TQ5403 and TQm5403

Enterprise-class 802.11ac Wave 2 Wireless Access Points with 2.4GHz and 5GHz Radios

Installation Guide

613-002713 Rev. J

Electrical Safety and Emissions Standards

This product meets the following standards:

Federal Communications Commission Interference Statement

Declaration of Conformity

Manufacturer Name: **Allied Telesis**
Declares that the product: **802.11ac wave2 2x2 Tri-radio 2.4G/5G/5G wireless AP**
Model Number: **AT-TQ5403 and AT-TQm5403**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution
FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. E80

Avertissement
Avertissement de la FCC: Les changements ou modifications non expressément approuvés par la partie responsable de la conformité pourraient annuler l'autorité de l'utilisateur à utiliser cet équipement. E80

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

European Union Restriction of the Use of Certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment

This Allied Telesis RoHS-compliant product conforms to the European Union Restriction of the Use of Certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment. Allied Telesis ensures RoHS conformance by requiring supplier Declarations of Conformity, monitoring incoming materials, and maintaining manufacturing process controls.

Note
For additional regulatory statements, refer to Appendix B, ”Regulatory Statements” on page 67.

Safety and Electromagnetic Emissions

Standard Compliance

- RoHs compliant
- European Union RoHS (Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.)

Wire Communication

- IEEE 802.1
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- IEEE 802.3at
- ITU-T G.993.1

Wireless Communication

- IEEE 802.11 DSSS
- IEEE 802.11a OFDM
- IEEE 802.11b DSSS/FHSS
- IEEE 802.11g OFDM
- IEEE 802.11n OFDM
- IEEE 802.11ac OFDM

Safety

- ❒ CB/UL
  - UL/IEC 60950-1: 2005+A1:2009+A2:2013 and EN60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
  - UL/IEC 62368-1:2014 and EN62368-1:2014
  - UL 60950-1, 2nd Edition, 2014-10-14/CSA C22.1 NO. 60950-1-07, 2nd Edition, 2014-10
- ❒ TUV
  - EN60950-1+EN62368-1
- ❒ AEL
  - Class I, US FDA/CDRH
  - EN(IEC) 60825-1:1994+a11,
  - EN(IEC) 60825-2:1994
  - EN(IEC) 60950: 1992+A1+A2+A3

Electro Magnetic Interference EMI

- FCC part15 Subpart B/ Class B
- EN55032 Class B
- CISPR 32
- VCCI Class B
- VCCI-CISPR 32:2016
- AS/NZS CISPR 32

Electro Magnetic Susceptibility - EN55024

- IEC 61000-3-2:2014
- IEC 61000-3-3:2013
- IEC 61000-4-2:2008
- IEC 61000-4-3: 2006+A1:2007+A2:2010
- IEC 61000-4-4:2012
- IEC 61000-4-5:2017
- IEC 61000-4-6:2013
- (IEC 61000-4-8:2009)
- IEC 61000-4-11:2014/AMD:2017
- IEC 61000-3-2:2014
- IEC 61000-3-3:2013

FCC/IC

- 47 CFR Part15, subpart C
- 47 CFR Part15, subpart E
- ICES-003
- RSS-247
- RSS-Gen

CE

- RED Directive 2014/53/EU
- European Council Directive 2014/30/EU
- EN55032:2015+AC:2016
  (CISPR32:2015/COR1:2016)
- EN 55024:2010+A1:2015
- EN 301489-1 V2.1.1
- EN 301489-17 V3.1.1
- EN 300328 V2.1.1
- EN 301893 V2.1.1
- EN 62311: 2008
- EN 50385: 2017
- EN 55035:2017
- EN 60601-1-2:2015

RCM

- AS/NZS CISPR 32: 2015
- AS/NZS 4268: 2017

Japan

- ARIB STD-T66
- ARIB STD-T71

Thailand NBTC

Singapore IMDA TS SRD

Figure 1. Singapore IMDA Logo

Korea KC

Vietnam MIC

India WPC

Malaysia SIRIM

Hong Kong OFCA

Taiwan NCC&BSMI

China SRRC (for the AT-TQ5403 model only)

Translated Safety Statements

Important: The ☞ indicates that a translation of the safety statement is available in a PDF document titled *Translated Safety Statements* on the Allied Telesis website at **www.alliedtelesis.com/library**.

Remarque: Les consignes de sécurité portant le symbole ☞ sont traduites dans plusieurs langues dans le document *Translated Safety Statements,* disponible à l'adresse **www.alliedtelesis.com/library**.

Contents

Figures

Tables

Preface

This guide contains the hardware installation instructions for the TQ5403 and TQm5403 Wireless Access Points. For installation instructions for the TQ5403e Wireless Access Point, refer to the *Allied Telesis TQ5403e Wireless Access Point Installation Guide*.

This preface contains the following sections:

Safety Symbols Used in this Document

This document uses the following conventions.

Note
Notes provide additional information.

Caution
Cautions inform you that performing or omitting a specific action may result in equipment damage or loss of data.

Warning
Warnings inform you that performing or omitting a specific action may result in bodily injury.

Warning
Warnings inform you of hot surfaces.

Contacting Allied Telesis

If you need assistance with this product, you may contact Allied Telesis technical support by going to the Services & Support section of the Allied Telesis web site at **www.alliedtelesis.com/support**. You can find links for the following resources on this page:

- Helpdesk (Support Portal) - Log onto Allied Telesis interactive support center to search for answers to your questions in our knowledge database, check support tickets, learn about Return Merchandise Authorizations (RMAs), and contact Allied Telesis technical experts.
- Software Downloads - Download the latest software releases for your product.
- Licensing - Register and obtain your License key to activate your product.
- Product Documents - View the most recent installation guides, user guides, software release notes, white papers and data sheets for your product.
- Warranty - View a list of products to see if Allied Telesis warranty applies to the product you purchased and register your warranty.
- Allied Telesis Helpdesk - Contact a support representative.

For sales or corporate contact information, go to **www.alliedtelesis.com/contact** and select your region.

Chapter 1

Product Description

The sections in this chapter describe the hardware components of the 802.11ac Wave 2 TQ5403 and TQm5403 Wireless Access Points:

Features

Hardware features include:

- One 2.4GHz radio
- Dual 5GHz radios
- Internal omni-directional antennas
- Two 10/100/1000Mbps LAN1 and LAN2 Ethernet ports with RJ-45 connectors
- PoE+ Class 4 powered device (PoE+ input on LAN1 port)
- One Reset button for restoring the default settings
- One On/Off button for the AC/DC power adapter connector
- LEDs for 2.4GHz and 5GHz radios, LAN1 and LAN2 ports, and power
- Kensington lock port
- Ceiling, wall, or table installation
- One Console RS232 RJ-45 port for factory use only

Features of the 2.4GHz and 5GHz radios include:

- IEEE802.11a/b/g/n/ac (Wave 2)
- Automatic channel selection
- Band steering
- WiFi multimedia (WMM) for prioritizing traffic

Features of the LAN1 and LAN2 ports include:

- 10Mbps (IEEE 802.3), 100Mbps (IEEE 802.3u), or 1000Mbps (IEEE 802.3ab)
- PoE+ (IEEE 802.3at) (LAN1 port only)
- Flow control (IEEE 802.3x)
- VLAN tagging (IEEE 802.1Q)
- Auto-Negotiation for speed and duplex mode
- Auto-MDI/MDIX
- Static link aggregation
- Cascade configuration

Software features include:

- On-board web browser management interface
- Virtual access points

- ❒ Network Time Protocol (NTP) client
- ❒ Dynamic Host Control Protocol (DHCP) client
- ❒ Static WEP, WPA Personal, and WPA Enterprise security
- ❒ Static WEP encryption: 64/128 bit (IEEE 802.11a/b/g only)
- ❒ WPA and WPA2 encryption: CCMP (AES) and TKIP
- ❒ WPA3 encryption CCMP (AES/CNSA)
- ❒ Quality of Service (QoS) ingress and egress queues
- ❒ Fast roaming
- ❒ Captive portals
- ❒ MAC address client filtering with the on-board filter
- ❒ MAC address client filtering with RADIUS servers
- ❒ Wireless Distribution System (WDS) bridges
- ❒ Quick Response codes for VAPs
- ❒ System log
- ❒ Syslog client
- ❒ SNMPv1, v2c, and v3

Software features with Vista Manager EX and the Autonomous Wave Controller (AWC) plug-in include:

- ❒ AWC-Smart Connect (AWC-SC)
- ❒ Channel Blankets*
- ❒ Hybrid multi-channel and Channel Blankets operation*
- ❒ MAC address client filtering with area authentication

(* TQ5403 Wireless Access Point only.)

Note
The features listed above are for firmware version 6.0.1-2.1. Some features are not available in earlier releases. For a complete list, refer to the TQ5403 *Series Management Software User Guide* or the product data sheets.

TQ5403 Models

The TQ5403 Wireless Access Point Series consists of the following three models:

- TQ5403
- TQm5403
- TQ5403e

Table 1 lists the basic differences.

Table 1. Differences Between the TQ5403 Wireless Access Points

Model	Indoor / Outdoor	Antennas	LAN Ports[a]	Power	Channel Blankets	Maximum Number of Wireless Clients
TQ5403	Indoor	Internal	2	PoE+ or AC/DC adapter	Yes	200 clients per radio in standalone mode 500 clients per Channel Blanket
TQm5403	Indoor	Internal	2	PoE+ or AC/DC adapter	No	127 clients per radio in standalone mode
TQ5403e	Indoor or outdoor	External	1	PoE+ only	Yes	200 clients per radio in standalone mode 500 clients per Channel Blanket

a. The LAN ports are 10/100/1000Mbps.

Note
All three models have one 2.4GHz and two 5GHz radios. The maximum client numbers in the table are per radio or per channel blanket.

The Channel Blankets feature, also referred to as single-channel mode, allows neighboring wireless access points to use the same channels to more efficiently handle roaming wireless clients. The feature requires Vista Manager EX and the Autonomous Wireless Controller (AWC) plug-in.

For installation instructions for the TQ5403e Wireless Access Point, refer to the *TQ5403e Outdoor Wireless Access Point Installation Guide*.

Hardware Components

The top view of the TQ5403 Access Point is illustrated in Figure 1.

Back Edge

Front Edge

Figure 1. TQ5403 Access Point Top View

The top view of the TQm5403 Access Point is illustrated in Figure 2.

Figure 2. TQm5403 Access Point Top View

The front edge view is illustrated in Figure 3.

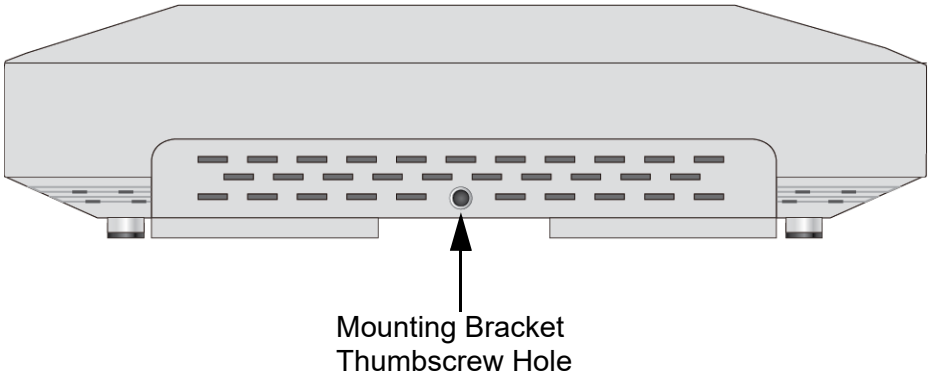


Figure 3. Front Edge View

The back edge view is illustrated in Figure 4.

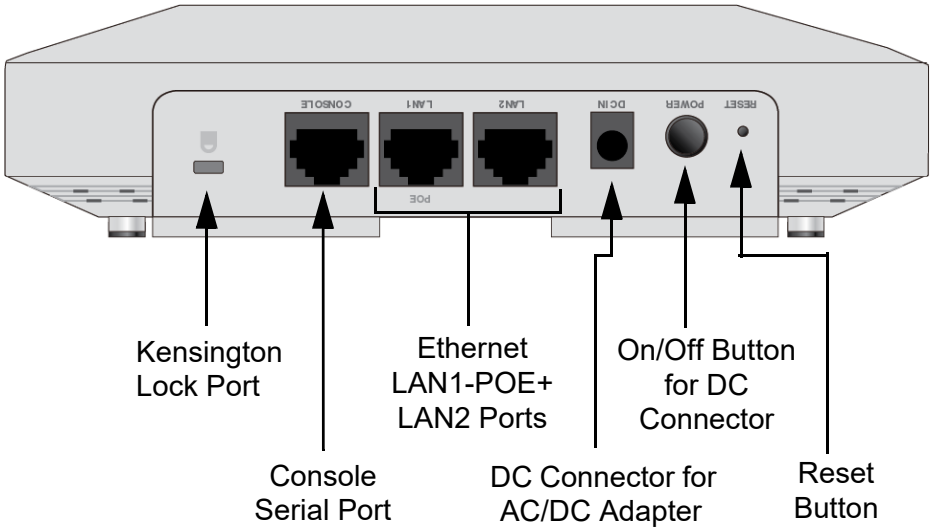


Figure 4. Back Edge View

Note
The On/Off button controls the DC connector for the AC/DC power adapter. It does not control PoE+ on the LAN1 port.

Note
The Console Serial port is for manufacturing purposes only.

LAN1 and LAN2 Ports

The wireless access point has two Ethernet ports, labeled LAN1 and LAN2. You use the ports to connect the wireless access point to your wired network. Here are their basic properties:

- The default setting for LAN1 port is enabled. You cannot disable it.
- LAN1 port supports PoE+.
- The default setting for LAN2 port is disabled.
- LAN2 port does not support PoE+.
- LAN1 and LAN2 ports can be combined into a static link aggregation (LAG) to double the bandwidth between the wireless access point and the wired network.
- LAN2 can be configured as a separate Ethernet port for another network device. This is referred to as the Cascade mode.

Static Link Aggregation

You can double the bandwidth between the wireless access point and your wired network by combining LAN1 and LAN2 ports into a static LAG. A static LAG functions as a single logical link between the wireless access point and another network device, such as an Ethernet switch or router. A static LAG also provides link redundancy. If one link goes down, the wireless access point maintains connectivity to the wired network over the remaining link. Refer to Figure 5.

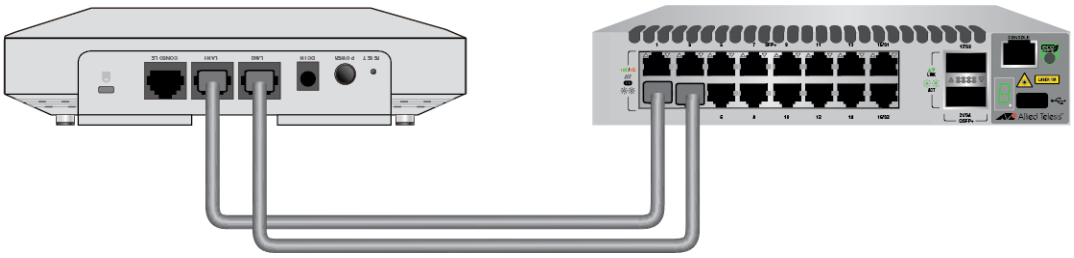


Figure 5. LAN1 and LAN2 Ports in a Static LAG

Here are guidelines to using LAN1 and LAN2 ports as a static LAG:

- You have to connect the ports to the same network device, such as an Ethernet switch or router, or virtual stacking devices. Do not connect the LAN ports to different network devices.
- The network device has to support static LAGs.
- You have to configure the two ports on the network device as a static LAG.

