TQ Series Wireless
PRODUCT INFORMATION

Allied Telesis

AT-TQ4600
ENTERPRISE-CLASS WIRELESS ACCESS POINT

The Allied Telesis AT-TQ4600 Enterprise-class Wireless Access Point features an IEEE 802.11ac 3ss dual-band 2.4/5GHz radio and embedded antenna, capable of 1750Mbps raw wireless capacity.

The AT-TQ4600 is based on IEEE 802.11ac, with three-spatial-stream Multiple Input and Multiple Output (MIMO), which can deliver up to twice the wireless capacity of 802.11n access points.

The AT-TQ4600 may operate either in standalone, AP-cluster, or controlled by UWC controller, and is suitable for a wide range of deployments — from SMBs to large Enterprises.

In large deployments with centralized control and management by UWC WLAN controller, operating costs are kept low by making the network simple to configure, monitor, and manage. For smaller deployments, without the UWC controller, the APs can function either as standalone APs or as a cluster of APs. When operating as a cluster, the APs are grouped to share the configuration and manage the channel automatically, and there is a single point of management, allowing easy management of all access points. It will reduce the cost for multiple AP configuration and operation management.

The AT-TQ4600 is equipped with advanced encryption and authentication IEEE 802.11i capabilities. It protects a WLAN by segmenting public and private access with multiple Service Set Identifications (SSIDs) and VLAN Tagging. Rogue access point detection provides the ability to detect unauthorized access points, thus preventing unauthorized entry to the wireless network.

The AT-TQ4600 can be deployed on desktop or by mounting on wall or ceiling. Power may be provided via Power over Ethernet (IEEE 802.3at PoE) or with an optional AC/DC power adapter.

Key Features

Flexible management
The AT-TQ4600 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 access points.

Clustering offers a single management point, which synchronizes provisioning for a group of access points. It also optimizes wireless coverage, due to dynamic channel selection among group members.

As a standalone access point, the AT-TQ4600 detects adjacent access points and acts promptly to prevent radio interference.

IEEE 802.11ac technology
Advanced IEEE 802.11ac technology provides a high-performance wireless link with improved bandwidth, efficiency, and robustness, and allows for backward compatibility with older IEEE 802.11a/b/g/n clients. This high level of throughput and range performance supports multimedia applications such as high definition video streaming. The MIMO system improves reliability and capacity, mitigating the fading effects of a multipath environment.

IEEE 802.11e Wireless Multimedia (WMM)
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 to 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 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. It is not necessary to configure user information on APs.

The AT-TQ4600 also supports RADIUS server redundancy, via configuration of a secondary RADIUS server.

PoE - IEEE 802.3at conformance
AT-TQ4600 conforms to the IEEE 802.3at standard. This enables simplified deployment, lower installation costs, and centralized power management capabilities for 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-TQ4600 includes a kit for wall and ceiling mounting. A Kensington lock or padlock are suitable for anti-theft security.

Specifications

Operational Mode
Centrally controlled and managed by Allied Telesis Unified Wireless Controller
AP Cluster (up to 16 members)
Standalone

Management
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:
- » 128-bit 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
- » Layer 2 - Layer 4 ACLs
- » IEEE 802.1X dynamic VLAN assignment
- » Rogue AP detection

Utilities
DHCP client
DNS client
NTP client
File transfer
Logging
Statistic information gathering

Wireless
IEEE 802.11a/b/g/n/ac 3x3:3ss MIMO
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
Extended Service Set (ESS)
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)
- » Standalone fallback
- » Wireless IDS

Media access protocol
- » CSMA/CA with ACK architecture 32-bit MAC

Compliance

Certificates
CE
EAC
FCC
IC
KC
RCM
TUV-T
Wi-Fi Certified (ID: WFA55543)

ElectroMagnetic Compatibility
EN 301 489-1
EN 301 489-17
EN 55022, Class B
EN 55024
EN 61000-3-2, Class A
EN 61000-3-3
EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-11
AS/NZS CISPR 22, Class B
FCC 47 CFR Part 15, Subpart B
ICES-003

