



CAROLINA ADVANCED DIGITAL, INC.  
IT INFRASTRUCTURE | SECURITY | MANAGEMENT  
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# MERU WLAN PORTFOLIO

## Unleashing the Power of the All-Wireless Enterprise

A suite of integrated products designed to empower IT directors — meeting the secure access, application delivery and capacity demands of today's high-density Wi-Fi® environments.

Gone are the days when wireless access for enterprise customers was a convenience. Today, it's a core necessity. And tomorrow, constant, reliable wireless access will be even more crucial. With the massive flood of Wi-Fi client devices headed your way and the bandwidth-hungry applications they'll use, demand will only expand, overwhelming your network. When this happens, the fundamental flaw of traditional networks — putting the client in control of choosing how and where to connect — will become too big to ignore.

Meru takes an entirely different approach, putting the network in control to unleash the true power of mobility.

To prepare today's enterprises for a world in which rock-solid Wi-Fi is a necessity, Meru has pioneered a series of technological firsts to produce a Virtualized Wireless LAN environment that intelligently monitors, manages and directs network traffic.

Meru puts the network in control, unlocking the full potential of 802.11n standards and transforms the once uncontrollable Wi-Fi environment into a secure and stable network — one with switch-like reliability and the ability to scale up to handle the ever-increasing client density, diversity and demand for Wi-Fi services.

# MERU SYSTEM DIRECTOR

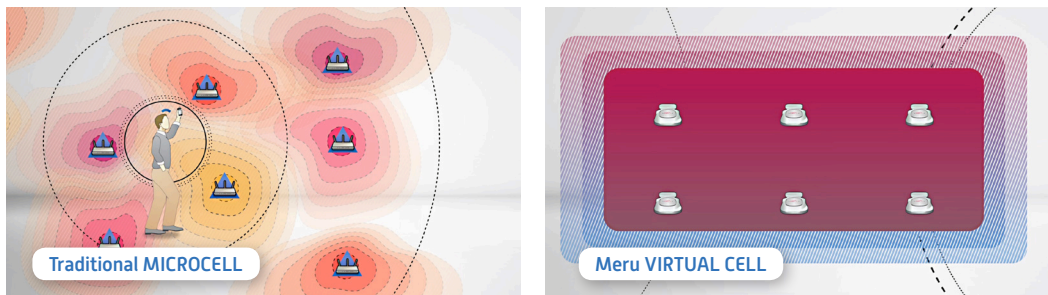
## The Intelligence that Puts the Network in Control

It's more than our operating system. It's the technology that powers the industry's highest-capacity wireless controllers and access points in their class.

### AIR TRAFFIC CONTROL™

This fundamental technology governs all traffic on the WLAN, managing the transmissions that client devices send and receive — not just the ones they receive, like in a traditional Wi-Fi network. Awareness of transmissions from both the client device and access point prevents system overload, ensures optimal performance and alerts you to security threats before they do damage.

### VIRTUAL CELL



Unlike traditional Wi-Fi networks where client devices chaotically fluctuate between dozens, even hundreds, of access points, System Director creates a single, seamless Virtual Cell. Which means client devices see one virtualized point of access for the entire network — allowing System Director to manage connections without roaming or disruptive handoffs.

