



Cisco Industrial Wireless 3700 Series Access Points

Ordering Guide

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1. Introduction

This document describes the Cisco® Industrial Wireless 3700 Series Access Points listed in Table 1. It also describes the various packaging structures and configurations available for the listed model. In this document are also part numbers and other information necessary to help you choose and order products.

Table 1. Cisco Industrial Wireless 3700 Series Access Points

Model	Description
IW3702	Cisco Industrial Wireless 3702 access point

For more detailed information about Cisco Industrial Wireless 3700 Series Access Points products, visit <http://www.cisco.com/c/en/us/products/wireless/industrial-wireless-3700-series/index.html>.

2. Cisco Industrial Wireless 3700 Series Access Points

Cisco Industrial Wireless 3700 Series Access Points are ideal for transportation, mining, manufacturing, and other industrial and outdoor applications. They are the most compact Cisco outdoor access points supporting the latest Wi-Fi standard, 802.11ac, and can operate over the widest temperature range. A fully operational system is composed of the following items:

1. Access point
2. Software
3. External antennas
4. RF adapters, RF cables, RF port protective covers, and lightning arrestors (optional)
5. Mounting bracket for pole or DIN rail mounting (optional)
6. Power injector if PoE/PoE+ powering method is used (optional)
7. AC to DC power adapter (to be released in February 2017) if AC powering method is used (optional)
8. M12 Ethernet cable (optional)
9. Power source
10. M12 DC power cable if DC powering method is used (optional)

Table 2 lists the part numbers for Cisco Industrial Wireless 3700 Series Access Points in a variety of configurations.

Table 2. Cisco Industrial Wireless 3700 Series Access Points Models¹

Part Number	Description
IW3702-2E-x-K9	IW3702, 2: Two antenna ports on the top panel (four antenna ports total, the other two antenna ports are located on the bottom panel), compatible with directly attached external antennas or cabled external antennas. E: External antennas, x: Regulatory domain.
IW3702-4E-x-K9	IW3702, 4: Four antenna ports on the top panel, compatible with cabled external antennas. E: External antennas, x: Regulatory domain.

¹ **Regulatory Domains: (x=regulatory domains)**

- Domain codes available for the IW3700 Series are x=A, B, D, E, M, Q, R, S and Z.
- Other regulatory domains are supported by the Universal access points today, or additional domain versions in the future
- Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain that corresponds to a particular country, visit <http://www.cisco.com/go/aironet/compliance>.

IW3702-2E-UXX9	IW3702, 2: Two antenna ports on the top panel (four antenna ports total, the other two antenna ports are located on the bottom panel), compatible with directly attached external antennas or cabled external antennas. E: External antennas, UX: Universal access point.
IW3702-4E-UXX9	IW3702, 4: Four antenna ports on the top panel, compatible with cabled external antennas. E: External antennas, UX: Universal access point.

Use Table 2 and the remainder of this guide to identify the items that you need for your deployment. Notice that some components are available as a configurable **option** or as a **spare**.

- A configurable **option** ships in the same main box in which the access point is shipped. For example:
 - **AIR-ACC370-NM-RF** is a configurable **option**, and if ordered as such, is shipped alongside the access point in the same box.
- A **spare** is denoted with an equals (=) sign at the end of the part number. For example:
 - **AIR-ACCPMK3700=** is a **spare**, and if ordered as such, is always shipped in separate packaging.

If making a return or trade-in, you might need to remove any option you installed before returning your access point to Cisco. Consult your Cisco representative for additional assistance to order mesh and other networking equipment.

Table 3 lists the standard items that are included with each specific model:

Table 3. Standard Items Included with Each Specific Model

IW3702
<ul style="list-style-type: none"> • Access point • Cisco product documentation and translated safety warning • Grounding lug (Panduit PLCD6-10A-L) and screws • Console cable

3. Cisco Software Subscription

Software Ordering Options

The Cisco Industrial Wireless 3700 Series requires at a minimum lightweight access point Cisco IOS® software release 15.3.3-JA4, or later (see Table 4). Traditionally, additional functionality is available for the access point with more recent releases. Refer to the applicable [Cisco Industrial Wireless 3700 Series Access Points Release Notes](#) for more information about features available with the latest software releases. You can select the access point to be loaded and shipped with the unified software as either **unified mesh (SWIW3702-MESH-K9)** or **unified local (SWIW3702-RCOVRY-K9)** mode during the ordering process. By default, the Cisco Industrial Wireless 3700 Series is also shipped with autonomous software **S3G3K9W7-XXXXXXX**, which is automatically added during the ordering process.

