EXRP-33n Three-Radio Ultra-Thin 802.11n Access Point with integrated internal Antennas

The Extricom Architecture

• 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 802.11n devices.

• Supports channel separation between services e.g. voice and data.

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

Extricom's exclusive EXRP-33n offers a high performance Three-Radio Ultra-Thin™ Access Point, designed for the increasing demands for speed and capacity from today's enterprise wireless solutions. Offering the perfect architecture to harness the power of 3x3 MIMO technology, and particularly suited for deployments supporting bandwidth-intensive applications, this access point is ideal for installations that demand a solution that will enhance the Extricom Channel Blanket's inherently high throughput whilst maintaining the other unique advantages of the architecture, such as zero-handoff mobility, aggregated TrueReuse™ and SameBand™.

The EXRP-33n is a radio access device and part of Extricom's innovative Channel Blanket™ architecture. Attached to the Extricom switch, the Extricom Access Points create three 802.11n 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 EXRP-33n is equipped with the latest best-of-breed 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).
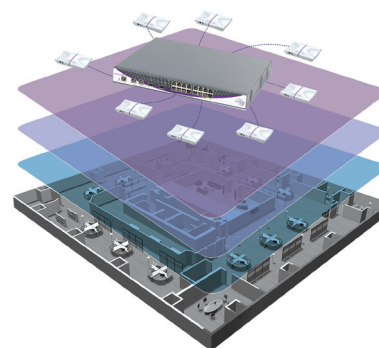
Features and Benefits

Guaranteed Service Level Agreement

EXRP-33n enables physical separation between different services (e.g. video, voice and data) by assigning different frequency channels to services. Physical separation between very slow devices e.g. 802.11b wireless clients and very fast devices such as three streams 802.11n wireless clients overcomes 'the weakest link' effect, detrimental to aggregate network throughput. EXRP-33n AP deployment density delivers blanket seamless coverage and a guaranteed communications rate everywhere.

Ease of Installation & Zero Configuration

Extricom Ultra-Thin AP deployment does not require cell planning and facilitates true plug-and-play deployment. EXRP-33n is software free hence requires absolutely no configuration.

Integrated antennas & Standard PoE

The EXRP-33n is equipped with integrated antennas. EXRP-33n is 802.03af PoE (Power over Ethernet) compliant. Since the EXRP-33n is highly energy efficient, all three radios can operate concurrently out of the given energy budget of 8021.af.

Immune to MIMO Coverage Variability

EXRP-33n 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.

Advanced 802.11n enhancements

The EXRP-33n is equipped with latest physical layer (radio) technologies which directly improve rate-over-range performance (LDPC, TxBF and MLD).

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Key Features

- Tri-Radio Access Point with Integrated Antennas - Works in Mixed 802.11 a/b/g/n Environments.
- Up to 450 Mbps air rate (Up to 260Mbps TCP traffic) with 3x3:3 Spatial Stream MIMO
- Transmit Beam forming (TxBF) for signal phase alignment and improved range*
- Space Time Block Cycle (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
- WEP, TKIP and AES hardware encryption
- 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 WPA2 security and rogue detection
- Integral Hanging brackets, and optional ceiling mounted brackets.

* Future firmware upgrade required.

WLAN Standards

WLAN	EEE 802.11n, 2.4GHz and 5GHz IEEE 802.11g, 2.4GHz (Pure mode, mixed mode) IEEE 802.11b, 2.4GHz (Short/long preamble support) IEEE 802.11a, 5GHz

Spectrum

Number of simultaneous channels	Up to three simultaneous 802.11a/b/g/n channels
Operating Frequencies	2.412 – 2.484 GHz 5.180–5.825 GHz

Supported Rates (Mbps)

802.11a	6, 9, 12, 18, 24, 36, 48, 54
802.11g	1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48, 54
802.11b	1, 2, 5.5, 11
802.11n	**20MHz, SGI:** 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 MCS 16-23 21.7, 43.3, 65, 86.7, 130,173.3,195, 216.7 **40MHz, SGI:** MCS 0-7 15, 30, 45, 60, 90, 120, 135, 150 MCS 8-15 30, 60, 90, 120, 180, 240, 270, 300 MCS 16-23 45, 90, 135, 180, 270, 360, 405, 450

Transmitter Power (Max) *

802.11n	22 dBm
802.11g/b	22 dBm
802.11a	21 dBm

* Maximum power may be limited by regulation.

Rogue AP Detection

Infrastructure	Optional chosen radio on each AP
Functionality	Automated, continuous monitoring, ensures fast detection of rogue AP
Additional Features	Configurable "white list" of allowed BSSIDs

Antenna Specifications

Per each Radio	The number of antennas matches the number of streams, 2/3 dual-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 are in process.

Physical Properties

Dimensions (W x H x D)	196 x 42 x 125 mm 7.7 x 1.6 x 4.9"
Weight	0.293 kg (0.65 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 +55°C (23°F to 131°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

EXRP-33n	Extricom Three-Radio Ultra-Thin Access Point with three 802.11a/b/g/n 2/3 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
EXRP-33n	3	-	1	2
EXRP-32n	3	-	3	-
EXRP-22n	2	-	2	-
EXRP-22En*	2	-	2	-
EXRP-30n	3	1	2	-
EXRP-40En*	4	2	2	-

*AP in a metal enclosure with external antennas (not included)

About Extricom:

Extricom is a manufacturer of 4th generation enterprise wireless LAN solutions, based on its Channel Blanket™ technology. While adhering to the 802.11 a/b/g/n standard, Extricom's patented, Interference-Free architecture takes a completely new approach to the way the infrastructure is deployed. The Channel Blanket topology provides wire-like reliability, high throughput, seamless mobility, unparalleled noise immunity, and is easy to install and maintain. In an era of intensive wireless usage powered by the market explosion of smart phones, iPads, iPods, tablets and other communication devices, voice, data, video, and location services are delivered with an always-on, robust and mobile Wi-Fi connection to any client, in any environment. Extricom Interference-Free™ WLAN is purpose-built to slash wireless complexity and future-proof your network for tomorrow's multi-service demands.

Extricom solutions are in use by customers operating in numerous industries worldwide, including Education, Healthcare, Manufacturing, Logistics and Warehousing, Retail and Public Venues. They have discovered the uncompromising performance, reliability and ease of ownership that are the hallmark of the Extricom WLAN.

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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