- You activate the static LAG for LAN1 and LAN2 ports with the on-board web browser management interface.

Note
Do not enable and cable the LAN2 port until after you have configured the other network device for the static LAG.

Cascade Mode

The LAN2 port also has a Cascade mode. The mode allows you to use the port to connect another device to your network. The device can be an end node such as a printer or computer, as shown in Figure 6.

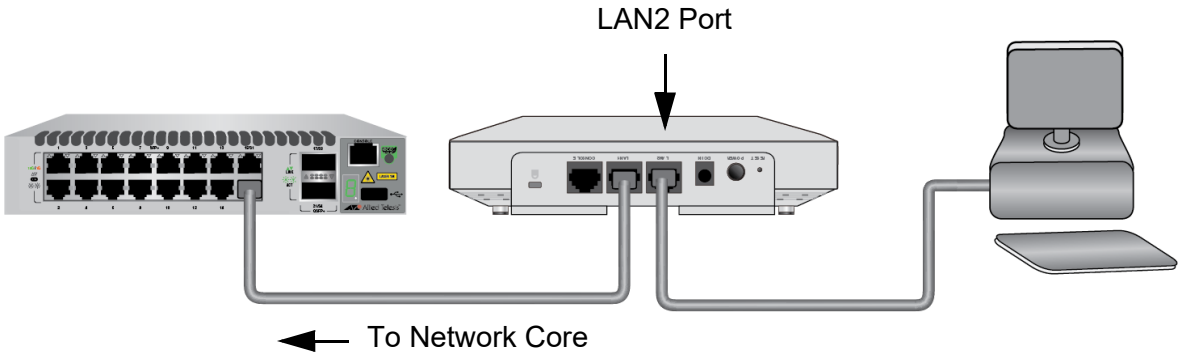


Figure 6. LAN2 Port in Cascade Mode with an End Node

It can also be a networking device such as a switch, router, or media converter. Refer to Figure 7.

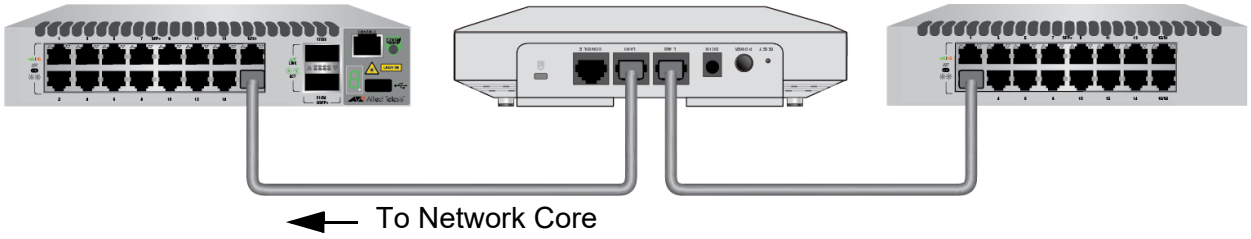


Figure 7. LAN2 Port in Cascade Mode with a Networking Device

Here are the Cascade mode guidelines:

- The Cascade mode requires firmware version 6.0.1-2.1 or later.
- You set the Cascade mode with the on-board web browser management interface.
- The Cascade mode is not supported with Vista Manager EX and the AWC plug-in.
- Do not connect both LAN1 and LAN2 ports to the same network device when the LAN2 port is in the Cascade mode.

Power Over Ethernet Plus (PoE+)

You can power the wireless access point with either PoE+ on the LAN1 port or an AC/DC power adapter. The wireless access point is a PoE+ Class 4 powered devices, with maximum power consumption of 25.5 watts. To power the device with PoE+, you have to connect LAN1 port to a PoE+ source device. The network cable connecting the LAN1 port to the PoE+ source device carries both network traffic and PoE+.

You can power the device with both PoE+ and an AC/DC power adapter. However, the two power sources are not load sharing. The power adapter is the primary power source and PoE+ is redundant power.

Connector Type

The LAN ports have an eight-pin RJ45 connector. The port uses four pins of the connector at 10/100 Mbps and all eight pins at 1000 Mbps. Refer to the tables in “Port Pinouts” on page 65 for the pin assignments.

Speed

The LAN ports have speeds of 10/100/1000Mbps. The speeds are set automatically with Auto-Negotiation. You cannot disable Auto-Negotiation on the ports.

Note
The LAN ports should be connected to network devices that also adjusts port speeds with Auto-Negotiation. If a network device does not support Auto-Negotiation, the LAN ports operate at10 Mbps, which may reduce network performance.

Duplex Mode

Both LAN ports can operate in either half- or full-duplex mode at 10/100Mbps, and full-duplex mode at 1000Mbps. The ports are IEEE 802.3u-compliant and use Auto-Negotiation to set the duplex mode. You cannot disable Auto-Negotiation on the port.

Note
The network device to which you connect the LAN ports should also set the duplex mode with Auto-Negotiation. If a network device does not support Auto-Negotiation, the LAN port operates at half-duplex mode. This may result in a duplex mode mismatch if the network device is operating at full duplex.

Automatic MDIX Detection

The 10/100/1000Mbps twisted-pair ports are IEEE 802.3ab compliant and feature automatic MDIX detection when operating at 10/100 Mbps. (Automatic MDIX detection does not apply to 1000 Mbps.) This feature automatically configures the ports to MDI or MDI-X depending on the wiring configuration of the port on the Ethernet switch.

You cannot disable automatic MDIX detection. For automatic MDIX detection to work properly, this feature must also be present on the Ethernet switch. The LAN port defaults to MDIX if it is connected to a

network device that does not support automatic MDIX detection.

Cable Requirements

The minimum cable requirements for the ports are listed here.

- 10 Mbps or 100 Mbps: Standard TIA/EIA 568-B-compliant Category 3 shielded or unshielded cabling.
- 1000 Mbps: Standard TIA/EIA 568-A-compliant Category 5 or TIA/EIA 568-B-compliant Enhanced Category 5 (Cat 5e) shielded or unshielded cabling.

Maximum Distance

The LAN ports have a maximum operating distance of 100 meters (328 feet).

Port Pinouts

Refer to Table 9 on page 65 for the port pinouts of the LAN port when it is operating at 10/100 Mbps in the MDI configuration and Table 10 on page 66 for the MDI-X configuration. Refer to Table 11 on page 66 for the port pinouts when the port is operating at 1000 Mbps.

Guidelines

Here are the guidelines to using the LAN1 and LAN2 ports:

- If you are connecting only one LAN port to your network, you have to use port LAN1.
- The default setting for the LAN1 port is enabled. You cannot disable it.
- The default setting for LAN2 is disabled. To activate it, use the on-board web browser management interface.
- To use the LAN1 and LAN2 ports as a static LAG, you have to connect them to the same network device, such as an Ethernet switch or router, or virtual stacking devices. Do not connect the LAN ports to different network devices. The network device has to support static LAGs.

Caution

When using LAN1 and LAN2 ports as a static LAG, do not activate the LAN2 port until you after have configured the ports on the network device to which the LAN ports are connected as a static LAG. Refer to the documentation for the network device for instructions.

- To activate the Cascade mode for LAN2, use the on-board web browser management interface.

DC Connector for an External AC/DC Power Adapter

There are two ways to power the wireless access point. You can power it with a PoE+ source device on LAN1 port or with an AC/DC power adapter. You can also power it with both methods for power redundancy. The power sources are not load-sharing. A wireless access point that has both power sources uses the AC/DC power adapter as its primary power source and PoE+ as redundant power. For technical specifications, refer to “Power Specifications” on page 62. The MWS0091 Power Adapter, shown in Figure 8., from Allied Telesis is approved for this product.

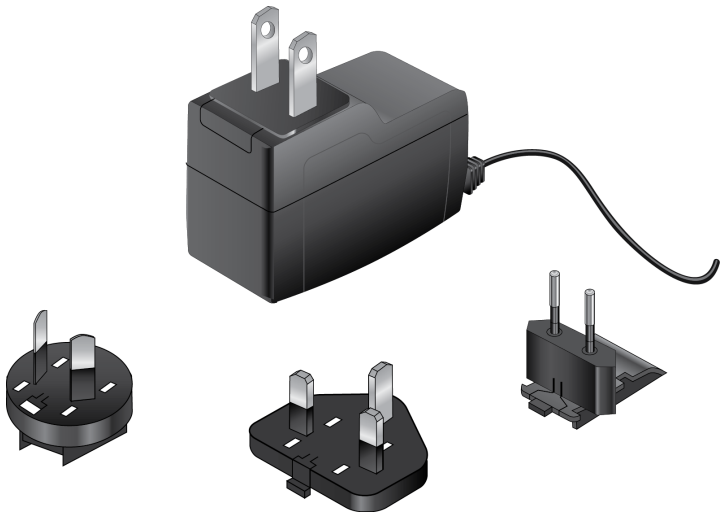


Figure 8. MWS0091 Power Adapter

POWER On/Off Button

The POWER On/Off button on the back panel controls the DC connector for the external AC/DC power adapter. You can use the button to turn on or off the power on the DC connector from the AC/DC adapter. Here are the button settings:

- In - The DC connector is On, permitting power from the AC/DC adapter.
- Out - The DC connector is Off, blocking power from the AC/DC adapter.

Here are the guidelines:

- If the wireless access point is powered by both an AC/DC power adapter and a PoE power source, turning off the DC IN connector shuts off power from the adapter. The access point automatically switches over to PoE for power.
- If the wireless access point is powered only by an AC/DC power adapter, turning off the DC IN connector powers off the device.

LEDs

The LEDs on the top panel display status information. They are defined in Table 2.

Table 2. LED Status Information

LED	State	Description
Power	Green	The access point is powered ON and operating normally.
	Red	The device is booting up or it has encountered a fault condition.
	Blinking Red	The access point is upgrading its firmware.
	Off	The access point is *not* receiving power.
LAN1	Green	The port has established a link to a network device.
	Blinking Green	The port is transmitting or receiving data.
	Off	The port has not established a link to a network device.
LAN2	Green	The port has established a link to a network device.
	Blinking Green	The port is transmitting and receiving data.
	Off	The port has not established a link to a network device.
2.4GHz Wi-Fi	Green	The 2.4GHz Radio1 is enabled.
	Off	The 2.4GHz Radio1 is disabled.
5 GHz[1] Wi-Fi	Green	The 5GHz Radio2 is enabled.
	Off	The 5GHz Radio2 is disabled.
5 GHz[2] Wi-Fi	Green	The 5GHz Radio3 is enabled.
	Off	The 5GHz Radio3 is disabled.

Reset Button

The wireless access point has a Reset button on the rear panel for returning the parameter settings of the device to their default values. You might reset the access point if you want to discard its current configuration or if you forgot the manager password and so cannot manage the device.

To reset the device, press the button for five seconds and release.

You can enable or disable the reset button with the management software. The default setting for the button is enabled. If the access point is installed in a public area, you probably should disable it to protect the device from being reset by unauthorized individuals.

Chapter 2

Installing the Wireless Access Point

This chapter contains the installation procedures for the TQ5403 and TQm5403 Wireless Access Points. The procedures are detailed in the following sections:

Note
The non-US models of this product have a country code setting that must be set during the initial management session of the units. The setting ensures that the units operate in compliance with the laws and regulations of your country or region.

For the US model, the country code is preset and cannot be changed. Per FCC regulations, the country code setting for all WiFi products marketed in the US must be fixed to US operational channels only.

Reviewing Safety Precautions

Please review the following safety precautions before installing the access point.

Important: Safety statements that have the ☞ symbol are translated into multiple languages in the *Translated Safety Statements* document, which is available at **www.alliedtelesis.com/library**.

Remarque: Les consignes de sécurité portant le symbole ☞ sont traduites dans plusieurs langues dans le document *Translated Safety Statements,* disponible à l'adresse **www.alliedtelesis.com/library**.

Warning
To prevent electric shock, do not remove the cover. No user-serviceable parts inside. This unit contains hazardous voltages and should only be opened by a trained and qualified technician. To avoid the possibility of electric shock, disconnect electric power to the product before connecting or disconnecting the LAN cables. ☞ **E1**

Warning
Do not work on equipment or cables during periods of lightning activity. ☞ **E2**

Warning
All Countries: Install product in accordance with local and National Electrical Codes. ☞ **E8**

Warning
Only trained and qualified personnel are allowed to install or to replace this equipment. ☞ **E14**

Warning
To reduce the risk of electric shock, the PoE ports on this product must not connect to cabling that is routed outside the building where this device is located. ☞ **E40**

Warning
This equipment shall be installed in a Restricted Access location. **E45**

Warning
FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. **E80**

Note
The access point must be powered by:

1. A UL listed external AC/DC power supply suitable for use at Tma 45 °C, a maximum operating altitude of 3000 m or higher, and whose output meets separated extra-low voltage (SELV), limited power sources (LPSs) and is rated 12 VDC, 2.0 A,

OR

2. By Power over Ethernet through a UL listed ITE. Refer to Table 6, “External AC/DC Adapter Specifications” on page 62.

Caution
Air vents must not be blocked and must have free access to the room ambient air for cooling. E6

Warning
An operational unit can be hot. Exercise caution when handling with unprotected hands.

Warning
Operating Temperature. This product is designed for a maximum ambient temperature of 45°C (122° F) E7.

Warning
To reduce the risk of electric shock, the PoE port on this product must not connect to cabling that is routed outside the building where this device is located. E40

Warning
This equipment is intended for indoor use only. E95

Note
If you are not using PoE to power to unit, use only an approved AC/DC adapter. Refer to “Power Specifications” on page 62.

Caution
The unit does not contain serviceable components. Please return damaged units for servicing. E42

Note
You should verify that your PoE network adheres to the standards of a separated extra-low voltage (SELV) circuit before using the PoE feature on the wireless access point.

Unpacking the Shipping Box

To verify the contents of the shipping box, perform the following procedure:

1. Remove all components from the shipping box.

> **Note**
> Store the packaging material in a safe location. Please use the original shipping material if you need to return the device to Allied Telesis.

2. Verify the contents of the shipping box listed in Table 9. If any item is missing or damaged, contact your Allied Telesis sales representative for assistance.