Medical (EMC)
EN 60601-1-2
CISPR 11

Radio Equipment
EN 300 328
EN 301 893
AS/NZS 4268
FCC 47 CFR Part 15, Subpart C
FCC 47 CFR Part 15, Subpart E
FCC part 2
RSS-210
RSS-Gen
RSS-102

Safety
UL 60950-1: 2003, First Edition
CSA c22.2 No.60950-1 1st Ed. April 1, 2003
EN 60950-1
IEC 60950-1

Technical Specifications

MTBF
1,172,600 hours (30°C)
646,600 hours (40°C)
Telcordia SR-332 Issue 3

Power Characteristics
PoE

» Input voltage:	IEEE 802.3at
» Max. consumption:	16W
» Avg. consumption:	9.8W

AC/DC power adapter

» Rated input voltage:	AC 100–240 V
» Input voltage range:	AC 90–264 V
» Rated frequency:	50/60 Hz
» Max. consumption:	16W
» Avg. consumption:	10.9W

Environmental Specifications

Operating temperature:	0° to 40°C (32° to 104°F)
Operating humidity:	≤80% relative (non-condensing)
Storage temperature:	-20° to 60°C (-4° to 140°F)
Storage humidity:	≤95% relative (non-condensing)

Physical Specifications

Dimensions (W x D x H):	170 mm x 170 mm x 35 mm (6.70 in x 6.70 in x 1.38 in)
Weight:	476g (1.05 lbs)
Enclosure:	Metal base, plastic cover

Interfaces

Wired

Ethernet

Standard:	IEEE 802.3 (10T) IEEE 802.3u (100TX) IEEE 802.3ab (1000T)
Ports:	1
Connector:	RJ-45 female

Console

Standard:	RS232
Ports:	1
Connector:	RJ-45 female

Wireless

WLAN radio

5 GHz:	IEEE 802.11a/n/ac
2.4 GHz:	IEEE 802.11b/g/n

Embedded Antennas

Omni-directional

Frequency band:	2.4 GHz
Max. peak gain:	3 dBi

Omni-directional

Frequency band:	5 GHz
Max. peak gain:	4 dBi

Radio Characteristics

Standard

- » IEEE 802.11 a/b/g/n/ac

Supported frequencies (country-specific restrictions apply)

- » 2.400 ~ 2.4835 GHz (ISM)
- » 5.150 ~ 5.250 GHz (UNII-1)
- » 5.250 ~ 5.350 GHz (UNII-2, upon DFS approval)
- » 5.470 ~ 5.725 GHz (UNII-2 Extended, upon DFS approval)
- » 5.725 ~ 5.825 GHz (UNII-3)

Modulation Technique

- » 802.11a/g/n/ac: OFDM
- » 802.11b: DSSS, CCK, DQPSK, DBPSK
- » 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
- » 802.11a/g/n: BPSK, QPSK, 16QAM, 64QAM

Media access

- » CSMA/CA + Ack with RTS/CTS

Diversity

- » Spatial diversity

Data Rate

- » 802.11a/g: 54/48/36/24/18/12/9/6Mbps
- » 802.11b: 11/5.5/2/1Mbps
- » 802.11n: 6.5 – 450Mbps (MCS 0 - 23)
- » 802.11ac: 6.5 – 1,300Mbps (MCS 0 - 9, NSS 1 - 3)

[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-TQ4600-xx
Enterprise-class Wireless Access Point with IEEE 802.11ac dual-band radios and embedded antenna

Where xx =

[none]	Regulatory Domain: Worldwide (except United States and Canada)
01	Regulatory Domain: United States and Canada Reserved

Related Products

AT-UWC-60-APL
Wireless LAN controller for enterprises (hardware appliance)

AT-UWC-BaseST
Wireless LAN controller for enterprises (software appliance installer, incl. licenses to manage 10 access points)

AT-TQ0091
AC/DC power adapter for AT-TQ4600

Allied Telesis
the solution : the network

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