

# TQ3403

## Hybrid Wi-Fi 6E (802.11ax) Wireless Access Point

Allied Telesis Enterprise-class TQ3403 Wi-Fi 6E hybrid wireless access point features a 3 radio design supporting 2.4GHz, 5GHz, and 6GHz bands, and a raw capacity of up to 2.4 Gigabits.



### Overview

Allied Telesis TQ3403 Wi-Fi 6E AP is enhanced by our innovative wireless technologies, Autonomous Wave Control (AWC) and AWC-Channel Blanket<sup>1</sup>. These powerful features enable flexible operation and a superior wireless user experience in all environments.

The AWC wireless controller integrated into our Vista Manager network management and monitoring platform, centralizes AP administration. AWC reduces wireless operating costs by autonomously optimizing AP settings for a self-tuning Wi-Fi network. AWC also maps and monitors each wireless area, and configuration templates can be applied to multiple new APs to reduce the time and effort required for installation or network changes.

High-performance is ensured with a 3 radio design (2x2 2.4GHz, 2x2 5GHz, and 2x2 6GHz), with simultaneous use of each of the 3 bands for high capacity and speed up to 2.4 Gigabits.

The power and efficiency of Wi-Fi 6E, and Allied Telesis smart hybrid technologies, enable a wireless MultiDimensional Exchange (MDX). This allows user devices to be managed and tracked as they move not only around the building floor, but between floors too. The innovative MDX wireless solution enables user device tracking in real-time as well as historically for security and auditing purposes.

Flexible installation options include desktop use, and wall or ceiling mounting. Power can be supplied by Power over Ethernet, or by an optional AC power adapter.

<sup>1</sup> Available in a future firmware release

<sup>2</sup> Note that outdoor use of the 6GHz radio band is not permitted

## Key Features

### Wi-Fi 6E

- ▶ IEEE 802.11ax Wi-Fi 6E connectivity delivers fast performance and efficient bandwidth distribution in crowded wireless environments. Use of the 6GHz band (up to 1200 MHz) allows more devices to connect and provides stable high throughput.
- ▶ Wi-Fi 6E features such as OFDMA and SU-MIMO increase AP intelligence in managing multiple client connections at once, providing better throughput, connectivity, and overall performance. With support for increased numbers of clients, and optimization for high-bandwidth and real-time applications like streaming video, the TQ3403 is ideal for education, healthcare, manufacturing, and commercial environments.
- ▶ Wi-Fi 6E increases the power and flexibility of AWC-CB wireless solutions. With AWC-CB, a high-capacity single wireless blanket can connect all devices in a building without any interference or capacity issues, for truly seamless roaming.

### Channel Blanket<sup>1</sup> Hybrid Operation

- ▶ The TQ3403 supports operation in multi-channel, single-channel (Channel Blanket) and hybrid (multichannel and Channel Blanket) modes, for the most flexible wireless solution available.
- ▶ Multi-channel operation provides maximum throughput for high-bandwidth clients, while Channel Blanket operation supports seamless roaming for dynamic environments like warehouses and hospitals, as all APs appear as a single virtual AP.
- ▶ Hybrid mode combines the best of both architectures, enabling an innovative wireless solution that maximizes performance for a superior user experience.

### Fast Roaming

- ▶ Fast roaming 802.11k, 802.11v, and 802.11r optimize discovering and selecting the best available AP in a Wi-Fi network. It establishes rapid connectivity for users to seamlessly move between APs, as the APs exchange security keys, so the client device does not need to re-authenticate on the RADIUS server as they roam.

### Flexible Management

- ▶ The TQ3403 can be managed in standalone mode using an intuitive web-based interface.
- ▶ Autonomous Wave Control (AWC) provides centralized management, and regularly analyses the wireless network, automatically optimizing AP settings to reduce interference and minimize coverage gaps—all with no user intervention.

- ▶ AWC wireless management is available on our Vista Manager EX network management platform, and from Vista Manager mini running on a number of switch and firewall products.

### Captive Portal

- ▶ Manage user access to the Wi-Fi network with captive portal. New users are taken to a login page to authenticate before gaining access to any online resources and applications.
- ▶ Login options include direct online access, external authentication, or redirection to third party services—for example social media sites like Facebook or Twitter.