Table 4. Minimum Access Point Software Releases

Part Number	Minimum Software Release
SWIW3702-MESH-K9	SW Cisco IW3702: Unified Mesh (for example, 8.0.xxx) + IOS (for example, 15.3.3-yyy)
SWIW3702-RCOVRY-K9	SW Cisco IW3702: Unified Local (for example, 8.0.xxx) + IOS (for example, 15.3.3-yyy)

4. Cisco Industrial Wireless 3700 Series Components

Antennas

The Cisco Industrial Wireless 3700 Series Access Points have 4 external antenna ports to connect to the Cisco antennas listed in Figure 1. The Cisco Industrial Wireless 3700 Series Access Points are not equipped with internal antennas.

Figure 1. Antenna Options



Table 5 contains the part numbers and summary specifications of the antennas available for the Cisco Industrial Wireless 3700 Series Access Points.

Table 5. Antennas for the Cisco Industrial Wireless 3700 Series Access Points

Part Number	Frequency Band	Gain	Type	Required Quantity and Note
AIR-ANT2547V-N=	2.4/5 GHz	4/7 dBi	Omnidirectional	4; 4x RF adapters and lightning arrestors may be needed; color white; compatible with IW3702-2E
AIR-ANT2547VG-N=	2.4/5 GHz	4/7 dBi	Omnidirectional	4; 4x RF adapters and lightning arrestors may be needed; color gray; compatible with IW3702-2E
AIR-ANT2524V4C-R=	2.4/5 GHz	2/4 dBi	Omnidirectional	1; 4x RF adapters/cable and lightning arrestors may be needed; compatible with IW3702-2E and IW3702-4E
AIR-ANT2544V4M-R=	2.4/5 GHz	4/4 dBi	Omnidirectional	1; 4x RF adapters/cable and lightning arrestors may be needed; compatible with IW3702-2E and IW3702-4E
AIR-ANT2524DX-R=	2.4/5 GHz	2/4 dBi	Omnidirectional	4; 4x RF adapters and lightning arrestors may be needed; color white; compatible with IW3702-2E
AIR-ANT2566P4W-R=	2.4/5 GHz	6/6 dBi	Directional	1; 4x RF adapters/cable and lightning arrestors may be needed; compatible with IW3702-2E and IW3702-4E
AIR-ANT2513P4M-N=	2.4/5 GHz	13/13 dBi	Directional	1; 4x RF adapters/cable and lightning arrestors may be needed; compatible with IW3702-2E and IW3702-4E
AIR-ANT2413P2M-N=	2.4 GHz	13 dBi	Directional	1; 2x RF adapters/cable and lightning arrestors may be needed; compatible with IW3702-2E and IW3702-4E

AIR-ANT5114P2M-N=	5 GHz	14 dBi	Directional	1; 2x RF adapters/cable and lightning arrestors may be needed; compatible with IW3702-2E and IW3702-4E; must be deployed in conjunction with at least 4' of LMR-240 cable, or 8' of LMR-400 cable, or 12' of LMR-600 cable to achieve 1 dBi attenuation for compliance
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For additional antenna specifications, refer to the [Cisco Aironet Antenna and Accessories Reference Guide](#).

* For optimal MIMO performance in cases where four directly attached antennas (**AIR-ANT2547V-N=**, **AIR-ANT2547VG-N=** or **AIR-ANT2524Dx-R=**) are required, Cisco recommends the **IW3702-2E-UXK9** part number due to its greater RF port separation.

RF Adapters

The Cisco Industrial Wireless 3700 Series Access Points are equipped with N-type antenna ports for maximum durability. For lightning arrestor attachment and to enable usage of the access points in conjunction with external antennas that come with RP-TNC connectors, Cisco offers the RF adapters listed in Table 6.

Table 6. RF Adapters for the Cisco Industrial Wireless 3700 Series

Part Number	Description
AIR-ACC370-NF-NF=	RF adapter, N(f) to N(f), spare
AIR-ACC370-NF-NF	RF adapter, N(f) to N(f)
AIR-ACC370-NM-RF=	RF adapter, N(m) to RP-TNC(f), spare
AIR-ACC370-NM-RF	RF adapter, N(m) to RP-TNC(f)

RF Cables

For customer convenience, Cisco offers the RF cables listed in Table 7 to remotely attach external antennas to the Cisco Industrial Wireless 3700 Series Access Points.

