

## MultiService Controller 5000 Series

The 802.11n-ready MultiService Controller (MSC) 5000 Series brings high performance and scalability to wireless networks of all sizes. MSCs centrally control the operation of the wireless infrastructure network, provisioning a broad range of identity-based services to ensure consistent QoS and security to clients that use and roam across the network. An integral component of the Colubris Intelligent Mobility Solution, the MSC pushes QoS and security policies to MultiService Access Points at the network edge, where traffic is forwarded directly from source to destination. This highly efficient architecture reduces the amount of wireless traffic on the LAN backbone, when compared with other WLAN solutions, and enables cost-effective scalability and migration to a high-capacity 802.11n network.



### Multi-service application delivery

Colubris MultiService Controllers increase the value of the wireless network by providing the richest set of services and application delivery options available in today's market. The MSC's easy-to-use web-based GUI allows administrators to centrally define multiple user profiles that outline traffic prioritization, bandwidth utilization, guest access, and security policies. These policies are flexible and can be deployed per individual, group, or application. For example, employee business applications, guest Internet access service and high priority voice applications can each be allocated separate and distinct QoS and security policies.

#### Multi-service features:

- Robust, identity- and roles-based user account profiles using embedded or external AAA services
- Central configuration of virtual service communities (VSCs) for QoS, authentication, encryption, and VLANs

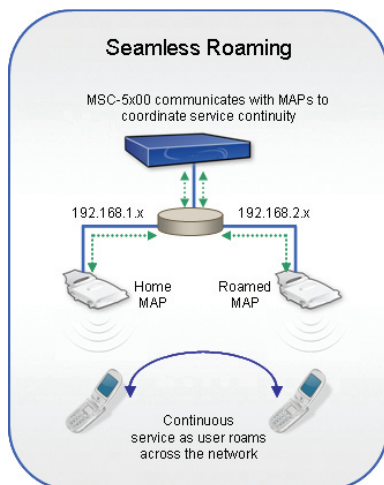
- Separation of wireless control and data forwarding maximizes delivery of business, voice, and multimedia applications
- Award-winning enterprise- and service provider-grade guest access services, fully customizable with web-based login portal per VSC
- Per user bandwidth management ensures fair access to low bandwidth remote network connections

### Anywhere, anytime mobility

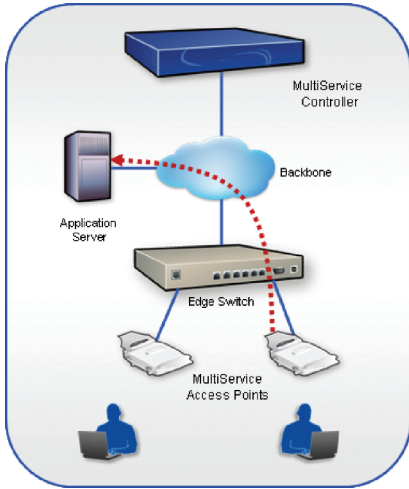
The Colubris Solution offers the ultimate in network access and freedom of movement, providing pervasive, highly reliable wireless where and when you need it. MultiService Controllers feature the Colubris Operating System, which integrates with the entire Colubris WLAN to deliver consistent services. Each controller model is offered in two configurations: The Access Services module allows you to offer secure wireless services to all wireless users and devices, including visitors requiring Internet access. The Mobility Pack module adds fast roaming on top of access services, ensuring seamless network connectivity and service continuity as users roam across the enterprise.

#### Anywhere, anytime features:

- Controller solutions for networks of all sizes from large organizations to branch offices
- Fast roaming provides service transparency and fast hand-offs across MAPs within and across subnet boundaries
- Per-user QoS and security services follow users as they roam
- Mobility cluster interconnects multiple MSCs and MAPs for scalable identity-based roaming across the enterprise
- Full service capabilities for wireless networks controlled across the WAN, at no extra cost



The MultiService Controller 5000 Series enables continuous cross-enterprise roaming within and across subnets by coordinating ultra-speed handoffs of network credentials and service characteristics from MAP-to-MAP.



