

Cisco Aironet 1552H Outdoor Access Point for Hazardous Environments

The Cisco® Aironet® 1552H Outdoor Access Point is designed for hazardous environments such as oil and gas refineries, chemical plants, mining pits, and manufacturing factories. This access point is Class I, Div 2/Zone 2 hazardous location certified. Several optional accessories are available to suit the requirements of particular deployments. A fully operational system requires the following minimum items:

- Access point
- Software
- Power
- Antennas: 2.4 GHz, 5 GHz, or dual band
- Mounting bracket

Additionally, you may need the following, depending on your particular deployment. Options for the 155H outdoor access point include:

- Fiber module

Use this guide to identify which items you need for your deployment. Note that accessories are available as a configurable option and/or as a spare. An equal sign at the end of the part number indicates that the part is a spare — for example, AIR-PWRINJ1500-2=.

You may need to remove any option you installed when returning your access point to Cisco. Consult your Cisco representative for additional assistance in ordering mesh and other networking equipment.

Access Point

The Cisco Aironet 1552H Outdoor Access Point is a ruggedized, AC power supplied, outdoor 802.11n access point designed for hazardous environments.

Table 1 lists the product ID for the Cisco Aironet 155H Outdoor Access Point.

Table 1. Product ID

Product ID	Description
AIR-CA1552H-x-K9	802.11N Outdoor Mesh Access Point, Hazardous Locations, with AC power supply

In Table 1, “x” is a placeholder for the regulatory domain designator. Please see <https://www.cisco.com/go/aironet/compliance> to determine which regulatory domain is used in your country. Note that the regulatory domain used in your country may differ with the access point model, and that some models are not available for all countries.

The following contents are included:

- Access point
- Grounding lug

- DC terminal block
- Liquid tight adapters for sealing cable ingresses
- Sealant for the antenna connections
- Antiseizing compound for the mounting brackets

Software Options

The Cisco Aironet 1552H Outdoor Access Point can be ordered with unified (controller-based) software or autonomous software. To operate as part of a mesh network (either as a root access point or mesh access point), the unified software is required. The autonomous, or standalone, software allows the access point to operate independently to serve clients and allows the access point to function as a work group bridge (WGB). The two software option part numbers are listed in Table 2. If no software is selected, the default selection is SWAP1500-BTIMGE-K9.

Table 2. Software Options

Part Number	Description
SWAP1500-BTIMGE-K9	Cisco 1552H Access Point Boot Image - Unified SW
S155K9W7-15303JC	Cisco 1552H Access Point IOS WIRELESS LAN – Autonomous SW

The 1552H access point requires the minimum software release noted in Table 3.

Table 3. Minimum Software Release

Product ID	Minimum Software Release
AR-CA1552H-x-K9	7.0.116.0 or later

Note: Additional functionality is available to the access point with more recent releases. Please see the applicable release notes for more information about features available with newer releases.

Power

The 1552H access point for hazardous locations supports multiple power options. It supports 12 VDC, but not in a hazardous environment.

Table 4 provides the powering options for the access point.

Table 4. Powering Options

Product ID	AC	DC	Power Injector
AR-CA1552H-x-K9	100-240 VAC	12 VDC	Yes

AC Power

The 1552H requires a discrete wired connection to the internal terminal block.

When AC power is not used (for example, when you use Power over Ethernet [PoE] or 12 VDC to power the access point), you should cover the unused connector. A cover is included with the power injector and is also available from Remke (visit <http://www.remke.com> and search for part number 75-0086).

Power over Ethernet

When you power the access point over Ethernet, the access point does not supply 802.3af PoE to an Ethernet - attached device. When you use PoE, use the power injector listed in Table 5.

Table 5. Power Injector for Use with Power over Ethernet

Product ID	Description
AIR-PWRINJ1500-2=	1520/1550 Series Power Injector

Do not use any other power injector or switch for Power over Ethernet with the 1552H access point for hazardous locations. The 1552H is approved for use only with the AIR-PWRINJ1500-2=. You must also specify the country type power cord for the power injector.

The AIR-PWRINJ1500-2= is for indoor use only. It has built-in surge protection, but you may also need to install a surge protector at the building entry point. Please check your local electrical regulations.