Figure 9. Shipping Box Components

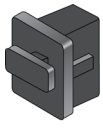
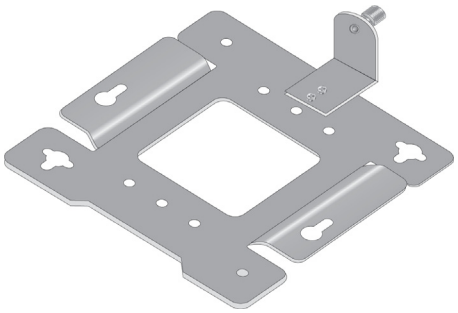
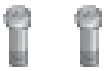
Name	Component
TQ5403 or TQm5403 Wireless Access Point	
One RJ-45 Dust Cap Pre-installed on the Console port	
One RJ-45 Dust Cap Pre-installed on the LAN2 port	

Figure 9. Shipping Box Components (Continued)

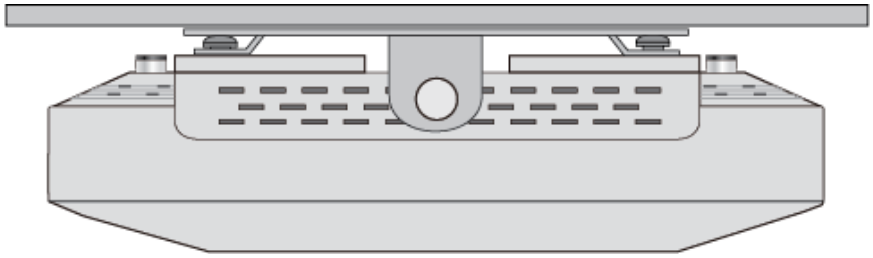
Name	Component
One Mounting Bracket	
Two M5 x 8mm, Pan-head Screws	

Reviewing Installation Guidelines

Review the following guidelines before installing the access point:

- ❒ The ceiling or wall mounting surface must be of proper material to accommodate the screws and strong enough to support the weight of the access point and cables. (Refer to Table 3 on page 61 for the product weight.)
- ❒ Connect the Ethernet cable(s) and power cord to the access point before installing the product on the ceiling or wall. Depending on the installation location, connecting or removing cables may be difficult after the device is installed.
- ❒ Verify that the Ethernet cable(s) is long enough to connect to its destination port(s) before installing the access point. Once the installation is complete, it is physically difficult to change the cables.
- ❒ If the wireless access point will be powered by an AC/DC adapter, verify that an AC power outlet is within six feet of the planned installation site. (Refer to “Power Specifications” on page 62 for the AC/DC adapter specifications.)
- ❒ Refer to Figure 10 on page 42 for approved orientations of the wireless access point on a table, wall, or ceiling.

Ceiling Installation



Wall Installation

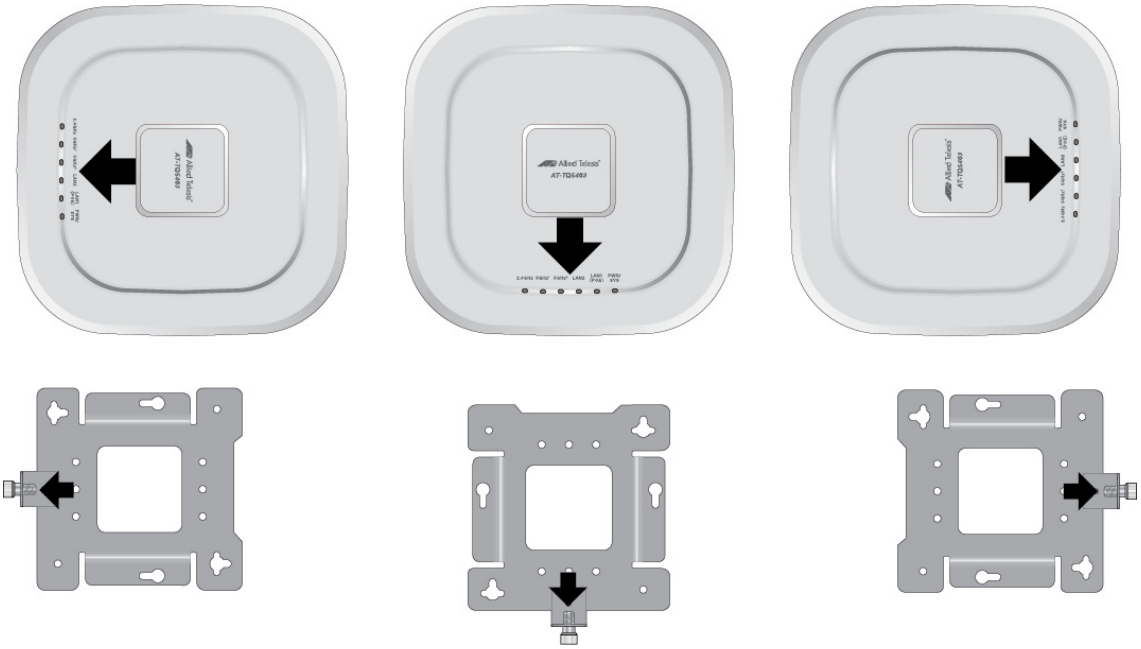


Table Installation

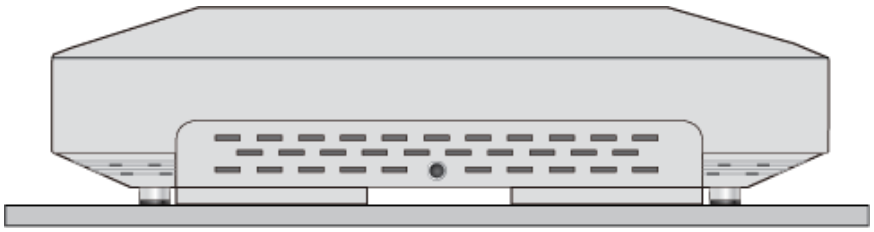


Figure 10. Device Orientations on a Ceiling, Wall, or Table

Installing the Access Point on a Table

You need the following items to install the access point on a table:

- ❒ TQ5403 or TQm5403 Wireless Access Point
- ❒ One or two Ethernet cables
- ❒ External AC/DC power supply (Optional if using PoE+. Required if not using PoE+ or for redundant power.)
- ❒ Kensington lock (optional)

Note
Please see “Reviewing Safety Precautions” on page 36 and “Reviewing Installation Guidelines” on page 41 before installing the product.

Perform the following steps to install the wireless access point on a table:

1. Place the wireless access point at the selected location on the table.
2. Connect Ethernet cables to LAN1 and LAN2 ports. Refer to “Connecting Ethernet Cables to LAN1 and LAN2 Ports” on page 52.
3. To connect an AC/DC power adapter to the access point, go to “Connecting the AC/DC Power Adapter” on page 55.
4. To install a security cable, refer to “Installing an Anti-theft Device” on page 58.
5. To start managing the device, go to “Starting the First Management Session” on page 59.

Overview to Installing the Access Point on a Wall or Ceiling

Here are the procedures for installing the wireless access point on a wall or ceiling:

- ❒ “Pre-fitting the Mounting Bracket on the Access Point” on page 45
- ❒ “Installing the Mounting Bracket on a Wall or Ceiling” on page 48
- ❒ “Connecting Ethernet Cables to LAN1 and LAN2 Ports” on page 52
- ❒ “Connecting the AC/DC Power Adapter” on page 55
- ❒ “Attaching the Access Point to the Mounting Bracket” on page 56
- ❒ “Installing an Anti-theft Device” on page 58

Note
Please see “Reviewing Safety Precautions” on page 36 and “Reviewing Installation Guidelines” on page 41 before installing the product.

Note
Depending on the installation location, it may be easier to connect the network cables and optional power adapter to the wireless access point before installing it on the wall or ceiling.

You need the following items to install the wireless access point on a ceiling or wall:

- ❒ TQ5403 or TQm5403 Access Point
- ❒ Two screws to attach the access point to the mounting bracket
- ❒ Mounting bracket
- ❒ Four (4) M4, 25.0 mm flat-head wood screws and anchors (not provided) for fastening the mounting bracket
- ❒ Phillips head screwdriver (not provided)
- ❒ Pencil (not provided)
- ❒ External AC/DC power supply (Optional if using PoE+. Required if not using PoE+ or for redundant power.)
- ❒ Kensington lock (optional and not provided)

Note
The four Phillips head M4 screws/anchors, the Phillips head screwdriver, pencil, external AC/DC power supply and Kensington lock are *not* included with the product.

Pre-fitting the Mounting Bracket on the Access Point

To pre-fit the mounting bracket on the access point, perform the following procedure:

1. Install the two screws (provided) in the bottom side of the access point chassis. Leave the screws loose enough so that you can slide the bracket under the screw heads. Refer to Figure 11.

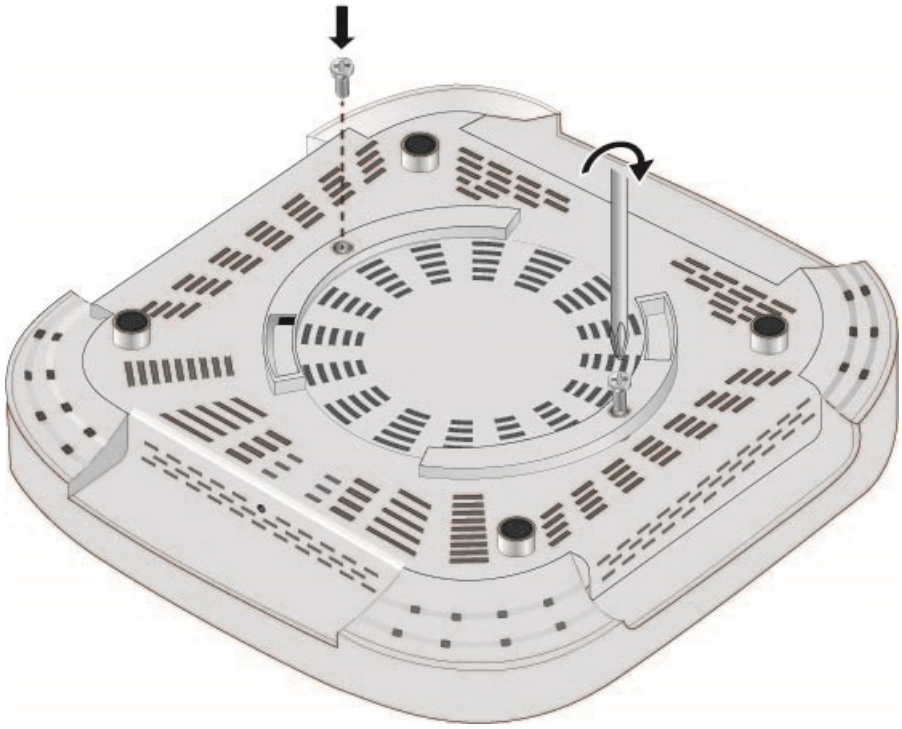


Figure 11. Attaching the Bracket Screws to the Wireless Access Point

2. Install the mounting bracket on the access point by sliding the keyholes under the screws. Refer to Figure 12 on page 46.

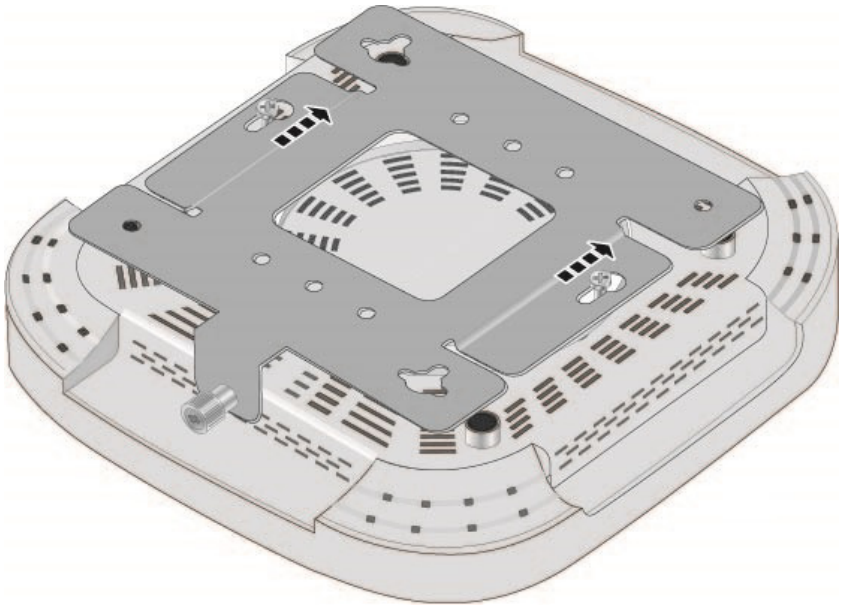


Figure 12. Attaching the Mounting Bracket on the Access Point

3. Tighten the screws so that they touch the mounting bracket plate, and then loosen them by approximately 1/4 turn. Refer to Figure 13.

Note
Adjust the screws so they are loose enough for you to remove the bracket, but tight enough to prevent the access point from rattling against the mounting bracket.

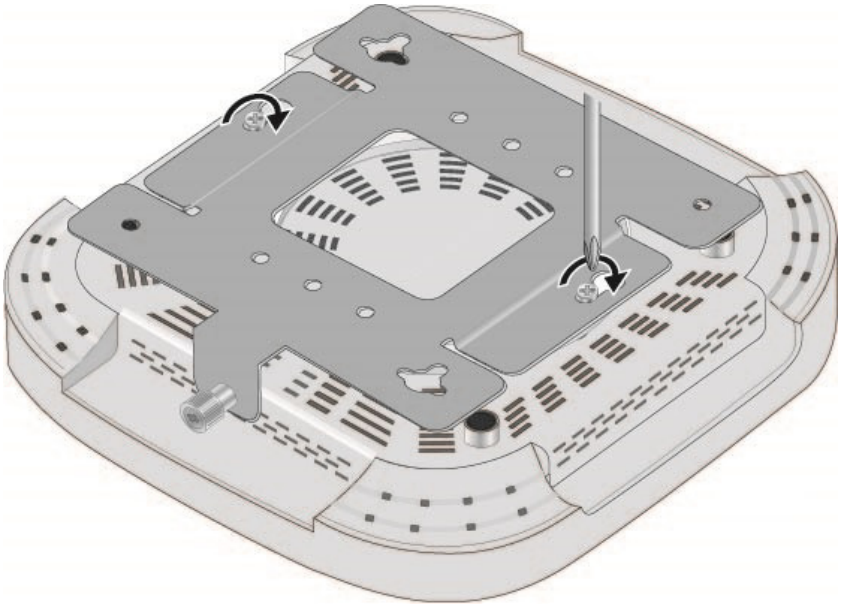


Figure 13. Adjusting the Screws on the Access Point

4. Slide the mounting bracket forward and temporarily remove it from the access point. Refer to Figure 14.

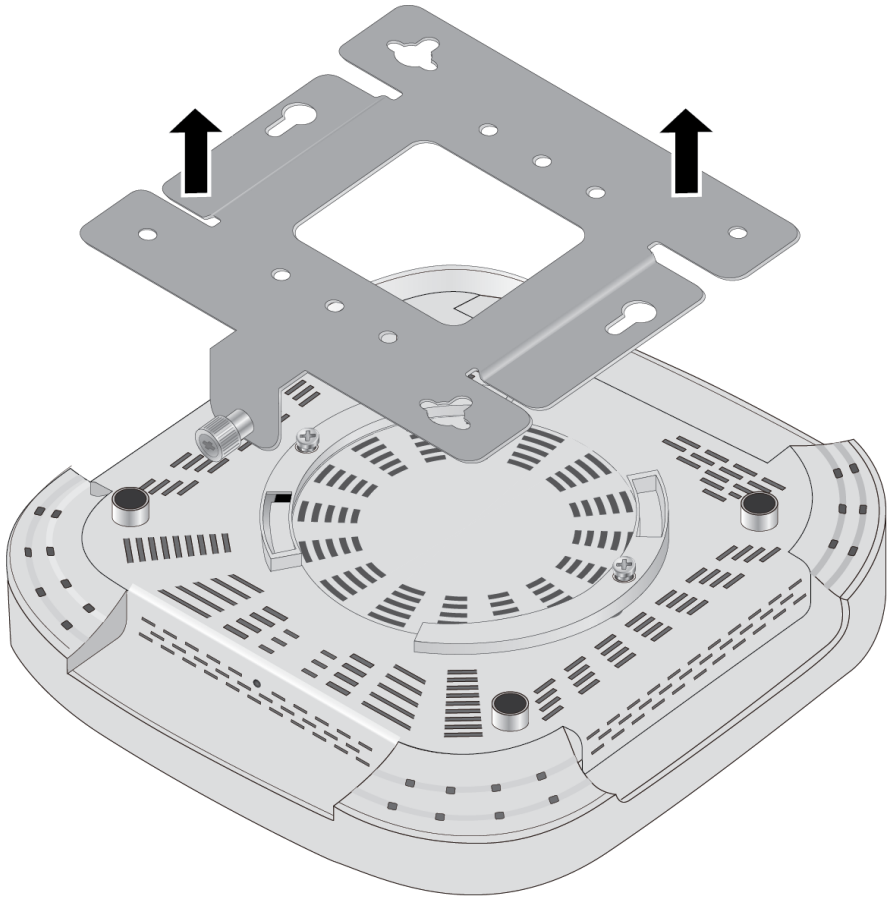


Figure 14. Removing the Mounting Bracket from the Access Point

5. Go to “Installing the Mounting Bracket on a Wall or Ceiling” on page 48.

Installing the Mounting Bracket on a Wall or Ceiling

To install the mounting bracket on a wall of ceiling, perform the following procedure:

1. Choose the location and orientation for the access point on the wall or ceiling. Refer to Figure 10 on page 42.
2. Position the mounting bracket at the selected location and orientation for the access point. Consider the following guidelines.
   - ❒ The thumbscrew on the mounting bracket is where the front panel of the access point will be.
   - ❒ The ports and connectors are on the back panel, away from the thumbscrew.
3. With a pencil, mark the wall or ceiling with the two key-hole slots of the bracket. Refer to Figure 15.

