Extricom

Extricom RP-23ac Two-Radio Ultra-Thin 802.11ac Access Point with integrated internal antennas

The Extricom Architecture

• Patented Channel-Blanket™ architecture – for getting the most out of 802.11ac

• Highest spectral efficiency with TrueReuse™

• Extremely easy to deploy and grow: No cell planning required

• Zero-Handoff between access points (voice) and no Edge-User-Effect (data)

• Supports channel separation between legacy and 802.11ac devices

• Most suitable architecture for 802.11ac: channel bonding, optimal MIMO capacity

Extricom's exclusive RP-23ac Ultra-Thin™ Access Point is an '802.11ac' field upgradeable dual-radio '802.11n' solution. Ideal for clients with bandwidth intensive applications that require high capacity and throughput from their WLAN, in a highly competitive package.

The RP-23ac is a radio access device and part of Extricom's innovative Channel-Blanket™ architecture. Attached to the Extricom switch-controller, this Access Point creates one or two wireless blankets without running any software and without the need for configuration. Interference between the access points is completely eliminated by the integrated switch intelligence. Mobile devices traversing the blanket are attached to one homogeneous network and are associated with the switch and not to a particular AP, ensuring they never disconnect.

The Extricom RP-23ac is equipped with best of breed latest silicon and radio modules. The most advanced radio layer features provided are Transmit Beam Forming (TxBF), Space-Time Block Code (STBC), Low Density Parity Check (LDPC), Maximum Likelihood (ML) detection, Maximum Ratio Combining (MRC) and Cyclic Delay Code (CDC).
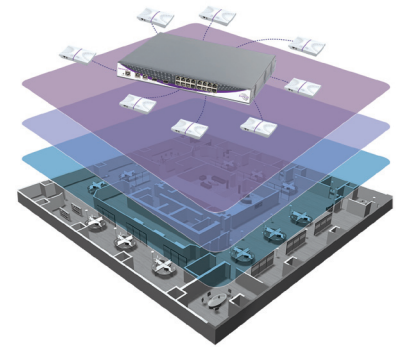
Features and Benefits

Perfect Fit
Deploying 802.11.ac networks with wide channels intensifies spectrum challenges as there are fewer channels available to re-use across the service area. Channel-Blanket is the most effective way to deploy 802.11ac simply because it uses most effectively those wide channels by super positioning instead of partitioning or micro-celling.

Zero Interference – More Coverage
Using Channel-Blanket APs circumvents co-channel interference altogether by relinquishing decisions to the central switch-controller. Contrary to multi-channel deployments that cope with co-channel interference by lowering the the APs Tx power and using smaller cells, Channel-Blanket can keep the same area covered with the same number of APs suing the same Tx power.

Future Proof
With hassle free upgrades to 802.11ac blankets, without any hardware replacements, installing RP-23ac today and switching on the "ac" option as the new standard takes off by updating the firmware is as practical as it is sensible.

Guaranteed Service Level Agreemen
RP-23ac enables physical separation between different services (e.g. video, voice and data) by assigning different frequency channels to different services. Physical separation between very slow devices e.g. 802.11g wireless clients and very fast devices such as three streams 802.11ac wireless clients overcomes 'the weakest link' effect, detrimental to aggregate network throughput. RP-23ac AP deployment density delivers blanket seamless coverage and a guaranteed communications rate everywhere.

Immune to MIMO Coverage Variability
RP-23ac employs Extricom's unique patent pending technology for improved transmission on MIMO deployments for reliably high throughput and "black hole free" MIMO blanket coverage. All APs receive traffic on the same channel. As a direct result, the Extricom blanket WLAN provides uplink path diversity for lower delay latency and higher uplink throughput.

Integrated antennas & Standard PoE
The RP-23ac is equipped with internally integrated antennas. RP-23ac is 802.3af PoE (Power over Ethernet) compliant. Since the RP-23ac is highly energy efficient, both radios can operate concurrently out of the given energy budget of 802.3af.

Key Features

- Dual-Radio Access Point with Integrated Antennas - Works in Mixed 802.11 a/b/g/n/ac Environments

- Transmit Beam forming (TxBF) for signal phase alignment and improved range

- Space Time Block Code (STBC) provides added robustness for an environment where there are multiple transmit chains and only a single receiver chain

- Low Density Parity Check (LDPC) technology provides improved performance in error detection and correction

- Maximum Likelihood (ML) detector to achieve higher accuracy demodulation

- Maximal Ratio Combining (MRC)

- Rx Peak Detection for interference detection, providing better performance in environments with a high level of interference

- Zero AP-to-AP Handoff Delay

- Link Resilience with AP Path Diversity

- Anti-Breach Security and Built-in Rogue AP Detection

- Zero–Configuration Device

- Standard 802.3af PoE on single cable supports full-rate on all radios concurrently

- Multi-layered security including standards-based RSN security and rogue detection

- Integral Hanging brackets, and optional ceiling mounted brackets.

