AT-TQ2450

ENTERPRISE-CLASS, WIRELESS ACCESS POINT WITH IEEE 802.11n DUAL-BAND RADIOS

The Allied Telesis AT-TQ2450 Enterprise grade wireless Access Point (AP) is capable of 600Mbps throughput and operates at both 2.4GHz and 5GHz frequencies.

The AT-TQ2450 is based on IEEE 802.11n, with two-spatial-stream Multiple Input and Multiple Output (MIMO) technology. This technology delivers speeds up to six times faster, and provides up to three times wider coverage than IEEE 802.11a/g.

The AT-TQ2450 can operate in either standalone or companion mode with a wireless access controller, thereby meeting Enterprise business needs.

A centralized design allows lower-cost Wireless LAN (WLAN) upgrades, and reduces operating costs by making your network simple to configure and manage. A single point of management, based on a Cluster Control feature, allows you to easily manage all your network APs.

The AT-TQ2450 with cluster management provides greatly enhanced performance levels, with:
» Simplified Plug and Play management with automatic channel assignment
» Control of end-to-end Quality of Service
» Continuous and adaptive radio monitoring.

The Cluster Control feature is also available when the device is in standalone mode, because a master device may be elected as the main controller for provisioning, firmware upgrade and dynamic RF coverage arrangement.

The AT-TQ2450 is equipped with advanced encryption and authentication IEEE 802.11i capabilities. It protects your WLAN by segmenting public and private access with multiple Basic Service Set Identifications (BSSIDs) and VLAN Tagging. Rogue AP detection provides the ability to detect unauthorized access points, thus preventing unauthorized entry to your wireless network.

The AT-TQ2450 can be powered via Ethernet (IEEE 802.3af - PoE) and is desktop, wall, or ceiling mountable.

Key Features

Flexible management methodology
The AT-TQ2450 can operate in either standalone or companion mode with a wireless access controller. This flexibility allows you to select the management approach that best fits your network.

For large scale network deployment, a wireless controller offers a single point of management for operation, administration, and maintenance of all your APs.

Clustering is suitable for medium scale networks, because a single management point synchronizes provisioning for a group of APs. It also optimizes wireless coverage, due to dynamic channel selection among group members.

As a standalone AP, the AT-TQ2450 detects adjacent APs and acts promptly to prevent radio interference.

IEEE 802.11n technology
Advanced IEEE 802.11n technology provides a high-performance, wireless link with improved bandwidth, efficiency and robustness, and allows for backwards compatibility with older IEEE 802.11a/b/g products. This high level of throughput and range performance supports multimedia applications such as high-definition video streaming.

The AT-TQ2450 combines IEEE 802.11n technology with antenna diversity, to mitigate the fading effect of a multipath environment. This improves the reliability and capacity of the MIMO system.

IEEE 802.11e (Wireless Multimedia)
Quality of Service (QoS) on WLAN optimizes resource use and fulfills the requirements of video, voice, and data applications Each of these applications creates different latency, bandwidth and packet error rate needs, and QoS caters for each of these needs using data traffic prioritization.

IEEE 802.11i (Security)
This feature set facilitates strong encryption, authentication and key management strategies, guaranteeing data and system security. Besides Temporal Key Integrity Protocol (TKIP) and Counter Mode with Cipher Block Chaining Message Authentication Code Protocol (CCMP), IEEE 802.1X key distribution via RADIUS controls access to your network.

Multiple-SSIDs and SSID-to-VLAN mapping
SSID enables wireless connectivity for client devices that are assigned different security policies. Mapping SSIDs to VLANs creates logical network separation, which differentiates between communication by application, functions or user communities.

Dynamic VLANs
Dynamic VLANs allow VLANs to be dynamically assigned on a per-user (wireless client) basis. The Dynamic VLAN feature interacts with an external RADIUS server, so that user information is centralized in RADIUS for ease of management. You do not have to configure user information on APs.

The AT-TQ2450 also supports RADIUS server redundancy, via configuration of a secondary RADIUS server.

PoE - IEEE 802.3af conformance
AT-TQ2450 conforms to the IEEE 802.3af standard. This gives you simplified deployment, lower installation costs and centralized power management capabilities for your critical network devices.

Graphical User Interface
The Web-based user interface is user-friendly and intuitive, minimizing training needs.

Mounting options
As well as simple desktop installation, the AT-TQ2450 comes with an optional bracket to allow wall and ceiling mounting. A Kensington lock-style hole is also provided for anti-theft security.