### QR codes simplify Wi-Fi connectivity

- ▶ Generate a QR code on the AP that can be scanned by smartphones and other wireless devices to enable quick and easy connection to the Wi-Fi network, eliminating the need to enter SSIDs and passwords.

### Passpoint<sup>®</sup> and OpenRoaming

- ▶ Wi-Fi Alliance certified Passpoint enables auto-detection and connection of client devices, removing the need for users to find and authenticate on wireless networks. This provides a flexible Wi-Fi network with a high level of security.
- ▶ OpenRoaming is an international Wi-Fi interoperability standard allowing devices using an applicable profile to automatically connect to OpenRoaming-compliant networks. This ensures ease of use, as well as avoiding security risks such as virus infection and data theft due to misconnection. The TQ3403 can be used to deploy OpenRoaming-compliant Wi-Fi networks in public facilities and event venues.

### Virtual APs with Multiple SSIDs

- ▶ The TQ3403 supports Virtual AP (VAP) functionality, with the assignment of different SSIDs and security policies for each VAP on the physical device.
- ▶ VAPs can be mapped to VLANs for logical network separation and improved throughput. Enable communication by application, function or users.

### Wi-Fi Scheduler

- ▶ Radio signal strength on the AP can be scheduled to suit the time of day, with different levels at different times. For example, turning off radio signals late at night, when the Wi-Fi network may not be in use, can prevent unauthorized access and save power.

## Key Features

### AMF-Security and Application Proxy<sup>3</sup>

- ▶ The AMF-Security (AMF-Sec) solution enables internal LAN threat detection and automatic end-point isolation to protect the network. If a firewall detects suspicious traffic or a threat such as a virus from a wireless device, it informs the AMF-Sec controller, which uses the AMF Application Proxy to communicate and enable to AP to block or quarantine the infected user device. This automatically protects the network from threats.

<sup>3</sup> An AMF-Security controller, and Vista Manager AWC wireless management are required

### Wireless

- ▶ Airtime fairness
- ▶ Automatic channel selection
- ▶ Automatic control of transmission power
- ▶ Band Steering
- ▶ Bi-directional Single-user MIMO
- ▶ ECO-LED
- ▶ Fast roaming
- ▶ Multi-channel, single-channel, or hybrid operation
- ▶ OFDMA
- ▶ Passpoint (Hotspot 2.0)
- ▶ RF load balancing
- ▶ VLAN (VAP (recommended 5 or less for 2.4GHz/5GHz/6GHz respectively)/Dynamic VLAN)
- ▶ Wi-Fi Multimedia (WMM) for traffic prioritization
- ▶ Wi-Fi Scheduler
- ▶ Wireless Distribution System (WDS)

### Operational Modes

- ▶ Centrally managed in multi-channel mode by Vista Manager EX (up to 3,000 APs)
- ▶ Centrally managed in single-channel or hybrid mode (multi-channel and single-channel) by Vista Manager EX<sup>4</sup>
- ▶ Centrally managed in multi-channel mode by Vista Manager Network Appliance (VST-APL) (up to 500 APs)
- ▶ Centrally managed in single-channel or hybrid mode (multi-channel and single-channel) by Vista Manager Network Appliance (VST-APL)<sup>4</sup>
- ▶ Centrally managed in multi-channel mode by Vista Manager mini (up to 305 APs)<sup>4</sup>
- ▶ Centrally managed in single-channel or hybrid mode (multi-channel and single-channel) by Vista Manager mini<sup>4</sup>
- ▶ Standalone (supports up to 128 clients per radio for 2.4GHz/5GHz/6GHz)

### Management

- ▶ Graphical User Interface (HTTP/HTTPS)
- ▶ Simple Network Management Protocol (SNMPv1, v2c, v3)
- ▶ Firmware upgrade
- ▶ Backup/restore settings
- ▶ Syslog notification
- ▶ DHCP client
- ▶ NTP client

<sup>4</sup> Available in a future firmware release

<sup>5</sup> Certificated with firmware release 10.0.4-0.1 or later

## Specifications

### Physical Specifications

PRODUCT	WIDTH X DEPTH X HEIGHT		WEIGHT	100M/1G/2.5G (RJ-45) COPPER PORTS
TQ3403	200 x 210 x 47 mm (7.87 x 8.23 x 1.85 in)	2 x 2 (2.4GHz) + 2 x 2 (5GHz) + 2 x 2 (6GHz)	1.1 kg (2.43 lb)	1 (PoE-in port)