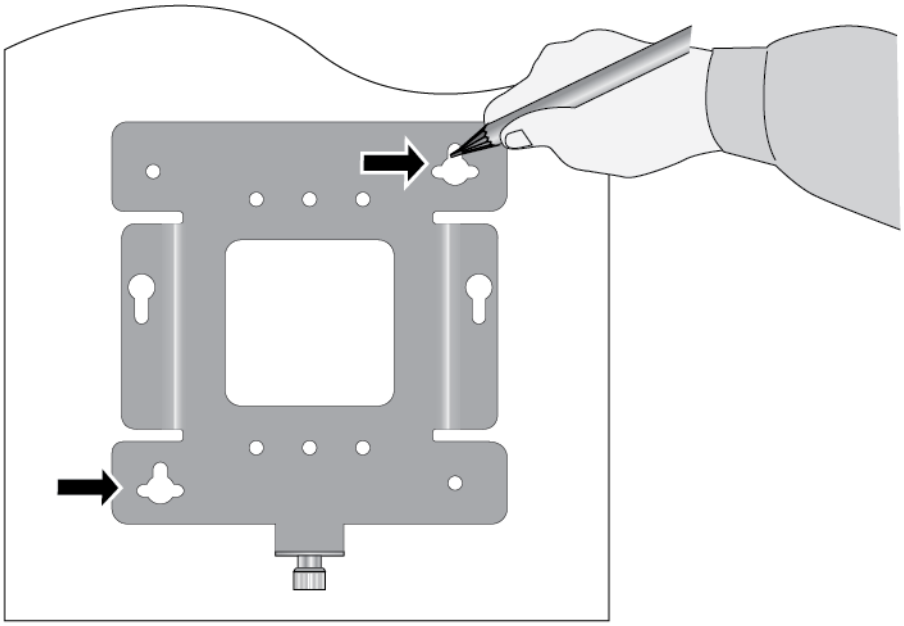


Figure 15. Marking the Holes for the Key-Hole Slots

4. Pre-drill the two marked locations for the keyhole slots on the hard-surface ceiling or wall.
5. Install two M4 screws and anchors (if required). Leave the screws loose enough so that the bracket can slide under the screw heads. Refer to Figure 16 on page 49.

Note
For a wooden wall or ceiling, use M4, 25.0 mm flat-head wood screws and anchors, if required. The screws and anchors are not provided.

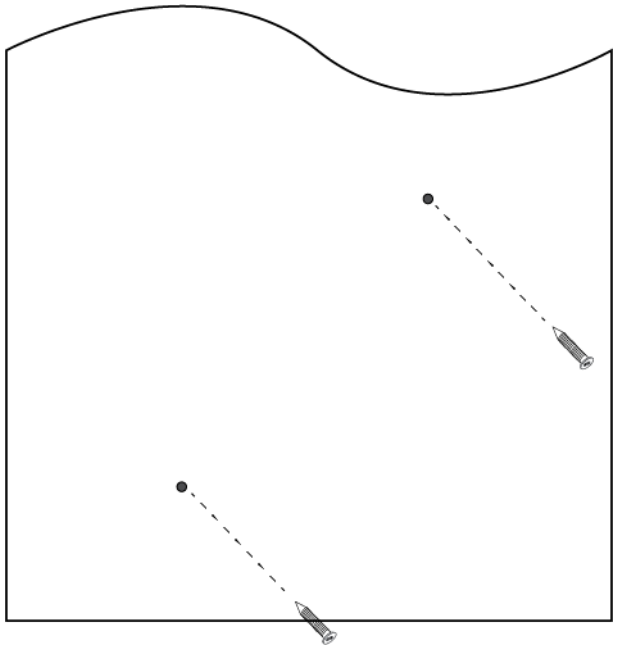


Figure 16. Installing Two Screws

6. Insert the openings of the bracket key-hole slots under the two screw heads and slide the bracket into the narrow end of the key-hole slot openings. Refer to Figure 17 on page 50.

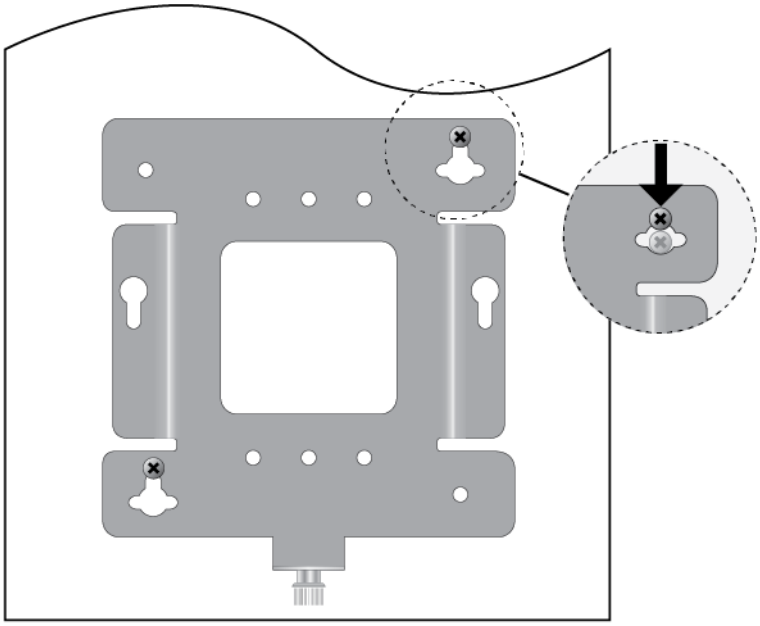


Figure 17. Installing the Mount Bracket On the Screws

7. Tighten the screws snugly onto the bracket.
8. To secure the mounting bracket, pre-drill holes through the two bracket mounting holes opposite the key-hole slots. Refer to Figure 18.

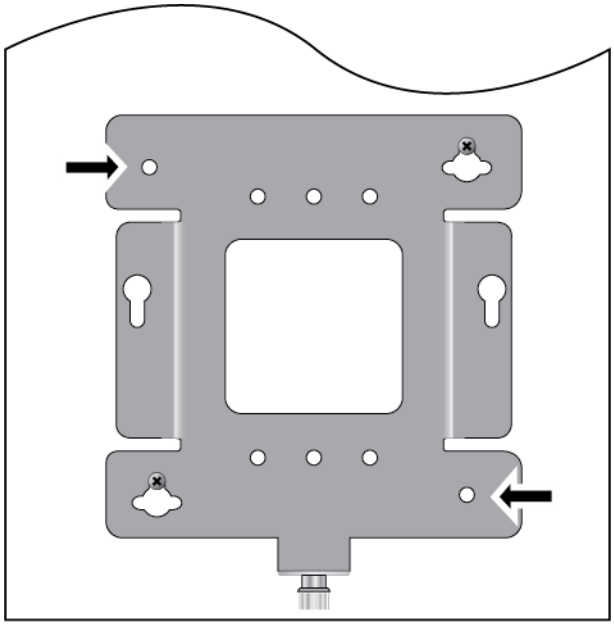


Figure 18. Pre-Drill Holes on Mounting Bracket

9. Install and tighten two M4 screws (not provided) in the holes prepared in Step 8. Refer to Figure 19. The bracket installation is now complete.

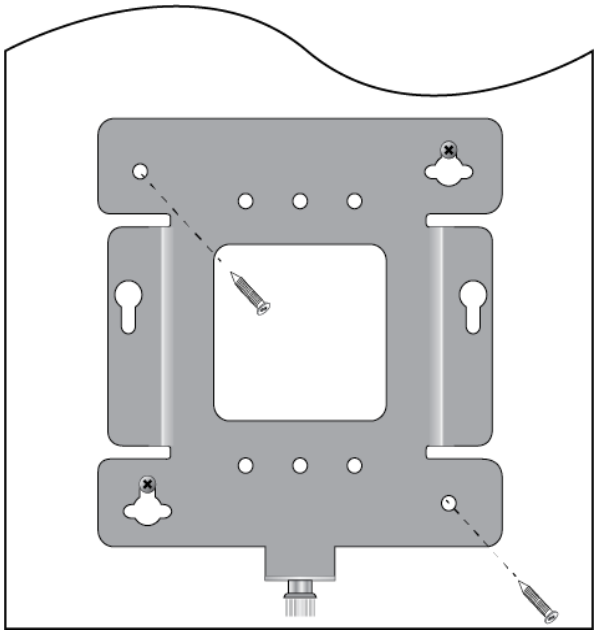


Figure 19. Securing the Mount Bracket

10. Go to “Connecting Ethernet Cables to LAN1 and LAN2 Ports” on page 52.

Connecting Ethernet Cables to LAN1 and LAN2 Ports

Here are the instructions for connecting Ethernet cables to the LAN1 and LAN2 ports. For information on cable specifications, refer to “Cable Requirements” on page 29. Please review the following guidelines before connecting cables to the LAN1 and LAN2 ports:

- If you are installing the wireless access point on a ceiling or wall, you might find it easier to connect the cables before placing the unit on the mounting bracket.
- You must use port LAN1 if you are connecting only one LAN port to the network.
- To power the wireless access point with PoE+, connect LAN1 port to a PoE+ source device. For power specifications, refer to “PoE+ Power Requirements” on page 63.
- To use both LAN1 and LAN2 ports, you have to connect them to the same network device. The device must support static LAGs.
- The default setting for the LAN2 port and static LAG on the wireless access point is disabled. You enable them with the on-board web browser management interface. For instructions, refer to the TQ5403 *Series Management Software User’s Guide*.

Note
Do not enable the LAN2 port until you have configured the other network device for the static LAG.

To connect the network cables, perform the following procedure:

1. To cable LAN1 port, connect an Ethernet cable into the port. The cable requirements are in “Cable Requirements” on page 29. Refer to Figure 20.

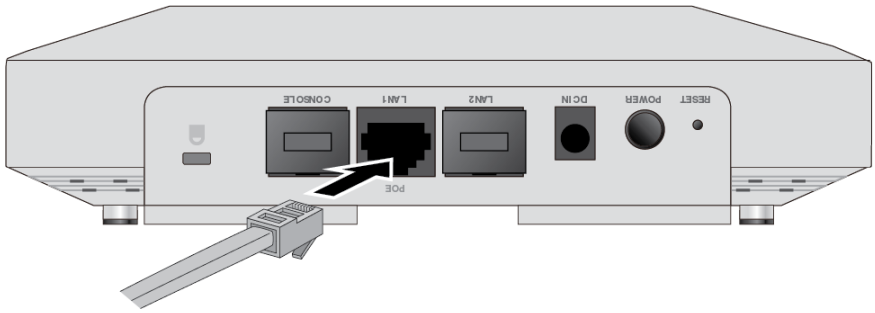


Figure 20. Connecting an Ethernet Cable to the LAN1 Port

2. Connect the other end of the Ethernet cable to a network Ethernet device, such as an Ethernet switch or router.

Note
If the device is a PoE+ source device, the wireless access point begins to power on and initialize its management software.

3. To use LAN2 port in the static LAG or Cascade mode, connect a second Ethernet cable to the port with these steps.

   a. Remove the dust plug from the port. Refer to Figure 21.

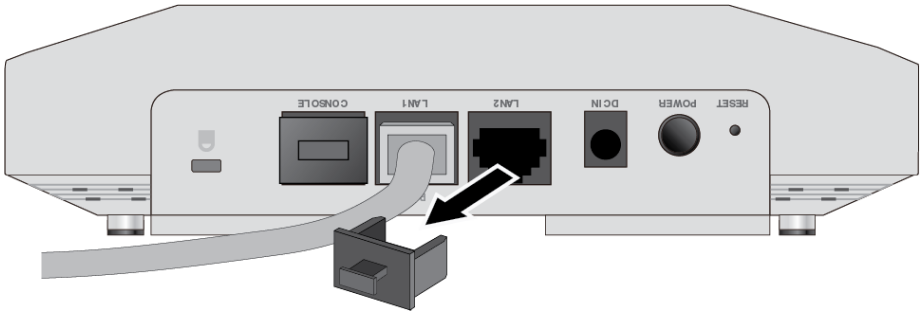


Figure 21. Removing the Dust Plug from the LAN2 Port

   b. Connect a second Ethernet cable into the LAN2 port. Refer to Figure 22.

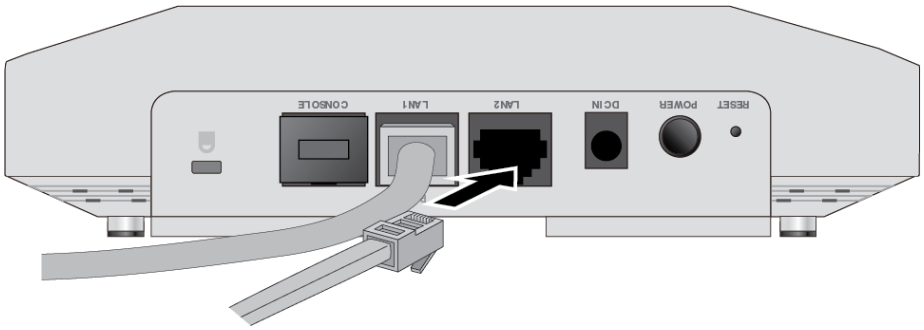


Figure 22. Connecting the Ethernet Cable to the LAN2 Port

4. Connect the other end to a network device. To use the port as a static LAG with the LAN1 port, connect it to the same router or switch as LAN1 port. To use it in the Cascade mode, connect it to a different device. For an overview, refer to “Static Link Aggregation” on page 26 and “Cascade Mode” on page 27.

Note
The default setting for the LAN2 port is disabled, To set it to the Static LAG or Cascade mode, use the on-board web browser management interface, explained in the TQ5403 *Series Management Software User Guide*.

5. Do one of the following:

   a. If the access point is to be power only by PoE+, without an AC/DC power adapter, go to “Attaching the Access Point to the Mounting Bracket” on page 56.

   b. To connect an external AC/DC power adapter, go to ”Connecting the AC/DC Power Adapter”.

Connecting the AC/DC Power Adapter

The wireless access point can be power with PoE+ on the LAN1 port or an AC/DC power adapter, or both. A wireless access point that is powered by both methods uses the AC/DC adapter as its primary power and PoE as redundant power. For an AC/DC power adapter, Allied Telesis recommends the MWS0091 Power Adapter.

