

IRONPOINT MOBILITY RS4000 RADIO SWITCH



SUPERIOR PERFORMANCE FOR DENSE AND DEMANDING WIRELESS LAN ENVIRONMENTS

KEY HIGHLIGHTS

- ▶ Patent pending wideband antenna technology with four high-power radios for dense, high-utilization wireless LAN environments
- ▶ Innovative performance paradigm resulting in enterprise deployment savings and reduced ongoing management costs
- ▶ Advanced technology provides 10-fold performance increase over conventional access points with support for 256 simultaneous wireless connections
- ▶ Toll-quality voice and performance using over-the-air QoS, contention management, RF coordination load balancing, and dynamic bandwidth reservation
- ▶ Centralized auto-discovery, auto-channel configuration, and auto-power selection for ease of use and deployment for increased wireless LAN capacity without complexity

Overview

The IronPoint® Mobility RS4000 Radio Switch from Foundry Networks scales capacity in the enterprise wireless LAN (WLAN) without adding complexity. The RS4000 increases WLAN capacity with a single access point, eliminating the need to deploy multiple access points. The RS4000 is a plug-and-play upgrade to existing WLANs without the need to re-plan the wireless network. Built on standards-based and proven wireless networking technology, the RS4000 uses innovative RF intelligence and 802.11 technologies from Foundry Networks to re-write the rulebook for enterprise WLAN deployments. The RS4000 enables enterprise networks to simultaneously deploy four 802.11 channels, resulting in a 10-fold increase to the WLAN network capacity. With the RS4000 and the complete line of IronPoint Mobility Series products, Foundry Networks can provide the unwired office broader access to the wired enterprise backbone today.

TARGET APPLICATIONS

Offering robust wireless performance, extensive security features, simplified deployment, and WLAN resiliency, the RS4000 is well-suited as a standalone device, in high density environments, and in demanding application environments including:

- ▶ Classrooms
- ▶ Conference rooms
- ▶ Auditoriums
- ▶ Theaters
- ▶ Convention centers

Advanced Capabilities

PERFORMANCE AND SCALABILITY

The IronPoint Mobility RS4000 Radio Switch uses a patent-pending wideband antenna to simultaneously transmit four 802.11b/g and 802.11a channels throughout the coverage area. Contention on the network is tightly managed using advanced over-the-air QoS. The RS4000 dynamically reserves bandwidth over-the-air to provide unprecedented VoIP scalability and quality

Technical Specifications

STANDARDS COMPLIANCE

- IEEE 802.1x, and open authentication support
- IEEE 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 with customizable Captive Portal utilizing RADIUS
- Support static and dynamic 40-bit and 128-bit WEP keys, TKIP with MIC, AES-CCMP
- Access control entries per user, per AP (MAC filtering, RADIUS MAC authentication)

- Multiple ESSID/BSSID each with its own security policy
- Security cable lock (Kensington) compatible

MOBILITY

- Roaming interoperability with third-party APs
- Active/standby configuration for automatic failover and recovery
- No performance degradation with increased wireless clients
- Coordinated load balancing

MANAGEMENT

- Central and remote management through IronPoint Mobility Controller release 3.3 or later
- Central and remote management, and software upgrades via GUI, SNMP v1/v2, Command-Line Interface (CLI) via serial port, HTTP, HTTPS, SSH, and Telnet

even in heavily congested wireless environments. With the RS4000, WLANs are no longer bound to density/performance trade-offs that limit conventional access points.

Using conventional 802.11 access point technology requires more access points to scale capacity. The IronPoint Mobility RS4000 Radio Switch breaks this paradigm by providing the performance of multiple access points in a single product. This can result in enterprise deployment savings and reduced ongoing management costs. The RS4000 wideband antenna enables enterprise IT departments to upgrade network capacity without changing the coverage area.

SECURITY

The IronPoint Mobility RS4000 uses a multi-layer approach to provide a security umbrella that follows clients as they roam, without reauthentication or degradation of performance.