The 1552H access point for hazardous locations uses a standard RJ-45 Ethernet connector. Cisco does not provide an Ethernet cable. You will need to source an outdoor-rated, Category 5 or better Ethernet cable and shielded RJ-45 connectors from a local supplier. Liquid-tight adapters are provided with the access point to seal this cable entry point from weather.

DC Power

The 1552H access point supports power from an external 12 VDC power supply, minimum 50 watts, which is not certified for hazardous location environments. A terminal block is included with your access point for this purpose, with liquid-tight adapters to weatherproof the connection. When using DC power, please consult the [Cisco Aironet 1552 Series for Hazardous Locations Installation Guide](#) for instructions on how to correctly assemble the connector.

The 1552H access point can be installed with redundant power sources. When multiple power sources are available, the access point will use power in the following priority:

1. AC power
2. DC power
3. Power over Ethernet

Antennas

The 1552H access point for hazardous locations is equipped with a combination of radios operating in the 2.4- and 5-GHz bands. Both radios are capable of two transmit and three receive streams using Maximal Ratio Combining (MRC), which takes advantage of multipath signals received across up to three antennas to improve signal quality.

Table 6 describes the antennas available for the 1552H, listing product IDs, as well as gain and other details.

Table 6. Antennas

Product ID	Frequency Bands	Gain	Type	Required Quantity
AIR-ANT2547V-N=	2.4 and 5 GHz	4 or 7 dBi	Omnidirectional	3
AIR-ANT2547V-N-HZ=	2.4 and 5 GHz	4 or 7 dBi	Omnidirectional	3
AIR-ANT2588P3M-N=	2.4 and 5 GHz	8 or 8 dBi	Directional	1

For additional antenna specifications, see the [Cisco Aironet Antenna and Accessories Reference Guide](#).

The access point is provided with a moldable sealant to protect the antenna connector from weather. Consult the installation guide for proper installation.

Mounting Brackets

The 1552H access point for hazardous locations can be mounted to poles. The pole-mounting brackets are not provided with the access point. Table 7 provides the accessories required for pole mounting.

Table 7. Pole-Mounting Brackets

Product ID	Description
AIR-ACCPMK1550=	1550 Pole Mount Bracket Kit
AIR-ACCPMK1550HZM=	1550 Pole Mount Bracket Kit, Marine Grade

The pole-mount kit is adjustable for any pole angle: horizontal, vertical, and any angle in between. It can also be used to mount the access point to a flat surface, such as a wall. To prevent the mounting bracket and access point from fusing together, antiseizing compound is included with the access point. The pole-mount kit includes two stainless steel band straps and buckles to fit poles up to 16 inches (40 cm) in diameter. For larger poles, consult a local provider. The band can be secured using the tool listed in Table 8.

Table 8. Band Installation Tool

Product ID	Description
AIR-BAND-INST-TL=	Band Installation Tool

The high-gain directional antennas (AIR-ANT5114P2M-N=) are supplied with a pole-mount kit. If you want to directly mount these antennas to the access point pole-mount bracket, you will need the antenna bracket-mounting kit for each antenna indicated in Table 9.

Table 9. Antenna Mounting Kit for Directional Antennas

Product ID	Description
AIR-ACCAMK-1=	Directional Antenna Mount Kit

Network Connection

The 1552H access point for hazardous locations can be connected to the network wirelessly or through a wired Ethernet or fiber connection.

Wireless

An access point that connects to the network through another access point over a wireless backhaul is known as a mesh access point (MAP). The backhaul radio is built in, and no wired connection is needed for MAPs. An access point that also acts as the gateway for mesh nodes is known as a root access point (RAP). RAPs connect to the network through a wired connection, either Ethernet or fiber. Liquid-tight adapters are provided with the access point to prevent water ingress.

Ethernet

The 1552H supports 10/100/1000 Gigabit Ethernet using a shielded RJ-45 connector with a minimum Category 5 cable. Please see your local supplier for an outdoor-rated cable and shielded connectors.

Fiber

Alternatively, the 1552H can use one of the temperature-rated Small Form-Factor Pluggable (SFP) modules. There is also an optional kit with fiber reels, described in Table 10, to store excess fiber inside the access point.