Colubris MSCs provide outstanding investment protection for 802.11n. They are highly scalable and 802.11n-ready because all processing power is focused on central control and coordination of the wireless network, while Colubris MAPs are responsible for forwarding traffic directly from source-to-destination.

### Rock-solid WLAN security

The MultiService Controller safeguards the integrity of the network and corporate information, while offering consistent, reliable mobile networking. As part of the Colubris defense-in-depth security solution, the MSC centrally defines user- and roles-based authentication, data encryption, access control and filtering policies, ensuring they are applied by the MAPs that provide wireless network access.

#### Security features:

- Per-user or per-device security policies
- Authentication based on user credentials (802.1X/EAP), hardware identifiers (MAC address, WEP key), and HTML login
- Authentication and authorization through Microsoft Active Directory or internal or external RADIUS AAA services
- Built-in stateful firewall for secure connection to Internet
- Secure management interfaces, including SSH/SSL access to CLI/Web UI, IPsec encapsulated SNMP, and XML with digital certificates
- Session tracking compiles a log of user activity for security forensics
- Option for MSC-based data forwarding for secure processing of specific applications or services (e.g., guest access)
- Access Control Lists based on IP address, protocol types and port filtering and DSCP values
- Transparent support for VPN tunnels via Adaptive NAT
- VLAN mapping of guest access traffic for secure passage through corporate network
- Mutual MSC/MAP authentication using digital certificates eliminates rogue access point connectivity

### Simplified management: Central control

The Colubris Solution reduces the time and complexity of managing a wireless network. A Colubris MultiService Controller centrally manages and controls hundreds of MAPs from a single management interface, ensuring that a consistent set of services is delivered throughout the wireless network. The MSC automates network provisioning and software distribution, eliminating AP-to-AP configuration, reducing system errors and trimming operating costs.

#### Management features:

- Controls a network of up to 200 MultiService Access Points per MSC, ensuring consistent security, QoS, and roaming services from MAP to MAP
- Scalability consistent in 802.11 a/b/g and 802.11n networks
- Central management of wireless access point operating modes, including infrastructure (bridging) and Local Mesh
- Plug-and-play auto-discovery and software installation for easy MAP deployment
- Integration with MS Active Directory and external RADIUS services
- RADIUS activity statistics collected per-user for billing by data volume and elapsed session time
- Easy-to-use web-based administrator interface
- Integration with wired network, leveraging existing L2/L3 infrastructure resources, e.g., QoS, VLANs, NAC, MS Active Directory and RADIUS AAA
- Management of large, multi MSC networks via CNMS

### Unparalleled investment protection: 802.11n migration and scalability

Colubris MSCs are highly scalable, deliver excellent price/performance and offer a cost-effective migration to 802.11n. MSCs handle a small fraction of total WLAN traffic, processing network control and management communication only, offloading policy enforcement and traffic forwarding to Colubris MAPs. Because of this efficient networking architecture, MSC scalability is a function of the number of access points managed, not the amount of wireless traffic on the network. The controllers used in most competing WLAN solutions place a limit on total wireless throughput. Additionally, the Colubris Optimized WLAN Architecture reduces the amount of wireless traffic crossing the LAN backbone by as much as 98% when compared with other WLAN solutions and enables cost-effective scalability for high-capacity 802.11n networks.

- 802.11n-ready: Consistent high-scalability in all 802.11 networks without expensive controller upgrades, i.e., an MSC which manages 200 802.11a/b/g MAPs will also manage 200 802.11n MAPs at full throughput

Service Pack	MSC-5100		MSC-5200		MSC-5500	
	Access	Mobility	Access	Mobility	Access	Mobility
Included services	WLAN Mgmt Guest Access	WLAN Mgmt Guest Access Ultra-Speed Roaming	WLAN Mgmt Guest Access	WLAN Mgmt Guest Access Ultra-Speed Roaming	WLAN Mgmt Guest Access	WLAN Mgmt Guest Access Ultra-Speed Roaming
MAP scalability	802.11 a/b/g: 10 802.11n: 10		802.11 a/b/g: 40 802.11n: 40		802.11 a/b/g: 200 802.11n: 200	
Max. simultaneous users	Unlimited		Unlimited		Unlimited	
Max. simultaneous Guest Access users	100		500		2000	



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