If you purchased a power adapter for the wireless access point, perform the following procedure. Otherwise, go to “Attaching the Access Point to the Mounting Bracket” on page 56.

Perform the following procedure to install an AC/DC power adapter:

1. If the AC/DC power adapter has replaceable AC plugs, like the MWS0091 Power Adapter shown in Figure 8 on page 30, verify that the current plug on the adapter is the correct plug for your region. If it is not, install the correct AC plug by following the instructions provided with the adapter.

2. Plug the DC cable from the power adapter into the DC connector on the access point. Refer to Figure 23.

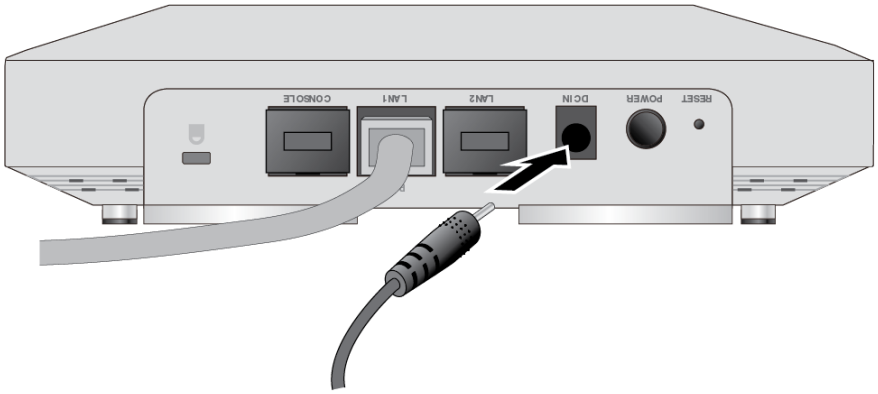


Figure 23. Connecting an AC/DC Power Adapter to the DC Connector

3. Connect the power adapter’ into an appropriate AC power source.

4. Push the DC On/Off Button to the “IN” position to turn on the DC connector.

> **Note**
> The DC Power Button controls the DC connector. It does not control PoE+ on the LAN1 port.

5. Go to “Attaching the Access Point to the Mounting Bracket” on page 56.

Attaching the Access Point to the Mounting Bracket

To attach the wireless access point on the mounting bracket on the wall or ceiling, perform the following procedure:

1. Align the bottom of the access point over the bracket so that the two screws on the bottom of the device fit into the bracket keyholes. Refer to Figure 24. (These are the two access point chassis screws installed in “Pre-fitting the Mounting Bracket on the Access Point” on page 45.)

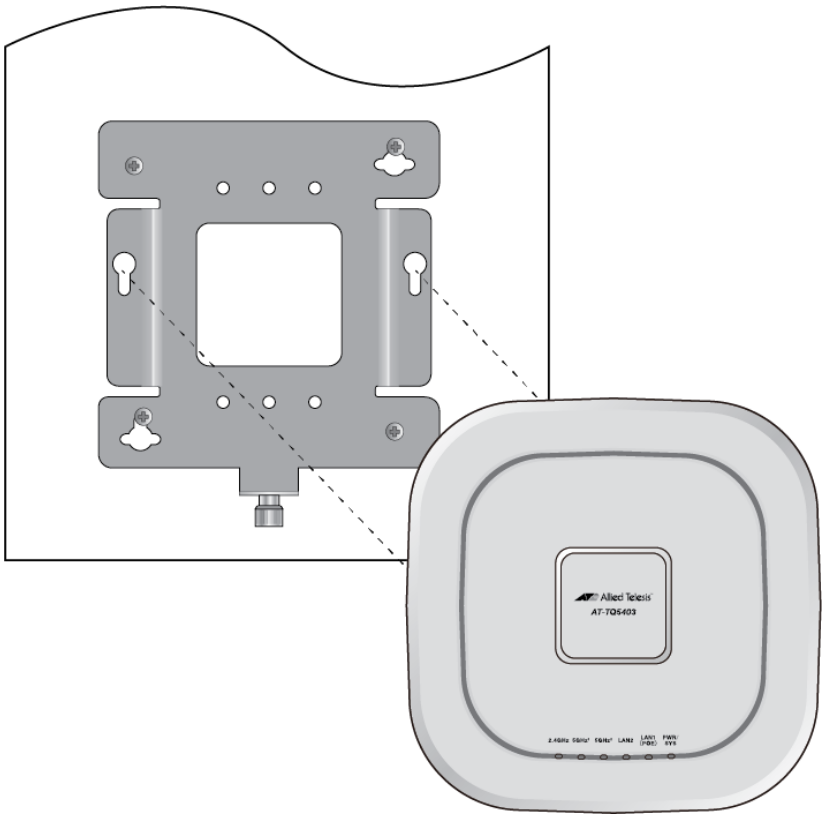


Figure 24. Installing the Access Point on the Mounting Bracket

2. Slide the access point forward until its screws are seated in the bracket keyhole slots and the bracket thumbscrew is aligned with the screw hole on the front panel. Refer to Figure 25 on page 57.

Figure 25. Seating the Access Point on the Mounting Bracket

3. Tighten the thumbscrew to secure the access point to the mounting bracket. Refer to Figure 26.

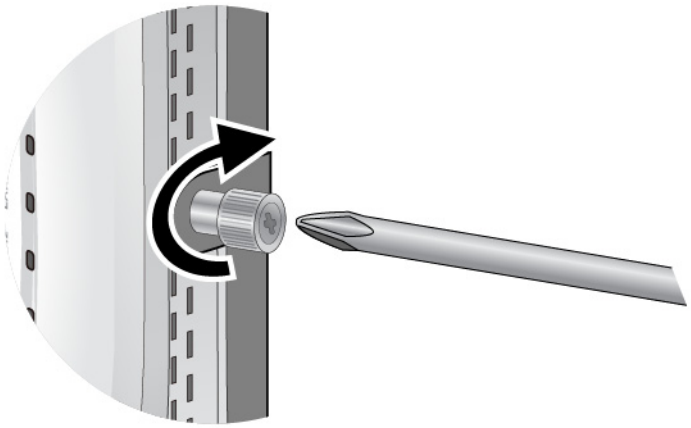


Figure 26. Tightening the Mounting Bracket Thumbscrew

4. Go to “Installing an Anti-theft Device” on page 58 or “Starting the First Management Session” on page 59.

Installing an Anti-theft Device

Installation of an anti-theft cable/lock is optional. The access point has a lock port that is compatible with a Kensington lock. The lock port can be used to physically secure the device to a table, wall, or a ceiling.

Note
Anti-theft devices are not available from Allied Telesis.

1. Follow the instructions provided with the vendor's anti-theft device for the installation. Refer to Figure 27 for the Kensington lock port location.

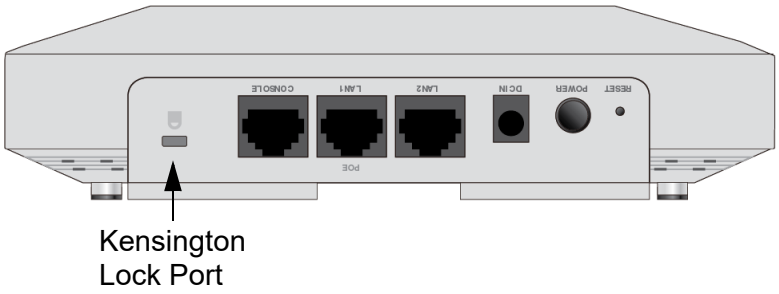


Figure 27. Kensington Lock Port Location

2. If you are installing the wireless access point on a wall or ceiling and have not installed in on the mounting bracket yet, go to "Attaching the Access Point to the Mounting Bracket" on page 56.

Starting the First Management Session

This section contains an abbreviated version of the procedure to start the first management session. For complete instructions, refer to the TQ5403 *Series Management Software User's Guide*.

The wireless access point firmware includes a DHCP client. The default setting for the client is enabled. When you power on the access point for the first time, it queries the subnet on the LAN1 port for a DHCP server. If a DHCP server responds to its query, the unit uses the IP address the server assigns to it. If there is no DHCP server, the access point uses the default IP address 192.168.1.230.

To start the first management session, perform the following procedure:

1. Start the web browser on your management workstation.
2. Enter the IP address of the wireless access point in the URL field of the web browser. The address is one of the following:
   - ❒ If your network does not have a DHCP server, enter the default address 192.168.1.230.
   - ❒ If your network has a DHCP server, enter the IP address the DHCP server assigned to the access point.

   The wireless access point displays the login prompt. Refer to Figure 28.

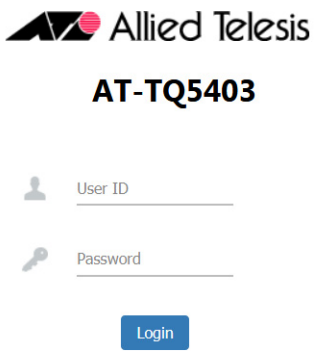


Figure 28. Login Prompt

3. Enter "manager" for the user name and "friend" for the password. The user name and password are case-sensitive.

Appendix A

Technical Specifications

This appendix contains the specifications for the TQ5403 and TQm5403 Wireless Access Points in the following sections:

- ❒ “Physical Specifications”
- ❒ “Environmental Specifications”
- ❒ “Power Specifications” on page 62
- ❒ “Cable Specifications” on page 64
- ❒ “LAN Ports Specifications and Pinouts” on page 65

Physical Specifications

Table 3. Physical Specifications

Parameter	Specification
Dimensions (W x D x H)	215 mm X 215 mm X 48 mm (8.46 in. x 8.46 in. x 1.89 in.)
Weight without mounting bracket	700 g (1.54 lbs)
Weight with mounting bracket	830 g (1.83 lbs)

Environmental Specifications

Table 4. Environmental Specifications

Parameter	Specification
Operating Temperature when powered by AC/DC adapter	0° C to 45° C (32° F to 113° F)
Operating Temperature when powered by PoE power source	0° C to 50° C (32° F to 122° F)
Storage Temperature	- 25° C to 70° C (- 13° F to 158° F)
Operating Humidity	0% to 90% non-condensing
Storage Humidity	0% to 95% non-condensing
Maximum Operating Altitude	3000 m (9843 ft)

Power Specifications

Input Power Specifications

Table 5 lists the power requirements of the TQ5403 and TQm5403 Wireless Access Points.

Table 5. Input Power Specifications

Parameter	Specification
Rated Input Voltage	12 VDC
Maximum Input Current	0.7 A
Average Input Current	0.52 A

External AC/DC Adapter Specifications

Table 6 lists the power requirements for an external AC/DC adapter.

Table 6. External AC/DC Adapter Specifications

Parameter	Specification
Input Voltage Range	100~240 VAC
Input Frequency	50 - 60 Hz
Rated Output Voltage	+12 VDC
Rated Output Current	2 A
Temperature Range	0° C to 45° C (32° F to 113° F)
Maximum Operating Altitude	3000 m (9843 ft)

Note
If you decide to use an AC/DC adapter with the TQ5403 or TQm5403 Wireless Access Point, Allied Telesis recommends the MWS0091 (WA-24Q12R) AC/DC adapter. The adapter is a UL Listed power supply and is fully compatible with the above specifications while meeting the standards of a separated extra-low voltage (SELV) product.

Note
The MWS0091 (WA-24Q12R) AC/DC adapter is sold separately.

PoE+ Power Requirements

Table 7 lists the PoE+ specifications for port LAN1. (Port LAN2 is not a PoE+ port.)

Table 7. PoE+ Power Requirements on Port LAN1

Parameter	Specification
TQ5403 and TQm5403	25.5 watts
PoE Device Classification	Class 4 Powered Device

Cable Specifications

The minimum cable requirements for ports LAN1 and LAN2 are listed here.

- 10Mbps or 100Mbps: Standard TIA/EIA 568-B-compliant Category 3 shielded or unshielded cabling.
- 1000Mbps: Standard TIA/EIA 568-A-compliant Category 5 or TIA/EIA 568-B-compliant Enhanced Category 5 (Cat 5e) shielded or unshielded cabling.

Note
The maximum operating distance of the cables is 100 meters (328 feet).

LAN Ports Specifications and Pinouts

Port Specifications

The access point port specifications are shown in Table 8.

Table 8. LAN Port Specifications

Connector	Specification
Standards - LAN1 and LAN2	IEEE 802.3 (10Base-T) IEEE 802.3u (100Base-TX) IEEE 802.3ab (1000Base-T)
PoE standard - LAN1 only	IEEE 802.3at (class 4)

Port Pinouts

The pin signal definitions for ports LAN1 and LAN2 are given here. Figure 29 illustrates the pin layout of the ports.

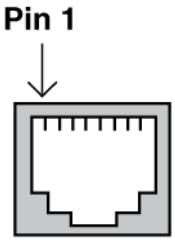


Figure 29. Pin Layout for RJ45 Connector on LAN Port

Table 9 lists the pin signals for ports operating at 10/100Mbps in the MDI configuration.

Table 9. MDI Pin Signals (10Base-T or 100Base-TX)

Pin	Signal
1	TX+
2	TX-
3	RX+
6	RX-

Table 10 lists the pin signals for ports operating at 10/100Mbps in the MDI-X configuration.

Table 10. MDI-X Pin Signals (10Base-T or 100Base-TX)

Pin	Signal
1	RX+
2	RX-
3	TX+
6	TX-

Table 11 lists the pin signals for LAN ports operating at 1000Mbps.

Table 11. Connector Pinouts (1000Base-T)

Pin	Pair	Signal
1	1	TX and RX
2	1	TX and RX-
3	2	TX and RX+
4	3	TX and RX+
5	3	TX and RX-
6	2	TX and RX-
7	4	TX and RX+
8	4	TX and RX-

Appendix B
Regulatory Statements

This appendix contains the following regulatory statements:

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- ❒ Reorient or relocate the receiving antenna.
- ❒ Increase the separation between the equipment and receiver.
- ❒ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❒ Consult the dealer or an experienced radio/TV technician for help.

Caution

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. E80

Caution

Avertissement de la FCC: Les changements ou modifications non expressément approuvés par la partie responsable de la conformité pourraient annuler l'autorité de l'utilisateur à utiliser cet équipement. E80

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For operation within 5.15 ~ 5.25GHz / 5.47 ~5.725GHz frequency range, it is restricted to indoor environment. The band from 5600-5650MHz will be disabled by the software during the manufacturing and cannot be changed by the end user. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Industry Canada Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'emetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1) L'appareil ne doit pas produire de brouillage.
(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Class B est conforme à la norme NMB-003 du Canada.

Caution:

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;

(iii) the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and

(iv) the worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2(3) shall be clearly indicated.

(v) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement:

Le guide d’utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment:

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l’intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5250 à 5 350 MHz et de 5470 à 5725 MHz doit être conforme à la limite de la p.i.r.e;

(iii) le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l’exploitation non point à point, selon le cas;

(iv) les pires angles d’inclinaison nécessaires pour rester conforme à l’exigence de la p.i.r.e. applicable au masque d’élévation, et énoncée à la section 6.2.2 3), doivent être clairement indiqués.

(v) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu’ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

Europe - EU Declaration of Conformity

Hereby, Allied Telesis declares that the radio equipment type [AT-TQ5403 and AT-TQm5403] is in compliance with Directive 2014/53/EU.