WLAN Standards

WLAN	IEEE 802.11ac, 5 GHz*
	IEEE 802.11a/b/g/n, 2.4 GHz and 5GHz

Spectrum

Number of simultaneous channels	Two 802.11a/b/g/n channels or one 802.11a/b/g/n and one 802.11ac*
Operating Frequencies	(Per each country regulatory domain) 5.180–5.825 GHz 2.412 – 2.484 GHz

Supported Rates (Mbps)

802.11ac data rates (5 GHz)*	
80MHz (GI=800ns)	MCS 0-9: 29.3, 58.5, 87.8, 117, 175.5, 234, 263.3, 292.5, 351, 390
80MHz (GI=400ns)	MCS 0-9: 32.5, 65, 97.5, 130, 195, 260, 292.5, 325, 390, 433.3
40MHz (GI=800ns)	MCS 0-9: 13.5, 27, 40.5, 54, 81, 108, 121.5, 135, 162, 180
40MHz (GI=400ns)	MCS 0-9: 15, 30, 45, 60, 90, 120, 135, 150, 180, 200

802.11n data rates (2.4 GHz and 5 GHz)	
20MHz (GI=800ns)	MCS 0-7: 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, MCS 8-15: 14.4, 28.9, 43.3, 57.8, 86.7, 115.6, 130, 144.4
40MHz (GI=800ns)	MCS 0-7: 13.5, 27, 40.5, 54, 81, 108, 121.5, 135 MCS 8-15: 27, 54, 81, 108, 162, 216, 243, 270
40MHz (GI=400ns)	MCS 0-7: 15, 30, 45, 60, 90, 120, 135, 150 MCS 8-15: 30, 60, 90, 120, 180, 240, 270, 300

Transmitter Power (Max)

802.11ac*	18 dBm
802.11n	19 dBm
802.11g/b	20 dBm
802.11a	19 dBm

Antenna Specifications

802.11a/b/g/n radios	2 dual-band omni-directional antennas
802.11ac radio	3 single band omni-directional internal antennas

Regulations Approval*

Safety	UL 60950-1 EN 60950-1 IEC 60950-1
EMC	FCC Part 15 class B EN 331 489 VCCI Technical Requirements, V-3/2001.04
Radio (including modular approval)	FCC Part 15 C and FCC Part 15 E EN 330 328 EN 331 893 Japan Type Certificate: Article 2, clause 1 FCC15.407 EN 301 893 (v1.6.1)

Regulatory approvals for 802.11ac are in process.

Physical Properties

Dimensions (W x H x D)	196 x 42 x 125 mm
Weight	0.273 kg (0.71 lbs)
Installation Options	Horizontal (desktop), Vertical (wall mount) or Top (Ceiling)
Power	PoE (IEEE 802.3af) Power Supply (optional): 48VDC

Environmental

Operational	Temperature: -5°C to +45°C (23°F to 113°F) Humidity: 0% to 95%, non-condensing
Storage	Temperature: - 20°C to +70°C (-4°F to 158°F) Humidity: 0% to 90%, non-condensing

Ordering Information

Extricom RP-32n	Extricom Three-Radio Ultra-Thin Access Point with three 802.11a/b/g/n dual streams radios, with integrated omni directional antennas.

Related Products

Product	Total No. of Radios	No. of radios for each Spatial Streams category		
		Single stream	Dual streams	Triple streams
RP-33n	3	-	-	3
RP-32n	3	-	3	-
RP-32EOn**	3	-	3	-
RP-22n	2	-	2	-
RP-22En**	2	-	2	-
RP-30n	3	1	2	-
RP-40En**	4	2	2	-

*Future firmware upgrade required for 802.11ac operation.
** The AP consists of a metal enclosure with connectors for external antennas (not included)

About Extricom:

Extricom Ltd. is a provider of high-performance enterprise wireless networks, based on its Channel Blanket™ technology. Extricom's unique Interference-Free™ single-channel architecture provides wire-like reliability, high throughput, seamless mobility, unparalleled noise immunity, and is easier to install and maintain than alternatives. Extricom wireless LANs deliver high-performance voice, data, video and location services with uninterrupted roaming in the most challenging high-density environments. Extricom's Channel Blanket offers superior scalability to meet tomorrow's multi-service demands and the continued explosion of smartphones, tablets and wearable communication devices. Extricom wireless solutions are used by customers in Education, Healthcare, Manufacturing, Logistics and Warehousing, Retail and Large Public Venues, who have discovered the uncompromising performance, reliability and ease of ownership – the hallmarks of Channel Blanket. Extricom serves its growing global customer base through offices in the USA, Europe and Japan, and by working with a global network of distributors and partners. For more information, visit us at www.extricom.com.

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