AT-TQ2450 with smart cover

AT-TQ2450 with wall/ceiling mounting kit

Network Services

Management
» Centralized management via:
  » Allied Telesis Unified Wireless Controller
  » Clustering (up to 16 members)
» Stand-alone AP
» Graphical User Interface (HTTP, HTTPS)
» Simple Network Management Protocol (SNMPv1, v2c)
» Extended MIB set

Bridging
» VLAN tagging (up to 4094 VLANs)

Security
» Authentication, Authorization and Accounting:
  » 64-bit,128-bit WEP encryption/decryption
  » Hardware-accelerated AES encryption/decryption
  » IEEE 802.1x authentication
  » WPA/TKIP, WPA2/CCMP
  » Extensible Authentication Protocol (EAP)
  » Protected Extensible Authentication Protocol (PEAP)
  » IEEE 802.1X RADIUS support
  » Network Access Control (NAC)
  » L2~L4 ACLs
  » IEEE 802.1X port-based access control
  » IEEE 802.1X dynamic VLAN assignment
  » Rogue AP detection

Utility Features
» DHCP client
» DNS client
» NTP client
» File transfer
» Logging
» Statistic information gathering

Wireless Features
» IEEE 802.11a/b/g
» IEEE 802.11n - 2x2 MIMO chains with antenna diversity
» IEEE 802.11d
» IEEE 802.11e (WMM)
» IEEE 802.11h (DFS/TPC)
» IEEE 802.11i (enhanced Security)
  » WPA/WPA2-Personal
  » WPA/WPA2-Enterprise
» Extensible Authentication Protocol (EAP):
  » 3rd Generation Authentication and Key Agreement (EAP-AKA)
  » Flexible Authentication via Secure Tunneling (EAP-FAST)
  » GSM Subscriber Identity (EAP-SIM)
  » Transport Layer Security (EAP-TLS)
  » Tunneled Transport Layer Security (EAP-TTLS/MSCHAPv2)
  » Protected Extensible Authentication Protocol (PEAP)

» Generic Token Card (PEAPv0/EAP-MSCHAPv2)
» Microsoft CHAP v2 (PEAPv1/EAP-GTC)
» Regulatory domain compliance
» Operating mode:
  » Access Point (up to 200 clients)
  » Wireless Distribution System
» Enhanced Auto Channel Selection, with periodical refresh
» SSID hiding/ignoring
» Multiple SSID (up to 16 per port)
» VLAN to SSID mapping
» User scan list
» Advanced wireless interface tuning:
  » Beacon period
  » Client isolation
  » Client max association
  » IEEE 802.11b fall-back control
  » IEEE 802.11n Guard Interval
  » Short radio preamble
  » Short slot time
» Advanced wireless service via UWC:
  » Captive Portal
  » Dynamic channel planning
  » Dynamic RF coverage optimization
  » Plug and Play support (authentication and configuration)
  » Stand-alone fallback
  » Wireless client Denial of Service
» Media Access Protocol:
  » CSMA/CA with ACK architecture 32-bit MAC

Compliance

Certificates
RCM
CE
FCC
EAC
KC
TUV-T
Wi-Fi certified (ID: WFA8879)

Electromagnetic Compatibility (EMC)
EN 61000-6-3
EN 301 489-17
FCC 47 CFR Part 15, Subpart B

Medical (EMC)
EN 60601-1-2

Radio Equipment
EN 300 328
EN 301 893
FCC 47 CFR Part 15, Subpart C
FCC 47 CFR Part 15, Subpart E

Safety
EN 60950-1
IEC 60950-1
UL 60950-1
CSA C22.2 No. 60950-1
UL 2043

Environmental Specifications

Operating temperature	0° to 50°C (32° to 122°F) powered by means of PoE
	0° to 40°C (32° to 104°F) powered by means of PSU
Storage temperature	-20° to 60°C (-4° to 140°F)
Relative humidity	80% relative, non condensing
MTBF	50,000 hours Telcordia SR332

Physical Specifications

Dimensions (W x D x H)	228 x 160 x 44 mm 8.98 x 6.3 x 1.74 in
Weight	1 Kg (2.2 lbs)
Case	Metal enclosure

Power Characteristics

AC/DC adapter	
Input Voltage	100 ~ 240 VAC
Frequency	47 ~ 63 Hz
Max consumption	8W
PoE Powered Device	
Input Voltage	IEEE 802.3af (class 3)
Max consumption	10.1W

