



**WIRELESS NETWORK INNOVATION THAT  
TRANSFORMS ENTERPRISE PERFORMANCE**



**WIRELESS COMMUNICATION IS NOT JUST A CONVENIENCE.  
FOR MANY ENTERPRISES, IT IS NOW BUSINESS-CRITICAL.**

**TODAY, USERS PRIMARILY RELY ON WIRELESS DEVICES FOR THEIR  
APPLICATIONS, DATA, AND COMMUNICATION CAPABILITIES.  
UNFORTUNATELY, MANY CAN'T RELY ON THEIR WIRELESS LANS.**

# UNLESS IT IS A MERU NETWORKS VIRTUALIZED WIRELESS LAN.

Our innovative, virtualized wireless technology is based on the 802.11n industry standard, which allows us to completely change the way that your business will view wireless LANs. You'll see reliable access to applications. Predictable high performance for all applications, including voice and video. One-person management. And a cost of ownership so low that it will be hard to believe—except that thousands of our customers have already experienced it too.



# A VIRTUAL GAME CHANGE

Legacy wireless LANs were never designed to meet the real-time demands of today's enterprises. Meru's are. Based on the 802.11n industry standard, Meru virtualized wireless LANs operate on an innovative, switched virtual cell architecture that places control in the network, instead of the access points and clients.



### **One Virtual Resource Pool**

Unlike legacy wireless LAN architectures, the Meru System Director™ operating system combines wireless resources into one virtual pool and partitions it to match device and application requirements. Meru controllers and wireless access points operate in concert, creating a virtual wireless LAN that intelligently monitors, manages, and directs network traffic.

### **Virtual Cell: Seamless Coverage and 30 Percent Fewer Access Points**

Resources from multiple access points are pooled together to create Virtual Cells on a single or multiple RF channels. Instead of user devices competing for connectivity to individual access points, devices on a Meru wireless LAN see only one common network connection and connect to the Virtual Cell. As a device moves, System Director determines the best physical access point to serve the device and seamlessly migrates the wireless device to the appropriate access point. Virtual Cell architecture is why Meru network users receive stable coverage everywhere and why your business can significantly reduce network, deployment, and management costs.

### **Virtual Port: Predictable Service Quality and User Satisfaction**

System Director also assigns a unique identifier and dedicated virtual link, or Virtual Port, to each connected device. This Virtual Port remains with the device for the life of its connection and allocates the appropriate network resources based on the device's characteristics and applications used. Virtual Ports enable System Director to intelligently allocate network resources among all connected devices so that users receive immediate, fair access to the network and maximum application performance. Virtual Port enables you to support multiple, latency-sensitive applications while assuring quality of service.

### **RF Virtualization: High Scalability**

Meru's RF engineering innovation brings Air Traffic Control technology to Meru virtualized wireless LANs. Air Traffic Control directs all network transmissions—upstream and downstream, and from ordinary 802.11 clients as well as Meru access points. Because each Virtual Cell requires only one radio channel, other channels are free for expansion. Scaling the network is as easy as adding a channel and more radios, and all channels in use are available network-wide. This innovative approach eliminates channel planning and the problems normally associated with interference from neighboring networks and devices.

### **Built-In Security at Every Layer**

Only Meru secures radio frequencies at the physical layer and provides real-time airspace scanning. Security integrated in Layers 1-7 defend the wireless LAN from perimeter, connection, network, and remote threats. Meru provides continuous, real-time scanning for intruders and rogue access points, even while serving real-time traffic.

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## **COMMITTED TO STANDARDS**

Meru Networks actively participates in development and evolution of industry standards through the Wi-Fi Alliance and IEEE:

- Chair, Voice Technical Certification program and task group, Wi-Fi Alliance
  - Vice-chair of Enterprise Program Committee, Wi-Fi Alliance
  - Major and lead contributions to IEEE 802.11r, v, w, aa
  - Voting member, IEEE-SA Oversight Board
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# CONTROLLERS: THE CORE OF A MERU WIRELESS LAN

Meru System Director coordinates all elements of a Meru wireless LAN solution, including access points and controllers. Highly scalable Meru controllers synchronize access points and manage all traffic for networks ranging in size from small branch offices to large campuses and enterprise headquarters.