- ▶ Multiple ESSID/BSSID with individual security policies to ensure separation of different user groups
- ▶ Strong encryption and authentication support with 802.1x and EAP with mutual authentication and dynamic, per user, per session unicast and broadcast keys

- Centralized security policies for WLAN, Multiple ESSIDs, and VLANs
- Access Point RF coordination with load balancing
- Centralized auto-discovery, auto-channel configuration, and auto-power selection for APs
- Remote logging via Syslog v1 and v2

WIRELESS SPECIFICATIONS

- IEEE 802.11a/b/g
- IEEE 802.11i support (AES, WEP, and WPA2)
- IEEE draft 802.11e support (QoS)
- Wireless Medium Access Certified IEEE 802.11 MAC standard
- Transmit power control in 1 dBm increments
- RP-SMA female connectors
- Frame Size Peak frame size: < 2250 bytes
- Fragmentation and reassembly of IEEE 802.11/Ethernet frames

- Active scanning and passive scanning supported
- Pre-authentication supported
- Rapid change to and from power save mode supported
- Power Save Mode supported in both QoS mode and non-QoS mode
- Sleep Mode drivers for IEEE 802.11 wireless voice handsets

IEEE 802.11A SPECIFICATIONS

- 5.180 – 5.240 GHz, 8 channels (34, 36, 38, 40, 42, 44, 46, 48)
- 5.280 – 5.320 GHz; 4 channels (52, 56, 60, 64)
- 5.745 – 5.825 GHz; 5 channels (149, 153, 157, 161, 165)
- Operating channels configurable based on country regulations
- Automatic rate adaptation of data rates 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
- Transmit power ~ +16 dBm (40 mW) nominal
- Receive sensitivity -70 dBm at 54 Mbps, -86 dBm at 6 Mbps

IEEE 802.11B/G SPECIFICATIONS

- 2.4 GHz - 2.4835 GHz
- Operating channels 1-11 US/Canada, 1-13 Europe)
- 3 non-overlapping channels
- Transmit Power ~+20 dBm (100 mW) nominal
- IEEE 802.11b Data Rates 11, 5.5, 2 and 1 Mbps with automatic rate adaptation
- IEEE 802.11g Data Rates 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 Mbps
- 802.11b Receive Sensitivity -85 dBm at 11 Mbps, -93 dBm at 1 Mbps
- IEEE 802.11g Receive Sensitivity -73 dBm at 54 Mbps, -85 dBm at 6 Mbps

INTERFACES

- Wireless Interfaces: Two 802.11b/g, two 802.11a
- Ethernet Interfaces: Two 10/100 Mbps Fast Ethernet

PHYSICAL SPECIFICATIONS

- Dimensions: 9.5" (W) × 8.5" (L) × 3.875" (H)
- Power Type: 2 × Power over Ethernet (IEEE 802.3af) or optional external 5V, 25-30W power adaptor
- Maximum Power Draw: 22W
- LED indicators: monitoring power, 802.11b/g activity, 802.11a activity, and Ethernet activity

ENVIRONMENTAL

- Indoor Operating Temperature: 32°F to 131°F (0°C to 55°C)
- Indoor Operating Humidity: 0% to 95% humidity (non-condensing)
- Indoor Storage and Transit Temperature: -14°F to 158°F (-10°C to 70°C)
- Indoor Storage and Transit Humidity: 0% to 95% relative humidity (non-condensing)

REGULATORY COMPLIANCE AND SAFETY APPROVALS

- Safety: UL1950, UL2043 (plenum)
- RF certifications: Radio compliance:
 - FCC Part 15
 - Canada RSS210
 - EN 300 328 V1.6.1 (11/2004)
 - EN 301 893 V1.3.1 (08/2005)
- EMC: FCC part 15
EN 301 489-17 V1.2.1 (08/2002)
- RoHS: compliant (6 of 6)

WARRANTY

- 1 year limited lifetime hardware warranty
- 90 days software

Ordering Information

PART NUMBER	DESCRIPTION
IP-RS4000-BWW	IronPoint Mobility Series RS4000 Radio Switch with 360° omni-directional antenna and wall/ceiling mount accessories
IP-RS4000-BWW-180	IronPoint Mobility Series RS4000 Radio Switch with 180° directional antenna and wall/ceiling mount accessories



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