Operating Frequencies and Maximum Transmission Power Levels

The operating frequencies and maximum transmission power levels for wireless devices operated in the EU are listed below:

- 2412-2472 MHz:
  19.23 dBm (Beamforming), 18.79dBm (Non-Beamforming)
- 5150-5250 MHz:
  22.11 dBm (Beamforming), 22.13dBm (Non-Beamforming)
- 5250-5350 MHz:
  22.06 dBm (Beamforming), 21.87dBm (Non-Beamforming)
- 5470-5725 MHz:
  28.97 dBm (Beamforming), 28.70dBm (Non-Beamforming)

Note
Operations in the 5.15 - 5.35 GHz band are restricted to indoor usage only.

Radiation Exposure Statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

AT	BE	BG	CH	CY	CZ	DE	DK	EE
EL	ES	FI	FR	HR	HU	IE	IS	IT
LI	LT	LU	LV	MT	NL	NO	PL	PT
RO	SE	SI	SK	TR	UK(NI)			

Importer

Allied Telesis International BV

Incheonweg 7, 1437 EK Rozenburg

Note
Contact Allied Telesis for the EU conformity statement. To contact Allied Telesis, visit our web site at **www.alliedtelesis.com/contact**.

UK - UKCA Declaration of Conformity

Hereby, Allied Telesis declares that the radio equipment type [AT-TQ5403 ; AT-TQm5403] is in compliance with The Radio Equipment Regulations 2017

Operating Frequencies and Maximum Transmission Power Levels

The operating frequencies and maximum transmission power levels for wireless devices operated in the UKCA are listed below:

- 2412-2472 MHz:
  19.23 dBm (Beamforming), 18.79 dBm (Non-Beamforming)
- 5150-5250 MHz:
  22.11 dBm (Beamforming), 22.13 dBm (Non-Beamforming)
- 5250-5350 MHz:
  22.06 dBm (Beamforming), 21.87 dBm (Non-Beamforming)
- 5470-5725 MHz:
  28.97 dBm (Beamforming), 28.70 dBm (Non-Beamforming)

Note
Operations in the 5.15 - 5.35 GHz band are restricted to indoor usage only.

Radiation Exposure Statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Importer

Allied Telesis International BV 11 Pine Court, Kembrey Park Swindon Wiltshire SN2 8AD, United Kingdom

Note
Contact Allied Telesis for the UK conformity statement. To contact AlliedTelesis, visit our web site at **www.alliedtelesis.com/contact.**

Appendix C
Radiation Patterns

This appendix contains the following sections:

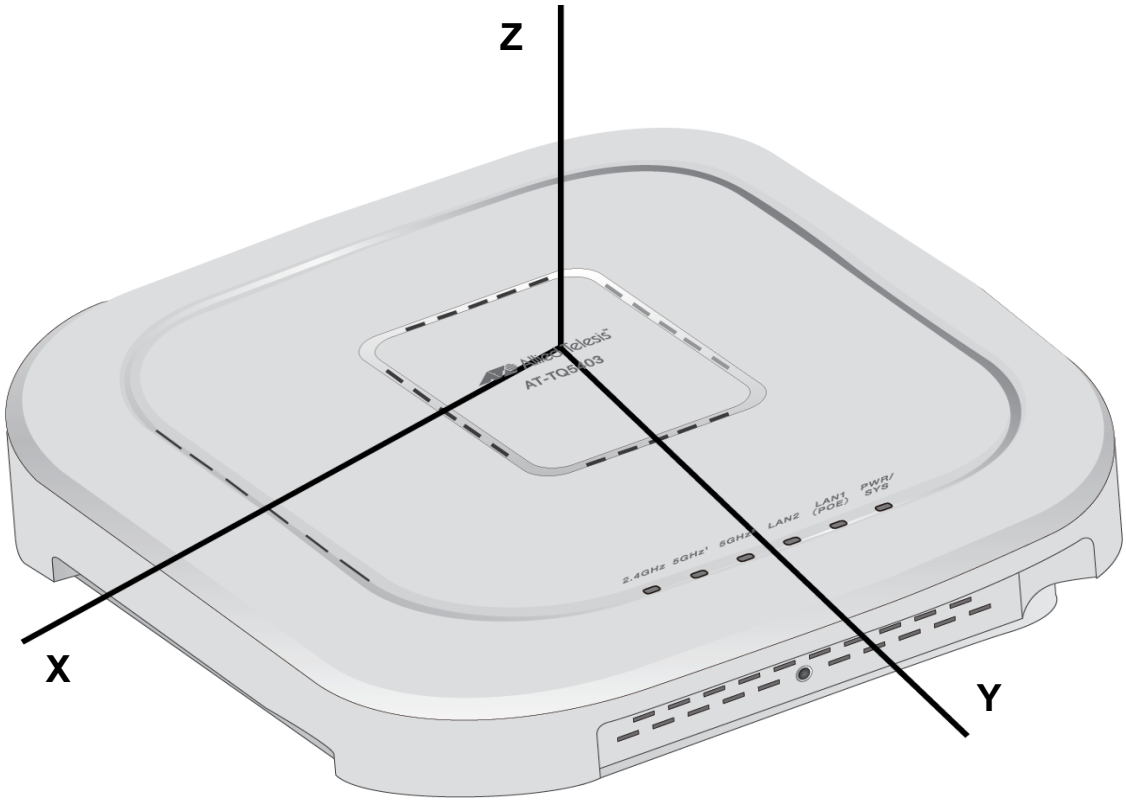
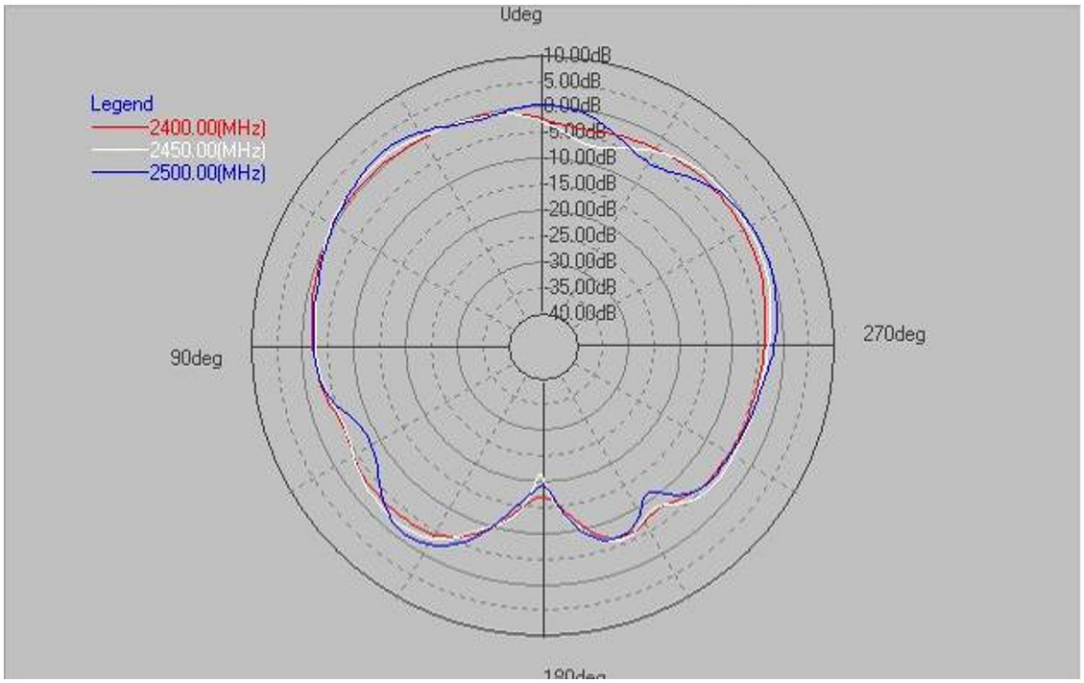


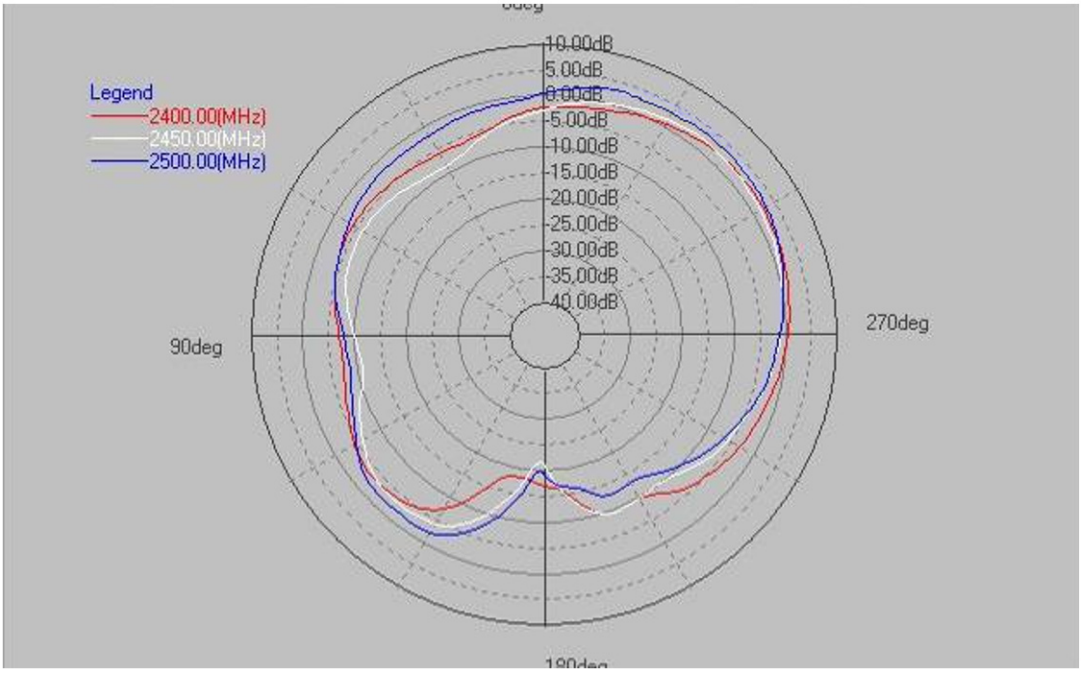
Figure 30. Axes on the TQ5403 and TQm5403 Access Points

2.4GHz Antenna 1

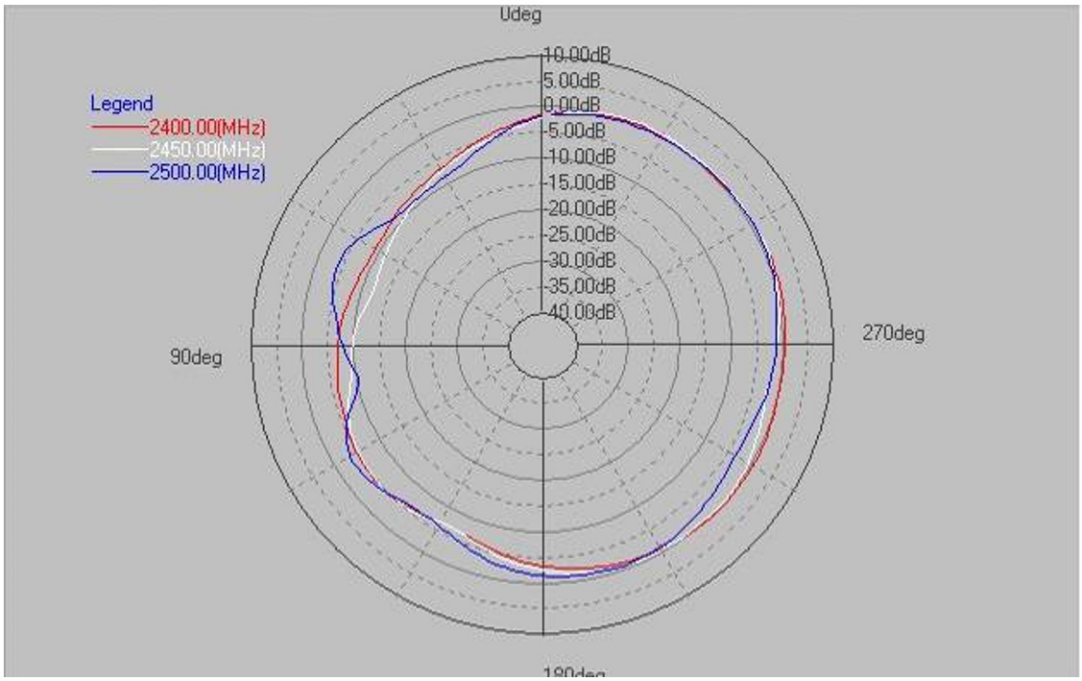
X-Z Plane
(E-total)



Y-Z Plane
(E-total)

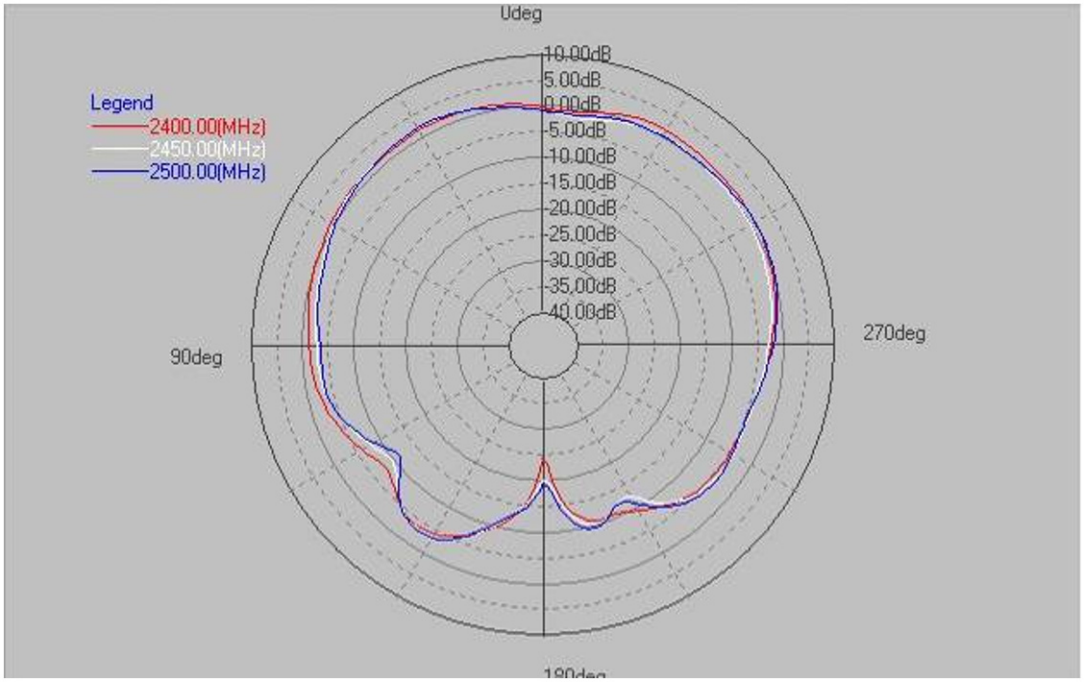


X-Y Plane
(E-total)