Interfaces

Wired	
Type	Ethernet
Standard	IEEE 802.3 (10BASE-T) IEEE 802.3u (100BASE-TX) IEEE 802.3ab (1000BASE-T)
Ports	1
Connector	RJ-45 Female
Wireless	
Type	WLAN
Standard	IEEE 802.11a/b/g/n
Ports	2
Connector	6x RP-SMA Female

Radio Characteristics

	IEEE 802.11a	IEEE 802.11a/n	IEEE 802.11b	IEEE 802.11g	IEEE 802.11g/n
FREQUENCY RANGE					
	4.9GHz ~ 5.85GHz		2.3GHz ~ 2.5GHz		
MODULATION TECHNIQUE					
	OFDM (BPSK, QPSK, 16QAM, 64QAM)		DSSS (DBPSK, DQPSK, CCK)	OFDM (BPSK, QPSK, 16-QAM, 64-QAM)	
OUTPUT POWER [1]					
	15 dBm @ 6Mbps 10 dBm @ 54Mbps	20 MHz: 15 dBm @ MCS0/8 10 dBm @ MCS7/15 40MHz: 15 dBm @ MCS0/8 10 dBm @ MCS7/15	18 dBm @ 1Mbps 18 dBm @ 11Mbps	18 dBm @ 6Mbps 14 dBm @ 54Mbps	20 MHz: 18 dBm @ MCS0/8 14 dBm @ MCS7/15 40 MHz: 18 dBm @ MCS0/8 14 dBm @ MCS7/15
RECEIVE SENSITIVITY					
	-82 dBm @ 6Mbps -81 dBm @ 9Mbps -79 dBm @ 12Mbps -77 dBm @ 18Mbps -74 dBm @ 24Mbps -70 dBm @ 36Mbps -66 dBm @ 48Mbps -65 dBm @ 54Mbps	20 MHz: -82 dBm @ MCS0/8 -64 dBm @ MCS7/15 40 MHz: -79 dBm @ MCS0/8 -61 dBm @ MCS7/15	-89 dBm @ 1Mbps -87 dBm @ 2Mbps -89 dBm @ 5.5Mbps -83 dBm @ 11bps	-82 dBm @ 6Mbps -81 dBm @ 9Mbps -79 dBm @ 12Mbps -77 dBm @ 18Mbps -74 dBm @ 24Mbps -70 dBm @ 36Mbps -66 dBm @ 48Mbps -65 dBm @ 54Mbps	20 MHz: -82 dBm @ MCS0/8 -64 dBm @ MCS7/15 40 MHz: -79 dBm @ MCS0/8 -61 dBm @ MCS7/15
DATA RATES					
	54, 48, 36, 24, 18, 12, 9, 6 Mbps, auto-fallback	@ 400GI, 20 MHz: 2Nss: ≤ 144.4Mbps @ 400GI, 40MHz: 2Nss: ≤ 300Mbps @ 800GI, 20MHz: 2Nss: ≤ 130Mbps @ 800GI, 40MHz: 2Nss: ≤ 270Mbps	11, 5.5, 2, 1 Mbps, auto-fallback	54, 48, 36, 24, 18, 12, 9, 6 Mbps, auto-fallback	@ 400GI, 20 MHz: 2Nss: ≤ 144.4Mbps @ 400GI, 40 MHz: 2Nss: ≤ 300Mbps @ 800GI, 20 MHz: 2Nss: ≤ 130Mbps @ 800GI, 40 MHz: 2Nss: ≤ 270Mbps

[1] Output power is the maximum signal level delivered by the radio. The signal level is automatically limited in accordance to the selected regulatory domain.

Ordering Information

AT-TQ2450-xx
Enterprise Class Wireless AP
with IEEE 802.11n dual-band radios

Where xx =

[none] Regulatory Domain: Worldwide (except United States and Canada)
No AC/DC adapter included

01 Regulatory Domain: United States and Canada
Reserved
No AC/DC adapter included

11 Regulatory Domain: United States and Canada
Reserved
AC/DC adapter and one power cord included (USA/Canada)

60 Regulatory Domain: Worldwide (except United States and Canada)
AC/DC adapter and four power cords included (USA/Canada, Europe, Australia, UK)

Associated Products

AT-UWC
Unified Wireless Controller for enterprises

AT-BRKT-J26
Wall/ceiling mount kit for AT-TQ2450

AT-CVR-01
Smart cover for AT-TQ2450

Allied Telesis

the **solution** : the **network**