Table 10. Fiber SFP Modules and Reels

Product ID	Description
GLC-SX-MM-RGD=	1000BaseSX Multimode Rugged SFP module
GLC-LX-SM-RGD=	1000BaseLX Singlemode Rugged SFP module
AR-1520-FIB-REEL=	Fiber Reel Installation Kit

Note: The fiber SFP needs to be installed in the access point. See the [Cisco Aironet 1552 Series f or Hazardous Locations Installation Guide](#) f or instructions.

Part Numbers for Ordering

Table 11 lists all product IDs available f or the 1552H access point f or hazardous locations.

Table 11. Part Numbers

Product ID	Description
Access Point	
AR-CA1552H-x-K9	802.11N Outdoor Mesh Access Point, Hazardous Locations, with AC power supply
Software	
SWAP1500-BTIMGE-K9	Cisco 1552H Access Point Boot Image – Unified SW
S155K9W7-15303JC	Cisco 1552H Access Point IOS WIRELESS LAN – Autonomous SW
Power Injector	
AR-PWRINJ1500-2=	Cisco 1552H Access Point Power Injector
Antennas	
AR-ANT2547V-N=	Antenna, omnidirectional, 2.4/5 GHz, 4/7 dBi, N connector,
AR-ANT2547V-N-HZ=	Antenna, omnidirectional, 2.4/5 GHz, 4/7 dBi, N connector, Hazloc
AR-ANT2588P3M-N=	Antenna, directional, 2.4/5 GHz, 8/8 dBi, N connector,
Mounting Brackets	
AR-ACCPMK1550=	1550 Pole Mount Bracket Kit
AR-ACCPMK1550HZM=	1550 Pole Mount Bracket Kit, Marine Grade
AR-BAND-INST-TL=	Band Installation Tool
AR-ACCAMK-1=	Directional Antenna Mount Kit
Fiber SFP Modules	
GLC-SX-MM-RGD=	1000BaseSX Multimode Rugged SFP module
GLC-LX-SM-RGD=	1000BaseLX Singlemode Rugged SFP module
AR-1520-FIB-REEL=	Fiber Reel Installation Kit

Note:

- For pricing, refer to the Ordering Tool on the Cisco website.
- Some accessories can be ordered as an option in that they are being included in the same packaging in which the access point is shipped. These items are identified by the absence of an = character at the end of the part number.

Cisco Services

Cisco Technical Services

Table 12 lists the Cisco Technical Services available f or the 1552H access point f or hazardous locations.

Table 12. Technical Services

Service	Description
Cisco Smart Net Total Care™ Service (SNTC)	<ul style="list-style-type: none"> • Next-business-day, 8 x 5 x 4, 24 x 7 x 4, and 24 x 7 x 2 advance hardware replacement¹ and onsite parts replacement and installation available • Global access to the Cisco Technical Assistance Center (TAC) 24 hours a day • Unrestricted access to the extensive Cisco.com resources, communities, and tools • Ongoing operating system software updates² within a software licensed feature set, if any • Proactive diagnostics and real-time alerts on Smart Call Home-enabled devices
Cisco Combined Services (CS)	<ul style="list-style-type: none"> • Combined Services bundles existing Technical Services foundational and Advanced Services subscription offerings • Combined Services Smart Net Total Care is a service created to bundle existing Technical Services, that is, Smart Net Total Care and Advanced Services subscription offerings • Combined Services SP Base is a service created to bundle existing Technical Services, that is, SP Base and Advanced Services subscription offerings • SP Base: This service is specifically tailored for service providers to improve network availability and reduce security and downtime risks • Cisco Solution Support with Smart Net Total Care is an ordering model created to bundle existing Technical Services offerings with Solution Support service offerings

¹ Advance hardware replacement is available in various service -level combinations. For example, 8 x 5 x Next Business Day (NBD) indicates that shipment will be initiated during the standard 8 -hour business day, 5 days a week (the generally accepted business days within the relevant region), with NBD delivery. Where NBD is not available, same -day shipment is provided. Restrictions apply. Review the appropriate Cisco Smart Net Total Care Service descriptions for details.

² Cisco OS updates include maintenance releases, minor updates, and major updates within the licensed feature set, if applicable.

Other Requirements and Resources

Cisco Technology Developer Program

Related solutions are available through our Cisco Technology Developer Partner Program partners. For more information, visit: <https://www.cisco.com/go/ctdp>.

Ordering Information

To place an order, visit the Cisco ordering website at: <https://www.cisco.com/en/US/ordering/index.shtml>.



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