**MC5000**  
Supports up to 1,500 access points  
Up to 20 Gbps encrypted throughput  
Headquarters, large campuses



**MC4100**  
Supports up to 300 access points  
Up to 4 Gbps encrypted throughput  
Regional offices, large campuses



**MC3000**  
Supports up to 150 access points  
Mid-size enterprises, branch offices



**MC1500**  
Supports up to 30 access points  
Small enterprises, remote offices

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## SYSTEM DIRECTOR CENTRAL CONTROL

Meru System Director coordinates controllers and access points to deliver:

- Application-aware optimization: monitors and classifies applications to optimize performance, support high-density wireless deployments, and deliver wired-like performance for mission-critical applications.
  - Comprehensive security: firewall and centralized policy enforcement by application type, device, and user. Strong authentication and WPA2 encryption, as well as integration with enterprise authentication and authorization infrastructure. Also supports guest access management for temporary users, wireless intrusion detection and mitigation, user access logging, and accounting.
  - High availability: redundancy features that cost-effectively increase network controller redundancy.
  - Flexible deployment: deploy access points and controllers anywhere and System Director allows access points to connect to an enterprise's existing network infrastructure through a wireless mesh. Reduces installation costs and extends wireless LAN to telecommuters' home offices without the need for separate VPNs.
  - Simplified operations: central configuration, management, and security policy enforcement. Predictive, proactive diagnosis of service problems and rapid troubleshooting with network event record and replay. Integrates with enterprise IT management systems through industry-standard protocols.
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## Access Points: simple installation for immediate productivity

Installing a Meru access point can be as easy as changing a light bulb. No channel planning or power adjustment is needed to support network connectivity for 802.11a/b/g/n devices. Meru access points automatically download their configurations from the Meru controller and System Director automatically manages all traffic on the network. Meru access points also monitor the network and gather information for enhancing security, centralized network management, and proactive and predictive diagnostics.

We provide a comprehensive line of 802.11a/b/g/n industry-standard access points that can be combined with a set of external antennae to support different coverage needs.



### **AP300Series 802.11a/b/g/n Indoor**

Five models with single or dual 802.11a/b/g or 802.11n radios  
Software-upgradable to 802.11n  
High-performance, secure environments



### **AP300i 802.11a/b/g/n Indoor**

Single or dual 802.11a/b/g or 802.11n radios  
Software-upgradable to 802.11n  
Meets high aesthetic and performance requirements of public environments



### **AP200 802.11a/b/g Indoor**

Single or dual 802.11a/b/g radios  
Mesh-capable  
High-performance VoIP or other non-802.11 applications



### **AP150 802.11a/b/g Indoor**

Dual 802.11a and 802.11b/g radios  
Remote offices or telecommuter



### **AP150-CB/Bridge 802.11abg Indoor**

Dual 802.11a and 802.11b/g radios  
Software-upgradable to full AP functionality  
Ethernet-to-wireless bridge



### **OAP180 Outdoor**

Dual 802.11a/b/g radios  
Ruggedized enclosure  
Outdoor access

# EASY MANAGEMENT: THE POWER OF JUST ONE PERSON

Compared to managing and maintaining legacy wireless LANs, a Meru virtualized wireless LAN is almost simple. Many of our customers manage their Meru networks with just one person.

## **Self-Monitoring**

Our innovative technology enables your network to monitor itself and deliver predictive and proactive issue diagnosis. You gain better visibility into potentially service-affecting problems before they affect users.

## **More Effective Troubleshooting**

The ability to continuously collect and analyze data, as well as record and replay key network events, saves time and accelerates troubleshooting.

## **Broad Insight**

With Meru, you also can view real-time and cumulative performance metrics for individual wireless devices, access points, and the network as a whole—from a single interface, which can be accessed remotely.



