

# TQm6403 GEN2

## Tri-Radio Wi-Fi 6 (802.11ax) Wireless Access Point



Allied Telesis Enterprise-class TQm6403 GEN2 Tri-Radio Wi-Fi 6 technology, with 2 spatial streams and 3 radios delivering a raw capacity of up to 2.4 Gigabits.

### Overview

The TQm6403 GEN2 has one 2x2 2.4GHz and two 2x2 5GHz radios, delivering a raw capacity of up to 2.4 Gigabits, for effective and efficient operation with superior performance.

The TQm6403 GEN2 supports Multi-User Multiple Input and Multiple Output (MU-MIMO), allowing multiple clients to send and receive data at the same time, substantially increasing throughput. A comprehensive feature set provides a superior solution for Enterprise businesses.

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

## KEY FEATURES

### Flexible Management

The TQm6403 GEN2 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.

### Wi-Fi 6

IEEE 802.11ax Wi-Fi 6 wireless connectivity delivers performance and throughput that is four times faster than 802.11ac devices. In crowded wireless environments, efficient bandwidth distribution is important.

Wi-Fi 6 offers new features such as OFDMA and bidirectional MU-MIMO that increase the intelligence of the AP in managing multiple client connections at once, providing better throughout,

connectivity and overall performance. With support for increased numbers of clients, and optimization for high-bandwidth and real-time applications like streaming video, the TQm6403 GEN2 Series is ideal for education, healthcare, manufacturing, and busy commercial environments.

### Virtual APs with Multiple SSIDs

The TQm6403 GEN2 Series support 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.

### 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.

### 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.

### Uplink Aggregation

The two wired LAN uplink ports can be aggregated for link resiliency and increased bandwidth using static link aggregation or the dynamic Link Aggregation Control Protocol (LACP), doubling uplink capacity to 5 Gbps.

### AMF-Security and Application Proxy<sup>1</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>1</sup> An AMF-Security controller, and Vista Manager AWC wireless management are required

# SPECIFICATIONS

## Physical Specifications

	Width	Depth	Height	Radios	Weight	100M/1G/2.5G (RJ-45) Copper Ports
<b>TQm6403 GEN2</b>	200 mm (7.88 in)	210 mm (8.26 in)	45 mm (1.78 in)	2 x 2 (2.4GHz) + 2 x 2 (5GHz) + 2 x 2 (6GHz)	1.1 kg (2.42 lb)	2 (PoE-in port)

## Power Characteristics

	Power Supply	Average Power Consumption	Maximum Power Consumption	Max Heat Dissipation
<b>TQm6403 GEN2</b>	100~240VAC	13W	17W	58.0 BTHu
	PoE	15W	18.4W	62.8 BTHu

## Wireless

- ECO-LED
- Airtime fairness
- Automatic channel selection
- Automatic control of transmission power
- Band Steering
- Bi-directional Multi-user MIMO
- Fast roaming
- Multi-channel operation
- OFDMA
- RF load balancing
- VLAN (VAP (recommended 5 or less for 2.4GHz/5GHz 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 100 APs)
- Centrally managed in multi-channel mode by Vista Manager Network Appliance (VST-APL) (up to 100 APs)
- Centrally managed in multi-channel mode by Vista Manager mini (up to 100 APs)
- Standalone<sup>2</sup>

## Management

- Automatic Channel Management
- Backup/restore settings
- DHCP client
- External RADIUS server for RADIUS Accounting
- Firmware upgrade
- Graphical User Interface (HTTP/HTTPS)
- Load-balancing
- NTP client
- Secondary RADIUS server
- Simple Network Management Protocol (SNMPv1, v2c, v3)
- Statistics Display
- Syslog notification

## Security

- Authentication and Accounting
  - 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)
- 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 3072 MAC address)
- SSID hiding/ignoring
- Neighbor AP detection
- Kensington lock