### Power Characteristics

PRODUCT	POWER SUPPLY	AVERAGE POWER CONSUMPTION	MAXIMUM POWER CONSUMPTION	MAX HEAT DISSIPATION
TQ3403	100-240VAC	15W	20W	61.4 BTHu
	PoE	14W	24W	66.15 BTHu

### Security

- ▶ Authentication and Accounting
  - Open System Authentication
  - Enhanced Open Authentication
  - IEEE 802.1X Authentication and Accounting
  - IEEE 802.1X RADIUS support
  - Shared Key Authentication
  - WPA (Enterprise, Personal)
  - WPA2 (Enterprise, Personal)
  - WPA3 (Enterprise, Personal)
  - Captive Portal (External RADIUS, Click-Through, Redirection Page, Virtual IP Address, RADIUS Accounting, Walled Garden)
  - Wi-Fi Alliance certified Passpoint® enables auto-detection and connection of client devices
- ▶ Client Isolation
- ▶ Encryption
  - WEP: 64/128 bit (IEEE 802.11a/b/g only)
  - WPA/WPA2: CCMP (AES), TKIP
  - WPA3: CCMP/GCMP (AES/CNSA)
- ▶ MAC address filtering (Up to 2048 MAC address)
- ▶ SSID hiding/ignoring
- ▶ Allow, block, and record client connections
- ▶ Neighbor AP detection
- ▶ Kensington lock

### Compliance

- Certificate
  - ▶ Wi-Fi certified
  - ▶ CE
  - ▶ RCM
  - ▶ FCC
  - ▶ IMDA (For Singapore)<sup>5</sup>
  - ▶ OFCA (For Hong Kong)<sup>5</sup>
  - ▶ NBTC (For Thailand)<sup>5</sup>
  - ▶ SIRIM (For Malaysia)<sup>5</sup>
  - ▶ ARIB STD T-66 / T-71
  - ▶ NCC
  - ▶ BSMI
- Safety
  - ▶ EN 62368-1
  - ▶ UL 62368-1
  - ▶ UL 2043
- ElectroMagnetic Compatibility
  - ▶ EN 301 489-1
  - ▶ EN 301 489-17
  - ▶ EN 55024
  - ▶ EN 55032, Class B
  - ▶ EN 55035

- ▶ EN 60601-1-2
- ▶ 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 61000-4-8
- ▶ EN 61000-4-11
- ▶ VCCI Class B
- Radio equipment
  - ▶ AS/NZS 4268
  - ▶ EN 300 328
  - ▶ EN 301 893
  - ▶ EN 303 687
  - ▶ FCC 47 CFR Part 15, Subpart C
  - ▶ FCC 47 CFR Part 15, Subpart E5

### Environmental Specifications

- ▶ Operating temperature range:
  - 0°C to 45°C (32°F to 113°F)
- ▶ Storage temperature range:
  - 25°C to 70°C (-13°F to 158°F)
- ▶ Operating relative humidity range:
  - 5% to 90% non-condensing
- ▶ Storage relative humidity range:
  - 5% to 95% non-condensing
- ▶ Operating altitude range:
  - Up to 3,048 meters maximum (10,000 ft)

### Embedded Antennas

- Omni-directional
  - ▶ Frequency band: 2.4 GHz
  - ▶ Max. peak gain: <2.83 dBi
- Omni-directional
  - ▶ Frequency band: 5 GHz
  - ▶ Max. peak gain: <3.85 dBi
- Omni-directional
  - ▶ Frequency band: 6 GHz
  - ▶ Max. peak gain: <5.93 dBi

### Radio Characteristics

- Supported frequencies:
  - ▶ 2.412 ~ 2.472 GHz
  - ▶ 5.150 ~ 5.250 GHz
  - ▶ 5.250 ~ 5.350 GHz
  - ▶ 5.500 ~ 5.720 GHz

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► 5.745 ~ 5.825 GHz (Not supported in EMEA)

► 5.925 ~ 6.425 GHz

► 6.425 ~ 7.125 GHz (US and Canada)