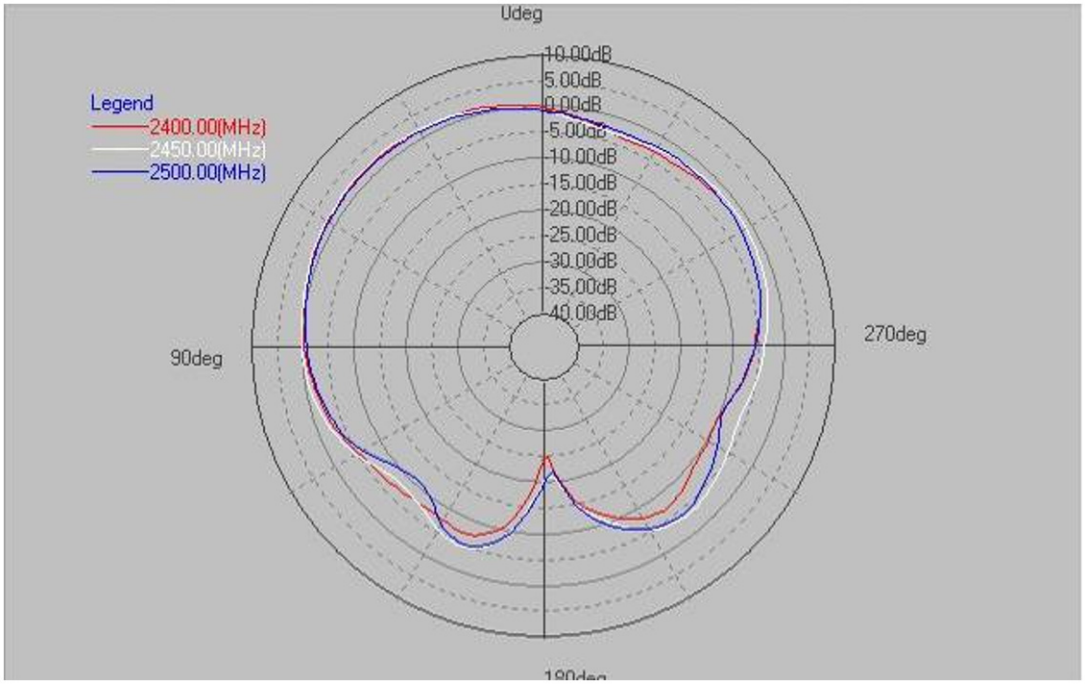


2.4GHz Antenna 2

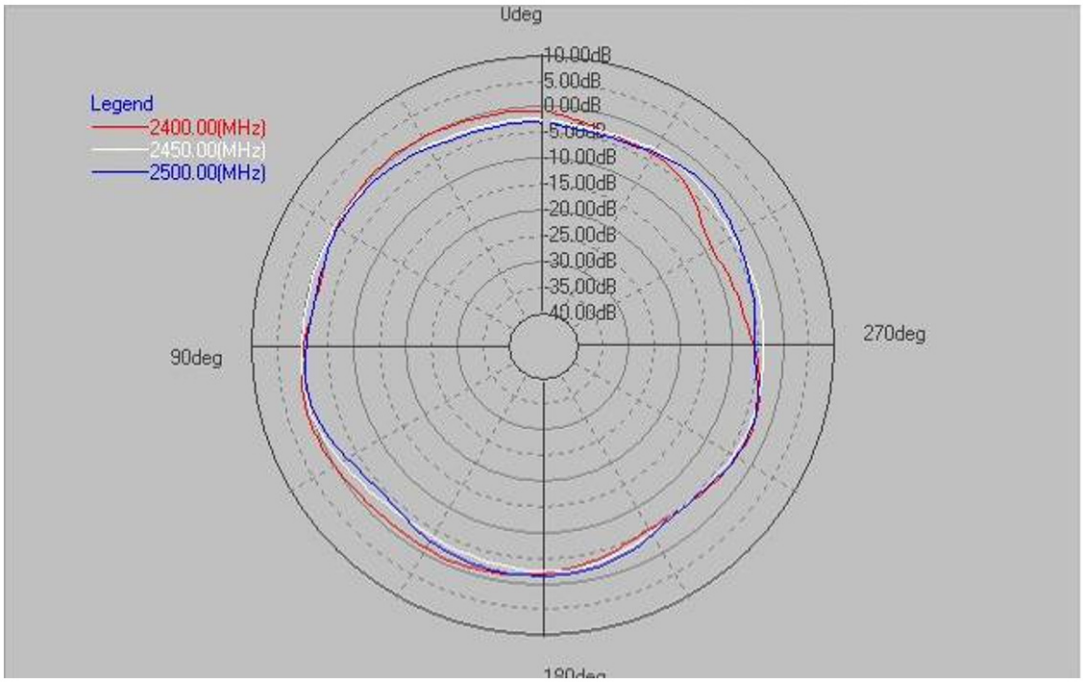
X-Z Plane
(E-total)



Y-Z Plane
(E-total)

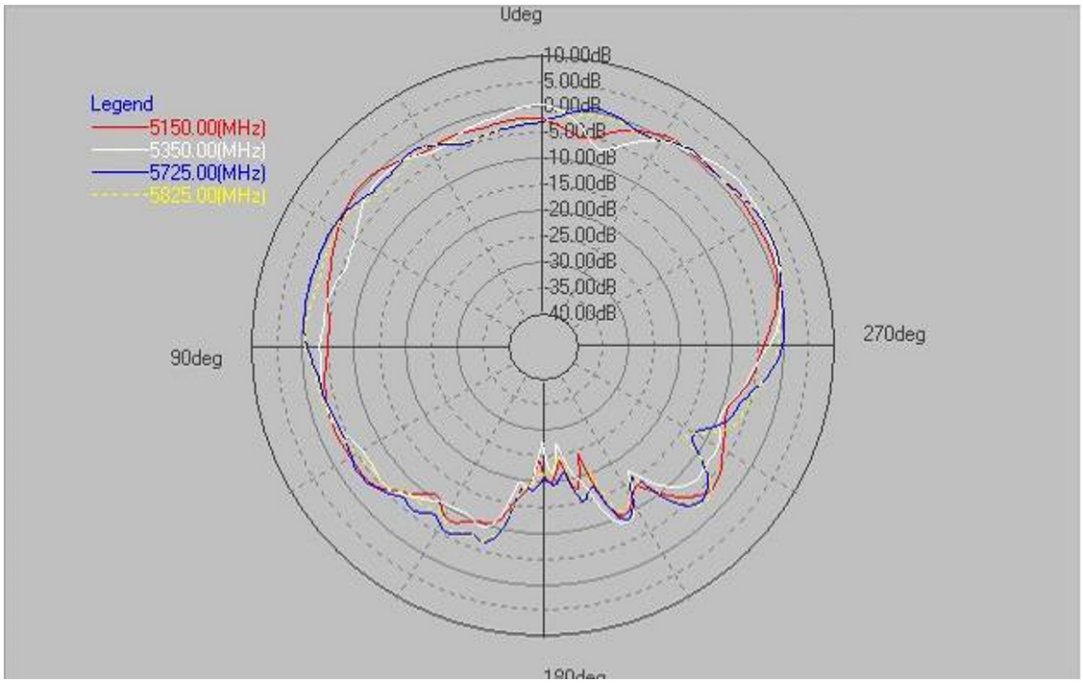


X-Y Plane
(E-total)

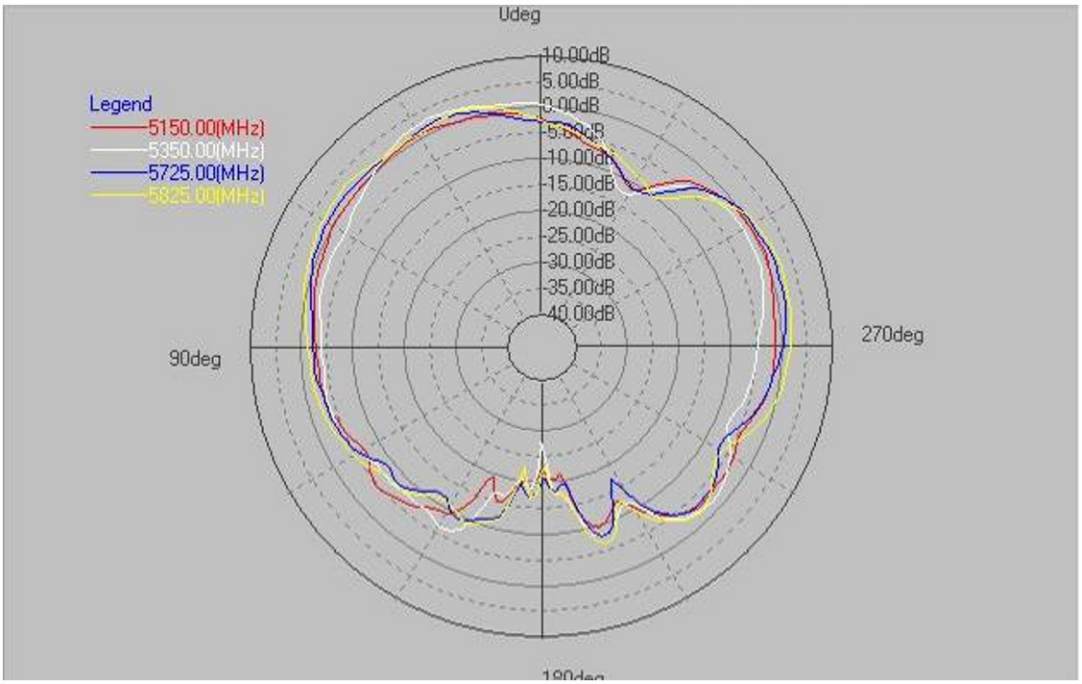


5GHz Antenna 1

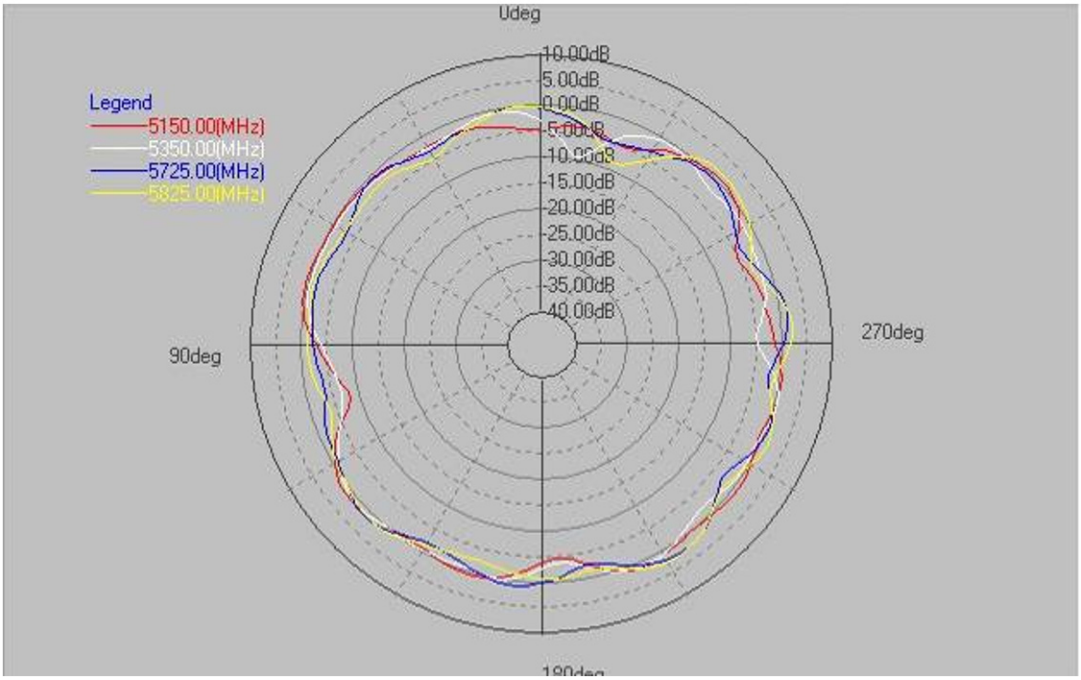
X-Z Plane
(E-total)



Y-Z Plane
(E-total)

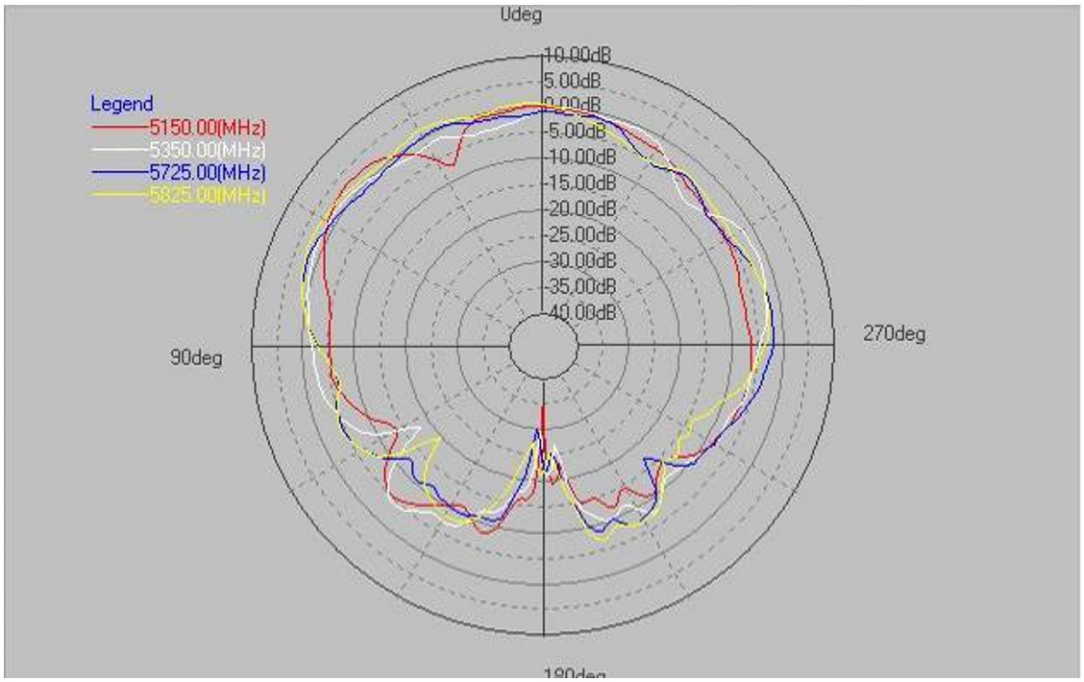


X-Y Plane
(E-total)