## Compliance

- Certificate
  - Wi-Fi certified
  - RCM
  - IMDA (For Singapore)
  - OFCA (For Hong Kong)
  - NBTC (For Thailand)
  - SIRIM (For Malaysia)
  - MIC (For Vietnam)
- 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
- 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: 2.93 dBi
- Omni-directional
  - Frequency band: 5 GHz (5.2-5.3 GHz)
  - Max. peak gain: 5.99 dBi
- Omni-directional
  - Frequency band: 5 GHz (5.6-5.8 GHz)
  - Max. peak gain: 5.99 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
  - 5.745 ~ 5.825 GHz (Not supported in EMEA)

<sup>2</sup> 2.4GHz: supports up to 500 clients, 5GHz(5.2-5.3 GHz): supports up to 500 clients, 5GHz(5.2-5.3 GHz): supports up to 256 clients

#### 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>3</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

<sup>3</sup> Using 256 Quadrature Amplitude Modulation

## STANDARDS

### Ethernet Standards

- IEEE 802.1AX-2008 Link Aggregation (static and dynamic)
- 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 MU-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<sup>4</sup>

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

platform	license Name	Description	max supported aps
<b>Vista Manager EX</b>	<b>AT-FL-VISTA-BASE-1/5YR</b>	Vista Manager EX network monitoring and management software license	NA
<b>Vista Manager EX (Windows)</b>	<b>AT-FL-VISTA-AWC10-1/5YR<sup>5</sup></b>	Vista Manager AWC plug-in license for managing up to 10 access points	3000
<b>Vista Manager EX (Virtual (VRT))</b>	<b>AT-FL-VISTA-AWC10-1/5YR<sup>6</sup></b>	Vista Manager AWC plug-in license for managing up to 10 access points	500
<b>Vista Manager EX (Network Appliance)</b>	<b>AT-FL-VISTA-AWC10-1/5YR<sup>6</sup></b>	Vista Manager AWC plug-in license for managing up to 10 access points	500
<b>SwitchBlade x908 GEN2</b>	<b>AT-SW-AWC10-1/5YR<sup>6</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	305
<b>x950 Series</b>	<b>AT-SW-AWC10-1/5YR<sup>6</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	185
<b>x930 Series</b>	<b>AT-SW-AWC10-1/5YR<sup>6</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	125
<b>x550 Series</b>	<b>AT-SW-AWC10-1/5YR<sup>3</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	45
<b>x540L Series</b>	<b>AT-SW-AWC10-1/5YR<sup>6</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	45
<b>x530 Series</b>	<b>AT-SW-AWC10-1/5YR<sup>6</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 10 access points	45
<b>ARX200S-GTX</b>	<b>AT-RT-AWC10-1/5YR<sup>7</sup></b>	Cumulative Autonomous Wave Control (AWC) license for up to 10 access points	50
<b>AR4050S UTM Firewall</b>	<b>AT-RT-AWC5-1/5YR<sup>6</sup></b>	Cumulative Autonomous Wave Controller (AWC) license for up to 5 access points	25

<sup>4</sup> Note that AWC-Smart Connect is not supported on the TQ6702e GEN2

<sup>5</sup> The AWC plug-in requires an AWC license, and a Vista Manager EX base license to operate on Vista Manager EX

<sup>6</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>7</sup> 20 APs can be managed for free on the ARX200S-GTX, and an additional 30 APs with a license

## ORDERING INFORMATION

<b>AT-TQm6403-GEN2-xx</b>	Enterprise-Class hybrid Wi-Fi 6 AP with 3 radios (2x2 2.4GHz, 2x2 5GHz 1, and 2x2 5GHz 2) and embedded antenna
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Where xx = 05 APAC countries<sup>8</sup>

<sup>8</sup> Please check the Compliance section on page 2 to see which countries are certified to use these access points.

## Related Products

<b>AT-PWRADP-01</b>	AC adapter
<b>AT-6101GP-yy</b>	Gigabit Ethernet PoE+ (802.3at) injector
<b>AT-7101GHTm-yy</b>	Multi-Gigabit Ethernet PoE++ (802.3bt) injector
<b>AT-BRKT-CONV-AP1</b>	Replacement <a href="#">bracket converter</a>

Where yy = 10 for US power cord  
30 for UK power cord  
40 for Australian power cord  
50 for European power cord