## The Meru E(z)RF Application Suite

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Our comprehensive E(z)RF™ Application Suite management solution lets you easily configure, monitor, troubleshoot, secure, and operate your Meru virtualized wireless LAN.

### **E(z)RF Network Manager**

This comprehensive wireless management and troubleshooting system provides network visualization, configuration, wireless performance dashboards, and fault management capabilities through a single interface. View activity details at each level of the infrastructure and gain real-time and cumulative performance metrics.

### **E(z)RF Service Assurance Manager**

E(z)RF Service Assurance Manager is designed to deliver end-to-end service assurance for the network and its applications. By creating virtual clients on existing access points that actively inject traffic over the air, Service Assurance manager tests and verifies network performance without impact to users. You can quickly isolate faults or potential issues—in the wireless network or back-end wired infrastructure—and take action before users experience performance impact.

### **E(z)RF Location Manager**

Automatically track the physical location of thousands of wireless devices, including laptops, PDAs, wireless VoIP handsets, and unauthorized access points. You can also create wireless security policies based on enterprise-defined parameters, and integrate location tracking capabilities with other business applications, such as asset tracking.

### **E(z)RF OnTheGo**

Meru also enables you to provide customized management dashboards on mobile devices, such as smart phones, so that IT personnel can monitor and manage the network from anywhere with a Wi-Fi or cellular connection.

### **Innovative Security Solutions**

Our hardware and software security solutions provide continuous monitoring and defense against security breaches:

- ❑ RFBARRIER™ provides security around the perimeter of a building to prevent eavesdropping from outside.
- ❑ AirFirewall™ intercepts and blocks unwanted communications as they are transmitted over the air, stopping them before they reach the network.
- ❑ The Security Gateway SG1000 is a centralized system designed to secure the entire Meru wireless LAN in compliance with the requirements of Federal Information Processing Standard (FIPS) 140-2 Level 3 security.

### **Meru Wireless Service Assurance Program**

The Meru Wireless Service Assurance program helps ensure that enterprises receive high availability and service quality for all wireless applications. The program provides three assurances:

- ❑ 99.99 percent wireless LAN availability to run business-critical applications with less than an hour of unplanned downtime per year.
- ❑ Real-time application service levels with voice quality equivalent to land-line service quality.
- ❑ A high-capacity infrastructure with up to 30 percent fewer access points than legacy multi-channel microcell wireless LANs.

### **Professional Services**

Meru Professional Services help you maximize the value of your wireless LAN. Our team of experienced engineers and consultants can help you deploy and tailor your network to meet your organization's specific needs.

# TRANSITION TO MISSION-CRITICAL WITH CONFIDENCE

Meru wireless LANs can help you deliver on your enterprise's mobility initiatives with unmatched quality of service, coverage, and application performance. At the same time, you are guaranteed to simplify management and greatly reduce the total cost of ownership. No worries. No complexity. Just total confidence.



# FOR MORE INFORMATION

FOR MORE INFORMATION ABOUT MERU WIRELESS LAN PRODUCTS, VISIT  
[WWW.MERUNETWORKS.COM](http://WWW.MERUNETWORKS.COM) OR CONTACT US AT +1.408.215.5300



## MERUNETWORKS.COM

**About Meru Networks** | Founded in 2002, Meru Networks provides a virtualized wireless LAN solution that cost-effectively optimizes the enterprise network to deliver the performance, reliability, predictability and operational simplicity of a wired network, with the advantages of mobility. Meru's solution represents an innovative approach to wireless networking that utilizes virtualization technology to create an intelligent and self-monitoring wireless network, and enables enterprises to migrate their business-critical applications from wired networks to wireless networks, and become all-wireless enterprises. Meru's solutions have been adopted in all major industry vertical markets, including Fortune 500 enterprises, healthcare, education, retail, manufacturing, hospitality and government. Meru is headquartered in Sunnyvale, Calif., and has operations in the Americas, Europe, the Middle East and Asia Pacific. For more information, visit [www.merunetworks.com](http://www.merunetworks.com) or call 408.215.5300.

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