Modulation Technique

► 802.11a/g/n/ac: OFDM

► 802.11 ax: OFDMA

► 802.11b: DSSS, CCK, DQPSK, DBPSK

► 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM

► 802.11a/g/n: BPSK, QPSK, 16QAM, 64QAM, 256QAM

► 802.11 ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM

Data Rate

► IEEE802.11b 11/5.5/2./1Mbps

► IEEE802.11a/g 54/48/36/24/18/12/9/6Mbps

► IEEE802.11g/n 6.5-600Mbps (MCS0-31)

► IEEE802.11g/n 6.5-800Mbps (MCS0-31)<sup>6</sup>

► IEEE802.11a/ac 6.5-1733.3Mbps (MCS0-9)

► IEEE802.11a/ax 6.5-2401.9Mbps (MCS0-11)

Media Access

► CSMA/CA + Ack with RTS/CTS

Diversity

► Spatial diversity

## Standards

### Ethernet

IEEE 802.3u 100BASE-TX

IEEE 802.3ab 1000BASE-T

IEEE 802.3bz 2.5GBASE-T ("multi-gigabit")

IEEE 802.3x Flow Control

IEEE 802.3at Power over Ethernet+

IEEE 802.1Q VLAN Tagging

### Wireless

IEEE 802.11 a/b/g/n/ac/ax 2x2:2ss SU-MIMO

IEEE 802.11k Radio Resource Measurement of Wireless LANs

IEEE 802.11v Basic Service Set Transition Management Frames

IEEE 802.11r Fast Basic Service Set Transition

IEEE 802.11e WMM for Quality of Service

IEEE 802.11i WPA/WPA2/WPA3 802.1x for Security

## Wireless Management Licenses

Wireless management of APs is available from the Vista Manager EX network management platform, and from Vista Manager mini<sup>7</sup> running on the switch and firewall products listed in the following table.

PLATFORM	LICENSE NAME	DESCRIPTION	MAX SUPPORTED APs
Vista Manager EX	AT-FL-VISTA-BASE-1/5YR	Vista Manager EX network monitoring and management software license	NA
Vista Manager EX (Windows)	AT-FL-VISTA-AWC10-1/5YR <sup>8</sup>	Vista Manager AWC plug-in license for managing up to 10 access points	3000
Vista Manager EX (Virtual (VRT))	AT-FL-VISTA-AWC10-1/5YR <sup>8</sup>	Vista Manager AWC plug-in license for managing up to 10 access points	500
Vista Manager EX (Network Appliance)	AT-FL-VISTA-AWC10-1/5YR <sup>8</sup>	Vista Manager AWC plug-in license for managing up to 10 access points	500
SwitchBlade x908 GEN2	AT-SW-AWC10-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	305
x950 Series	AT-SW-AWC10-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	185
x930 Series	AT-SW-AWC10-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	125
x550 Series	AT-SW-AWC10-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	45
x540L Series	AT-SW-AWC10-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	45
x530 Series	AT-SW-AWC10-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	45
ARX200S-GTX	AT-RT-AWC10-1/5YR <sup>10</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	30
AR4050S UTM Firewall	AT-RT-AWC5-1/5YR <sup>9</sup>	Cumulative Autonomous Wave Controller (AWC) license for up to 5 access points	25

<sup>7</sup> Wireless management from Vista Manager mini will be available in a future firmware release

<sup>8</sup> The AWC plug-in requires an AWC license, and a Vista Manager EX base license to operate on Vista Manager EX

<sup>9</sup> 5 APs can be managed for free. Purchase one license per 10 additional APs on switches, or one license per 5 additional APs on the AR4050S Firewall

<sup>10</sup> 20 APs can be managed for free on the ARX200S-GTX, and an additional 10 APs with a license

## Ordering Information

### AT-TQ3403-xx<sup>11</sup>

Enterprise-Class hybrid Wi-Fi 6E AP with 3 radios (2x2 2.4GHz and 2x2 5GHz and 2x2 6GHz), and embedded antenna

Where xx =

- 05 Other countries<sup>12</sup>
- 02 Taiwan

<sup>12</sup> Please check the Compliance section on page 2 to see which countries are certified to use these access points

Where yy = 10 for US power cord

30 for UK power cord

40 for Australian power cord

50 for European power cord

## Related Products

### AT-PWRADP-01

AC adapter

### AT-6101GP-yy

Gigabit Ethernet PoE+ (802.3at) injector

### AT-7101GHTm-yy

Multi-Gigabit Ethernet PoE++ (802.3bt) injector

### AT-BRKT-CONV-API

Replacement bracket converter

