Extricom™ Series LV-2000

LARGE VENUE, HIGH-DENSITY WIRELESS LAN SOLUTION

The Allied Telesis Extricom Series LV-2000 WLAN Switch provides a Wi-Fi solution for high-density large venues, with robust connectivity and high throughput for thousands of wireless clients in convention centers, arenas, and open air stadiums.

The AT-EXLV-2000 is the perfect solution for mobile network operators who need to offload data traffic from these challenging cellular environments to the venues' Wi-Fi networks. As well as unmatched capacity, the AT-EXLV-2000 offers a simple and cost-effective deployment—requiring no complex RF cell planning, and fewer Access Points (APs) compared to traditional solutions.

Large venue, high-density WLAN deployments and Extricom Series Channel Blanket™: a perfect fit

Delivering wireless Internet in densely populated public venues such as arenas and open air stadiums is no easy technological feat, since cellular networks are unable to provide reliable wireless service to thousands of people, all connecting at once. The Allied Telesis Extricom Series dedicated large public venues solution resolves the technical obstacles, building on years of expertise in delivering Wi-Fi in the most challenging environments.

The Channel Blanket architecture underlying the Allied Telesis wireless solution is designed to offer high capacity and Wi-Fi performance—even in the most challenging environments. As such, it inherently addresses large public venue issues such as co-channel interferences, the high density of mobile clients, and the problematic placement of APs.

Key Features

Patented Channel Blanket Architecture provides unprecedented ease of installation

» Allied Telesis Extricom Series WLAN deployment does not require cell planning, and facilitates true plug-and-play deployment. Moreover, the Extricom Series Channel Blanket architecture is a perfect match for the unpredictable coverage patterns of 802.11ac and 802.11n APs. In the Channel Blanket deployment, overlapping coverage from adjacent UltraThin APs is not a problem.

Superior scalability

» The Allied Telesis Extricom WLAN switch supplies power for all the connected Extricom UltraThin APs through built-in PoE, eliminating the need for AC power at the APs. Each AT-EXLV-2000 supports up to 16 UltraThin APs, 2 Channel Blankets and a maximum of 48 radios. It can also be deployed in a cascaded pair to support up 32 UltraThin APs, 2 Channel Blankets and a maximum of 96 radios.

Continuous mobility

» Allied Telesis Extricom Series multi-layer, multi-channel architecture with overlapping Channel Blankets provides physical segregation of wireless clients and applications. Voice clients can be isolated on one channel, data clients on another, and legacy 802.11n clients can be separated from newer 802.11ac or other 802.11n clients. This flexible approach translates into much higher throughput, more stable and predictable wireless LAN performance, and the ability to offer guaranteed service levels.

Centralized management

» AT-EXLV-2000 platforms are managed by a user-friendly Web Management application, in small deployments or with the CloudBlanket NMS, a comprehensive cloud-based system that enables the efficient management of large deployments.

» Both management platforms implement the Fault, Configuration, Accounting, Performance, and Security (FCAPS) model.

Flexible connectivity

» Each AT-EXLV-2000 provides two uplink Gigabit Ethernet ports to connect to the wired LAN, and supports 16 Gigabit Ethernet ports with Power over Ethernet (PoE) to attach up to 16 Extricom UltraThin APs. A pair of AT-EXLV-2000 switches can be cascaded together and connected to 32 Extricom UltraThin APs. The hardware platform in standalone deployments is available with 16-port licenses. In the cascade mode it is available with a 32-port license.

Channel Blanket takes a different approach to traditional microcell topologies, which assign each AP a single Wi-Fi channel and require intensive cell planning to minimize co-channel interference. With Channel Blanket, no frequency planning or interference mitigation is necessary between APs.

Multiple APs are placed on the same channel, creating a blanket of coverage that uses the same channel across the entire venue. Several channel blankets, of non-overlapping channels, are created on both 2.4GHz and 5GHz bands, with each channel blanket covering the entire space. The Channel Blanket topology delivers complete coverage with no co-channel interference.