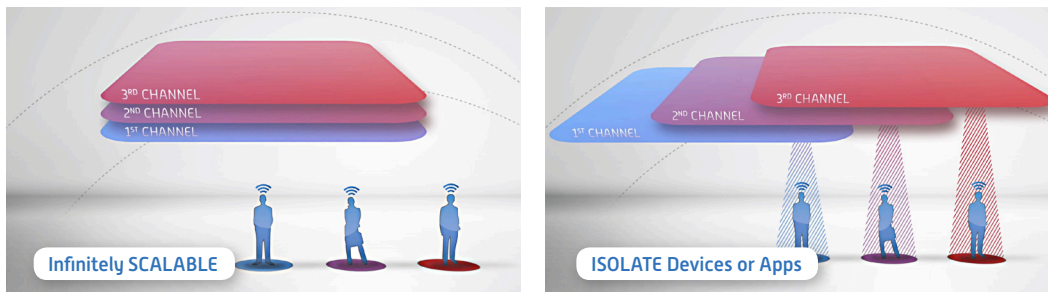
### THE ADVANTAGE OF MERU NETWORK IN CONTROL

**Reliable**  
*Switch-like wireless performance*

**Scalable**  
*Independent channel layering*

**Predictable**  
*Proactive management, security and diagnostics*

### CHANNEL LAYERING



System Director also allows you to deploy multiple channel layers that operate independently in the same area. Like stacked Ethernet switches, you can layer additional Virtual Cells to increase capacity while isolating certain client device types or applications.

### VIRTUAL PORT

Each client device within the Virtual Cell gets its own private link — a Virtual Port — that it carries throughout the environment. This allows System Director to identify the specific needs of each client device and intelligently distribute wireless resources network-wide.

Paired with our controllers and access points, System Director fundamentally changes the Wi-Fi environment as we know it. Meru has created a Virtualized Wireless LAN that puts the network in control, instead of the client device, to intelligently monitor, manage and direct wireless traffic.

# SYSTEM DIRECTOR KEY CAPABILITIES

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## A Wealth of Advancements to Unlock the True Potential of Enterprise Wi-Fi

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### APPLICATION-AWARE WIRELESS

System Director analyzes traffic passing through the system, identifies different application flows, then configures network resources and policies to optimize delivery for every application, providing reliable quality of service to every user.

### MULTI-LAYER SECURITY

Every Meru network is defended by complete wireless intrusion detection and prevention, the latest wireless link level security and comprehensive measures at each protocol layer. System Director also provides a per-user firewall, enabling customized security rules by user, class of user or application.

### FLEXIBLE NETWORK DEPLOYMENT

System Director allows the Meru Virtualized Wireless LAN to integrate seamlessly into existing enterprise networks. Meru Controllers and Access Points can be installed anywhere, with communication between controller and access points at layer 2 or layer 3 to match the design of the wired network. For branch office networks, data traffic can be tunneled back to a central controller or bridged directly from the remote location, whichever best suits the needs of the enterprise.

### VOICE SERVICES

Adds advanced telephony features required by large enterprises that rely on voice systems using VoIP. System Director supports SIP over TCP, in addition to SIP over UDP, which is required by the latest unified communications platforms.

### VIDEO SERVICES

Leverages Meru's Virtualized Wireless LAN architecture and incorporates the mechanisms required to support high-quality video over wireless at scale.

## OPTIONAL APPLICATION MODULES

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### License Modules to Enhance Network Capabilities

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#### POLICY ENFORCEMENT MODULE

Extends wireless security, giving IT the ability to authorize, segregate and control all wireless traffic.

#### REDUNDANCY MODULE

Provides high availability at the system level by offering controller redundancy. With N+1 redundancy, one controller can act as backup for many, ensuring cost-effective continuity in case of controller or back-end network failure.

# MERU SERVICE ASSURANCE APPLICATION SUITE

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## The Industry's Only Proactive Diagnostics, Operations and Management System

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Meru Service Assurance Application Suite helps you manage every aspect of the wireless enterprise from a single console.

**Service Assurance Manager** makes it possible to create virtual clients that act just like real ones, detecting problems before they ever affect users.

**E(z)RF™ Network Manager** enables management of hundreds of controllers and thousands of access points. You can even rewind and re-enact past conditions to pinpoint problems.

**Spectrum Manager** uses a network of dedicated sensors, or one of the radios on non-dedicated Meru AP400 Series Access Points, to continuously scan the 2.4 GHz and 5 GHz band for interference.

# MERU IDENTITY MANAGER

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## Seamlessly and Securely Manage the BYOD Workplace

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Simplify secure enterprise network access and identity management in dense wireless environments.

