected EAP (PEAP) MS-CHAPv2, Smartcard/Certificate, Lightweight EAP (LEAP), EAP-FAST and EAP-MD5, with mutual authentication and dynamic, per user, per session unicast and broadcast keys Secure HTTPS w/customizable Captive Portal utilizing RADIUS
Encryption support	Static and dynamic 40-bit and 128-bit WEP keys, TKIP with MIC
Security Policy	Access control entries supported per user, per AP (MAC filtering) Multiple ESSID/BSSID each with its own Security Policy
Dual Radios	Centralized, continuous Rogue AP detection and suppression/permit for 802.11a and 802.11b/g

MOBILITY	
Zero-loss Handoffs	Infrastructure-controlled zero-loss handoff mechanism for standard Wi-Fi clients
Multi-vendor	Interoperates with non-Meru AP's for hand offs
High Availability	Active/Standby configuration for automatic failover and recovery No performance degradation with increased Wi-Fi clients Virtual cell provides load balancing coordination for improved performance and WLAN resiliency upon AP failure
CENTRALIZED MANAGEMENT	
Zero-Configuration	Automatically selects power and channel settings
System management	Centralized and remote management and software upgrades via System Director web-based GUI, SNMP, Cisco-like Command-Line Interface (CLI) via serial port, SSH, Telnet Centralized Security Policy for WLAN, Multiple ESSIDs and VLANs with their own administrative/security policies
Intelligent RF Management	Coordination of APs with load-balancing for predictable performance Centralized auto-discovery, auto-channel configuration, and auto-power selection for APs Co-channel interference management

Model	MC500	MC1000	MC3000
<b>Application</b>	Remote Office Small Office	Mid-size Enterprise Branch office	Large Scale Enterprise
<b>Performance</b> APs Supported Max MTU	Up to 5 1546 Bytes	Up to 30 1546 Bytes	Up to 150 1546 Bytes
<b>Interfaces</b> Dual 10/100s Dual 10/100/1000s Serial port	Yes Yes	Yes Yes	Yes Yes
<b>Indicators</b> Power - On/Off Status Ethernet Ports	Yes Yes LED Link/Activity/ Speed	Yes Yes LED Link/Activity/ Speed	Yes Yes LED Link/Activity/ Speed
<b>Power</b> 110VAC/220VAC Auto Ranging	27W	200W	300W
<b>Dimensions</b> H x W x D	1.4in. x 7.6in. x 5in.	1.75in. x 17in. x 13.1in.	1.75in. x 17in. x 16.25in.
<b>Mounting</b>	Mini-desktop	1U rack mount	1U rack mount

### All Controllers:

**Environmental Operating:**  
Temperature: 0 to 50C / 32 to 122F  
Humidity (RNC): < 95% @ 40C / 104F

**Storage and Transit:**  
Temperature: -40 to +85C / -40 to 185F  
Humidity (RNC): < 95% @ 40C / 104F

**Compliance:**  
Per country certification  
Safety: UL 1950  
EMI: FCC Part 15, Class A; CE

**Warranty:**  
Hardware 1 year; Software 90 days  
Red Carpet Service options



Meru Networks  
Corporate Headquarters  
1309 South Mary Avenue  
Sunnyvale, CA 94087 USA  
P 408.215.5300  
F 408.215.5301

www.merunetworks.com  
info@merunetworks.com

Copyright © 2005 Meru Network, Inc. All rights reserved worldwide. No part of this document may be reproduced by any means nor translated to any electronic medium without the written consent of MeruNetworks, Inc. Specifications are subject to change without notice. Information contained in this document is believed to be accurate and reliable, however, Meru Networks, Inc. assumes no responsibility for its use, Meru Networks is a registered trademark of Meru Networks, Inc. in the U.S. and worldwide. All other trademarks mentioned in this document are the property of their respective owners.