AP and antenna placement

With co-channel interference issues eliminated by Channel Blanket, the deployment of APs is a straightforward process. There's no need for placing APs under concrete seats, or lowering transmission power in order to decrease cell coverage.

APs can be placed in close proximity to each other—creating shorter distances between end users and APs and providing improved link budgets.

In addition, the Allied Telesis Extricom Series high-density large venues solution uses high-gain directional antennas, which improve the link budget between APs and mobile clients, providing higher transmission rates and channel availability.

An arena or stadium can be split into a large number of sections using many APs, operating on the same channel, without the risk of RF interference between mobile clients and APs.

Specifications

WLAN Standards

WLAN	IEEE 802.11a/b/g/n
	IEEE 802.11e/WMM
Ethernet	IEEE 802.3x, full/half duplex
	IEEE 802.3af Power over Ethernet

Security

Encryption	802.11i hardware-based encryption for:
	WEP-64 and WEP-128
	WPA-TKIP / AES (CCMP)
	WPA2-TKIP / AES (CCMP)

Interfaces

WLAN Ports (to APs)	Sixteen (16) Gigabit Ethernet ports
LAN Ports (Uplinked to wired LAN)	Two (2) Gigabit Ethernet RJ45/ SFP Combo Ports

Physical Specifications

Dimensions (W x H x D)	441 mm × 44 mm × 371 mm (17.4 in × 1.7 in × 14.6 in)
Weight	3.6 kg (7.9 lbs)
Installation options	Rack mount (19 in 1U) and desktop
LEDs	Power
	LAN Activity
	Activity on AP ports
Power	PoE to WLAN ports
	Built in IEEE 802.af injectors

Environmental

Operating temperature	0°C to 45°C (32°F to 113°F)
Operating humidity	0% to 90%, non-condensing
Storage temperature	-20°C to 70°C (-4°F to 158°F)
Storage humidity	0% to 90%, non-condensing

Regulations Approval

Safety	EN609501:2006+A11:2009+A1:2010+A12:2011
	cTUVus
EMC	EN 55022:2010
	EN 55024:2010
	EN 300 386 V1.4.1:2008-04
	FCC CFR 47 Part 15 Subpart B, Industry Canada ICES-003:04; C108.8-M1983 VCCI Technical Requirements, V-3/2001.4

Ordering Information

AT-EXLV-2000
Extricom Series LV-2000 Large Venue Wireless LAN switch platform

AT-EXLC-LV
Extricom Series Software License for fully populated AT-EXLV-2000 Wireless LAN switch platform with 16 Ultra-Thin Access Points

AT-EXLC-LV-3200
Extricom Series Software License for fully populated dual AT-EXLV-2000 Wireless LAN switch platforms in cascade configuration with 32 Ultra-Thin Access Points

Related Products

AT-EXRP-22n
UltraThin Two-radio, Two-stream Access Point, equipped with 2 x 802.11 a/b/g/n radios with internal antennas

AT-EXRP-22En
UltraThin Two-radio, Two-stream Access Point with Connectors for External Antennas, equipped with 2 x 802.11 a/b/g/n Radios and 4 x RP SMA female connectors

AT-EXRP-32n
UltraThin Three-radio, Two-stream Access Point, equipped with 3 x 802.11 a/b/g/n radios with internal antennas

AT-EXRP-32EOn
UltraThin Three-radio, Two-stream Outdoor Access Point for External Antennas, equipped with 3 x 802.11 a/b/g/n Radios and 6 x N-type female connectors and pole-top mounting bracket

AT-EXRE-1000
Power over Ethernet (PoE) Range Extender for 100/1000Mbps

AT-EXMC-1000
Media convertor (Fiber-Copper ; Copper- Fiber)

AT-EXLC-CBNMS
CloudBlanket Network Management System