Enterprises are readying themselves for the smart revolution — a flood of diverse Wi-Fi devices entering corporate networks claiming their share of WLAN resources. Networks must be prepared to deliver secure, scalable wireless network access to a diversity of users and client devices, including employees and their guests.

Meru Identity Manager solves the problem of delivering enterprise wireless network access for all, enabling one-click self-provisioning of client devices for secure 802.11x connectivity.

Together, the Guest Management and Smart Connect features of Identity Manager deliver the best solution for enterprises to manage the BYOD phenomenon.

**Smart Connect** enables identity-based access, policy management and client device registration for user- and corporate-owned mobile devices by providing over-the-air detection of device type and automatic 802.11x authentication.

**Guest Management** provides identity-based visitor access and management capabilities for wireless and wired networks, streamlining the visitor access and management process with a secure, policy-based, easy-to-use solution.

# MERU SECURITY SOLUTIONS

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## Security Management for Virtualized Wireless LANs

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**Wireless Intrusion Prevention System (WIPS)** recognizes threats and mitigates their effect before they damage your wireless network.

**Compliance Manager** makes it easy for enterprises to follow Payment Card Industry best practices, enabling comprehensive PCI auditing with a global view of multi-site networks from a single console.

# MERU CONTROLLERS

## At the Center of the Virtualized Wireless LAN Environment

Meru Controllers allow the IT manager to deliver five times the capacity of other controllers in the industry, without taking up more data center space and power. Running on System Director, these highly scalable controllers synchronize access points and seamlessly manage Wi-Fi traffic.

### MC5000



- 1,500 APs
- 20 Gbps encrypted throughput
- Headquarters, large campuses

### MC4200



- 500 APs
- 10 Gbps encrypted throughput
- Large enterprises, regional offices

### MC3200



- 200 APs
- 4 Gbps encrypted throughput
- Mid-size enterprises, branch offices

### MC1500



- 30 APs
- 1 Gbps encrypted throughput
- Small enterprises, remote offices

### BUSINESS-ESSENTIAL BENEFITS OF MERU CONTROLLERS

*5X the capacity of other controllers in the industry*

*Switch-like performance*

*Ultra high-density client support*

*Multilayer security*

*Simplified operation — centralized configuration and management*

*Flexible deployment*

# MERU ACCESS POINTS

## The Virtual Network Edge — Built for Mobility

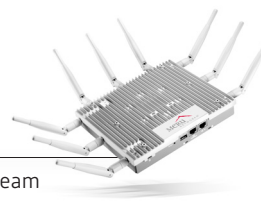
Meru Access Points assure optimal application delivery and the highest WLAN performance. No channel planning. No power adjustment. Just install Meru Access Points and they'll automatically receive configurations from the Meru Controller.

### AP300 Series



- Single or dual radio, dual stream 802.11
- High-performance, secure environments

### AP400 Series



- Triple radio, three stream 802.11a/b/g/n
- Highest performance and density
- Flexible configuration

### AP433is



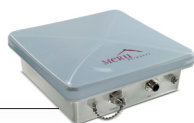
Meru's newest access point offers greater capacity as well as a fully integrated RF sensor that, in conjunction with the Meru Spectrum Manager, assures optimal application delivery and the highest WLAN performance

### AP1000i



- Single or dual radio 802.11n
- Multi-site businesses, solid connectivity

### OAP380



- Outdoor multi-radio 802.11a/b/g/n
- Mesh backhaul, ruggedized for outdoor access

### THE MERU ACCESS POINT ADVANTAGE

*Plug-and-play deployment*

*No dead zones*

*Eliminates co-channel interference*

*Operates at full power — 30% fewer access points are needed*

*Switch-like reliability and performance*



**The Meru Difference: engineering wireless networks built for mobility from day one.** As wireless devices increase in density and diversity, and move from casual to business-essential use, Meru helps customers across an array of industries prepare for the coming Wi-Fi® flood.



For more information about Meru Networks, visit [www.merunetworks.com](http://www.merunetworks.com) or email your questions to: [info@merunetworks.com](mailto:info@merunetworks.com)  
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