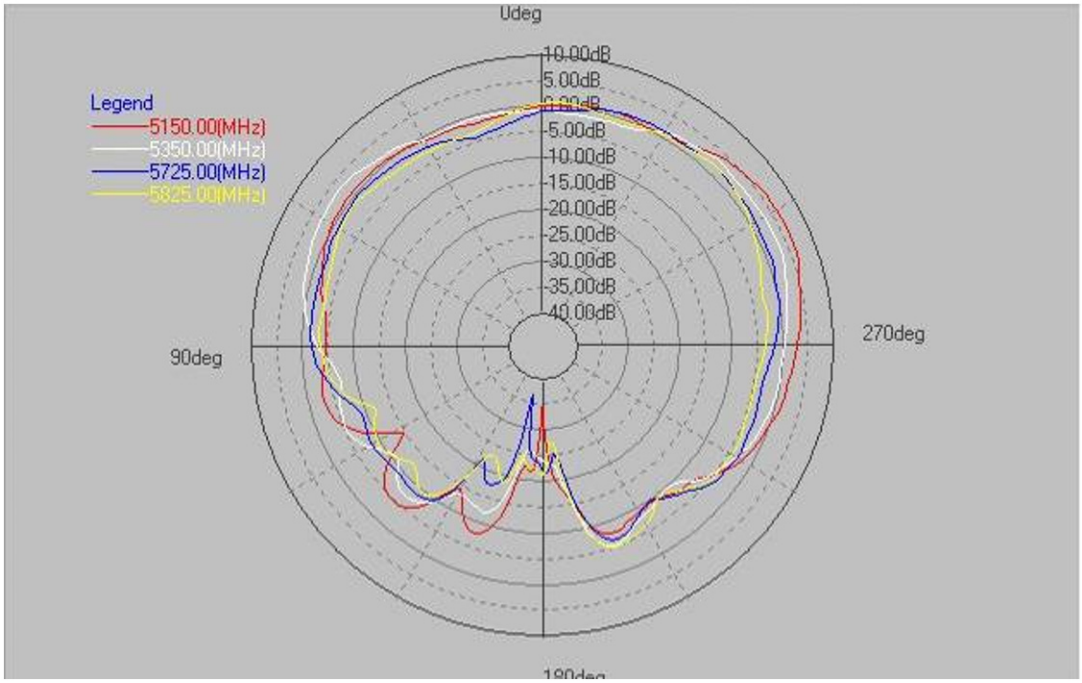


5GHz Antenna 2

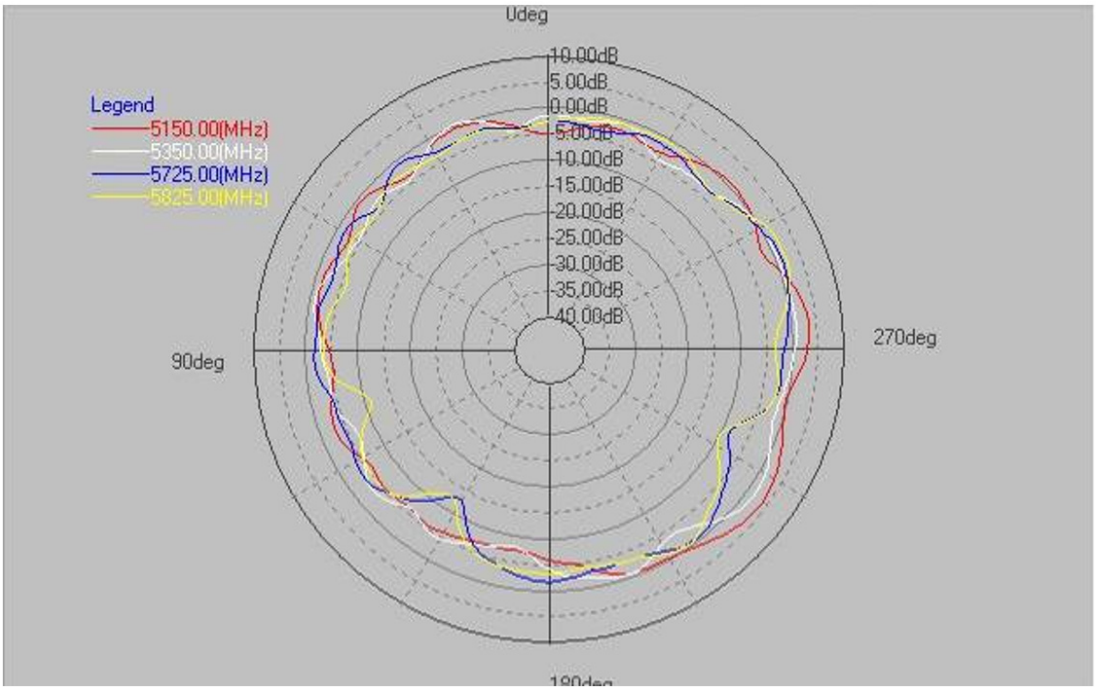
X-Z Plane
(E-total)



Y-Z Plane
(E-total)

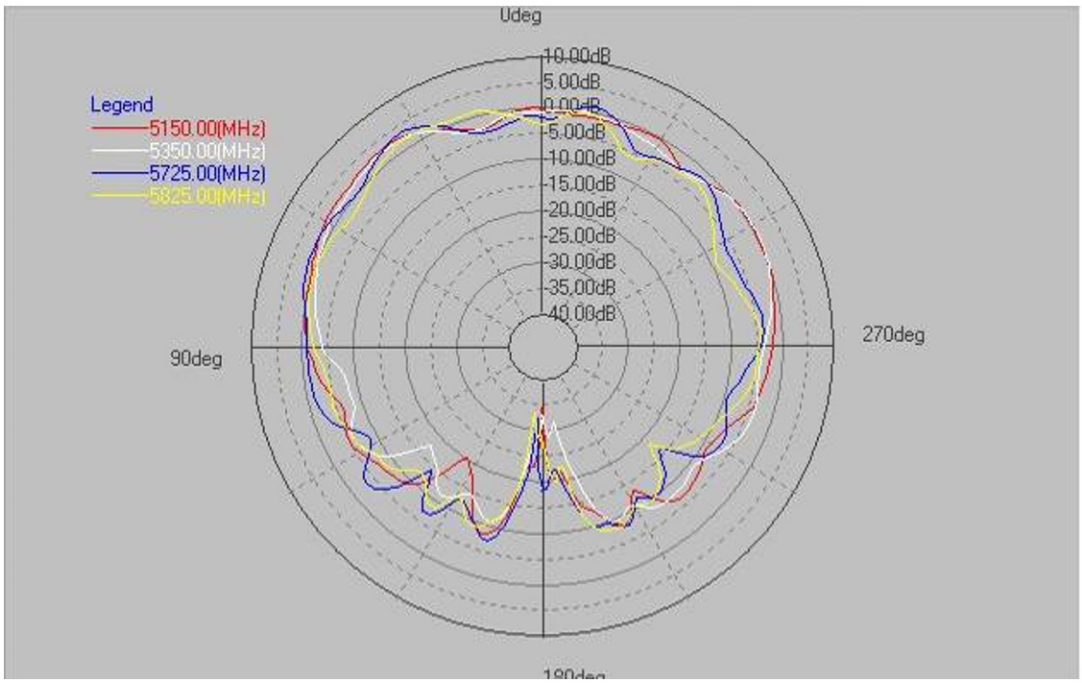


X-Y Plane
(E-total)

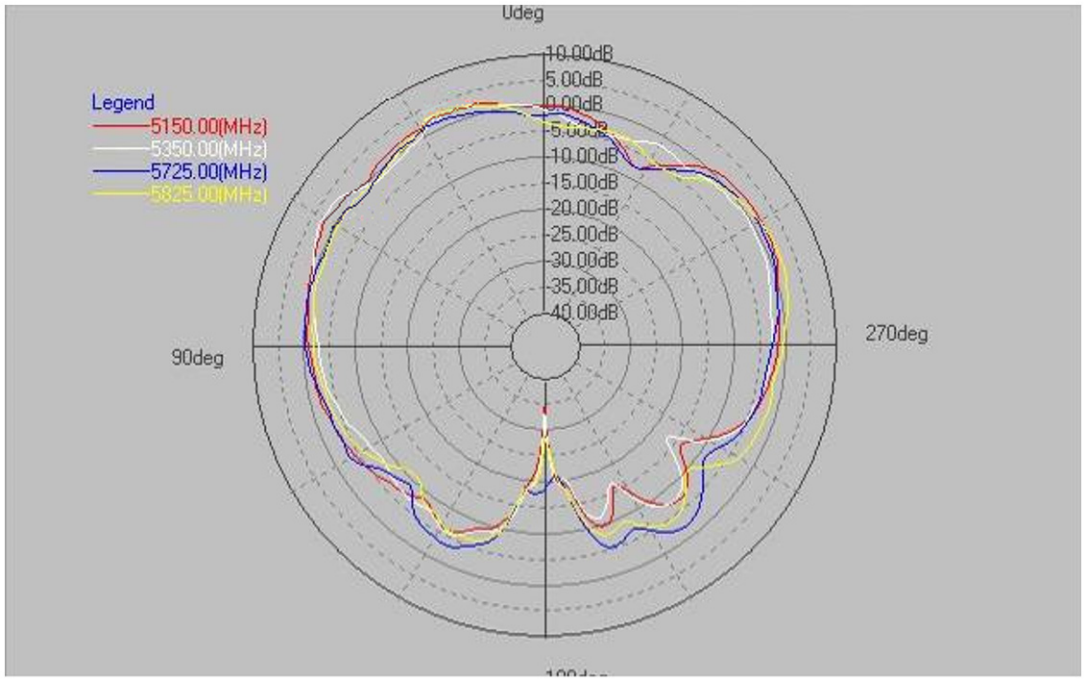


5GHz Antenna 3

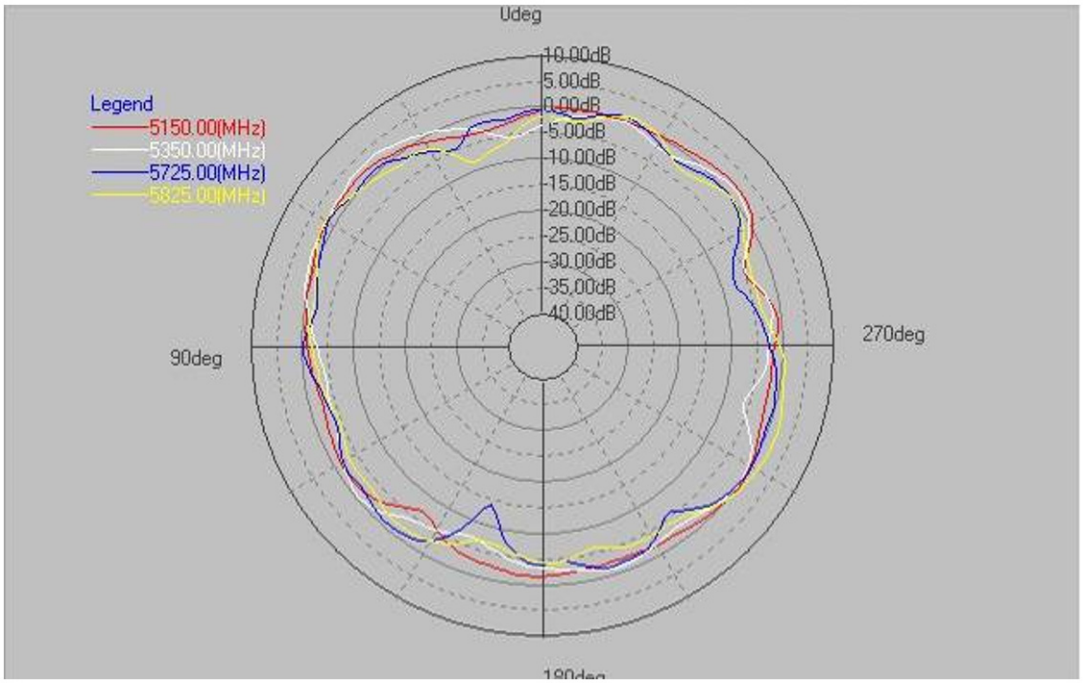
X-Z Plane
(E-total)



Y-Z Plane
(E-total)

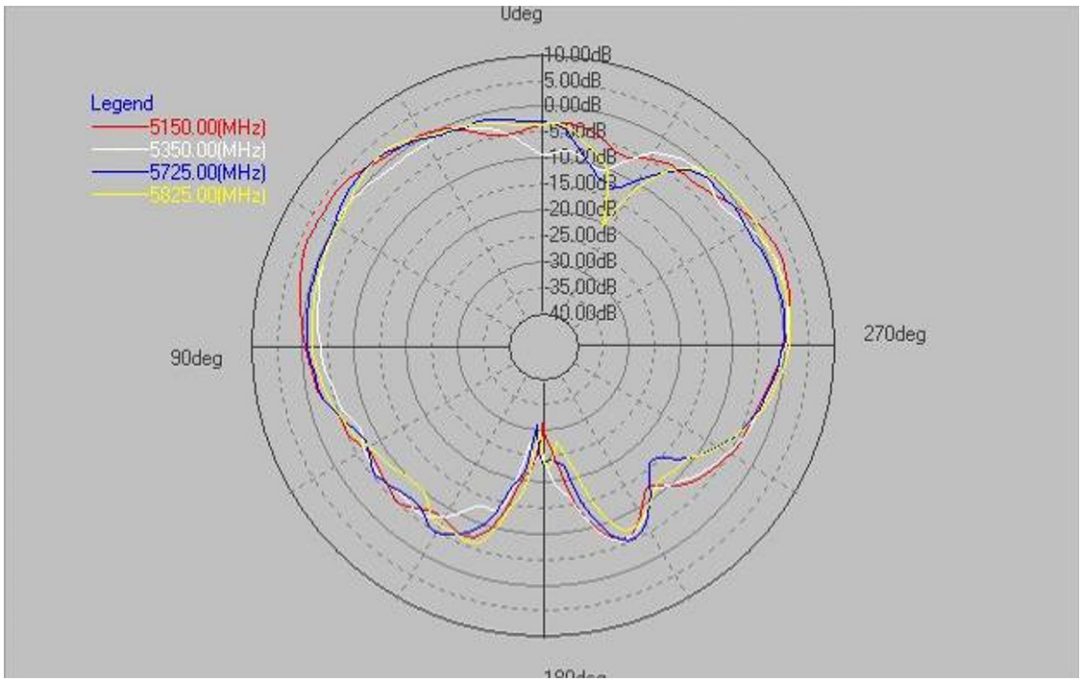


X-Y Plane
(E-total)

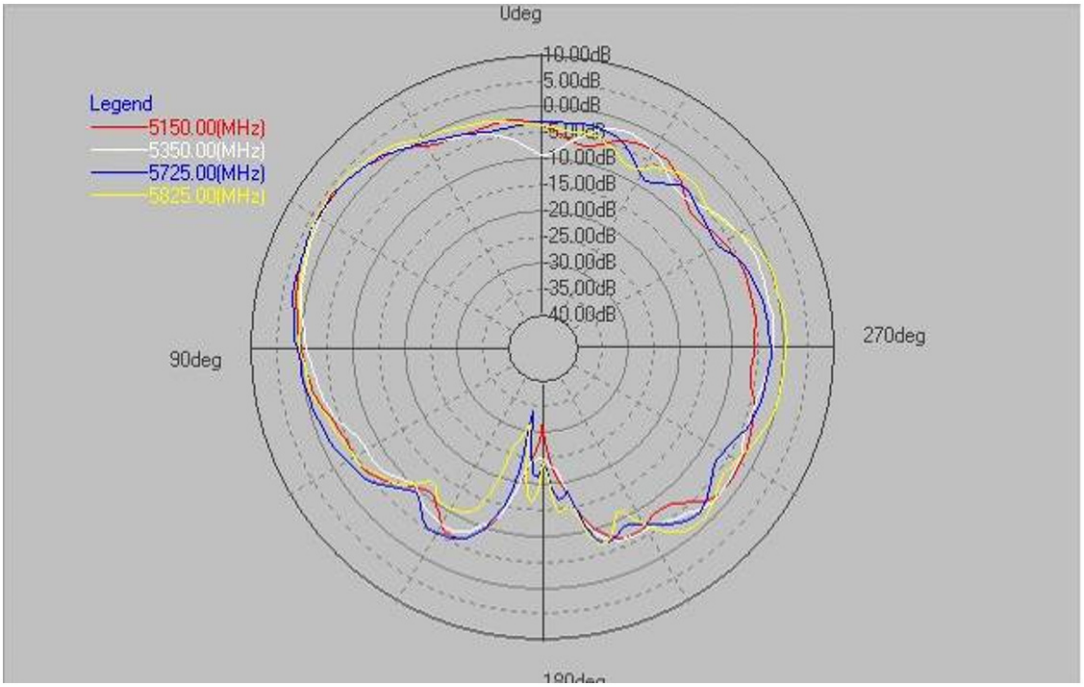


5GHz Antenna 4

X-Z Plane
(E-total)



Y-Z Plane
(E-total)



X-Y Plane
(E-total)