Table 7. RF Cables for the Cisco Industrial Wireless 3700 Series Access Points

Part Number	Description
CAB-L400-5-N-N=	RF cable, 5 ft, LMR-400-DB, RA-N(m) to N(m), spare
CAB-L400-5-N-N	RF cable, 5 ft, LMR-400-DB, RA-N(m) to N(m)
CAB-L240-10-N-R=	RF cable, 10 ft, LMR-240-DB, RA-N(m) to RP-TNC(f), spare
CAB-L240-10-N-R	RF cable, 10 ft, LMR-240-DB, RA-N(m) to RP-TNC(f)
CAB-L400-20-N-R=	RF cable, 20 ft, LMR-400-DB, RA-N(m) to RP-TNC(f), spare
CAB-L400-20-N-R	RF cable, 20 ft, LMR-400-DB, RA-N(m) to RP-TNC(f)
CAB-L400-20-N-N=	RF cable, 20 ft, LMR-400-DB, RA-N(m) to N(m), spare
CAB-L600-30-N-N=	RF cable, 30 ft, LMR-600-DB, RA-N(m) to N(m), spare

RF Port Protective Covers

Cisco offers the N-type caps listed in Table 8 to cover and protect any unused RF ports on Cisco Industrial Wireless 3700 Series Access Points. These caps are not included in the IW3702 shipping package.

Table 8. RF Port Protective Covers for the Cisco Industrial Wireless 3700 Series

Part Number	Description
AIR-ACC15-N-CAP=	Outdoor AP cover caps for N-connector, bag of 10 units

Lightning Arrestors

When you use RF cables or RF adapters between the antennas and these access points, Cisco recommends that you add lightning arrestors to each port, particularly when the deployment is in an area with high lightning activity. The lightning arrestors listed in the following table, when properly grounded, provide robust protection against induced currents in the RF cabling generated by nearby lightning strikes. The lightning arrestors do not protect against direct lightning strikes on the access point. Table 9 lists and describes the lightning arrestor parts.

CGR-LA-NM-NF= is used only when the access point is connected to the **AIR-ANT2513P4M-N=** antenna.

Table 9. Lightning Arrestors for the Cisco Industrial Wireless 3700 Series Access Points

Part Number	Description
CGR-LA-NF-NF=	Lightning arrestor, DC pass, N(f) connectors, spare
CGR-LA-NM-NF=	Lightning arrestor, DC pass, N(m) to N(f), spare
AIR-ACC245LA-N=	Lightning arrestor, DC pass, N(m) to N(f), spare

Mounting Brackets

Cisco Industrial Wireless 3700 Series Access Points can be mounted on walls, ceilings, poles, or DIN rails. Table 10 provides the accessories required for pole and DIN rail mounting.

Table 10. Mounting Options for the Cisco Industrial Wireless 3700 Series Access Points

Part Number	Description
AIR-ACCPMK3700=	Accessory, pole mounting kit; vertical pole only (2 to 3 inches in diameter); does not require special band installation tool, spare
AIR-ACCPMK3700-2=	Accessory, pole mounting kit; for poles with 2 to 16 inches in diameter, spare
AIR-ACCDMK3700=	Accessory, DIN rail mounting kit, spare

Power

Cisco Industrial Wireless 3702 Series access points can be powered with either PoE (Power over Ethernet), PoE+, DC (Direct Current), or AC (Alternating Current)

Cisco Industrial Wireless 3700 Series Access Points can be powered over one of the two Gigabit Ethernet interfaces, while the second Gigabit Ethernet interface can provide a PoE (802.3af) output when DC power is supplied. PoE+ power can be sourced directly from an appropriately powered PoE+ switch port or from one of the inline power injectors listed in Table 11.

Table 11. Power Injectors for Use with PoE/PoE+

Part Number	Description
AIR-PWRINJ1500-2=	PoE+ power injector, for indoor environments
AIR-PWRINJ-60RGD1=	PoE+ power injector; for outdoor environments; with North American plug
AIR-PWRINJ-60RGD2=	PoE+ power injector; for outdoor environments; international version without AC plug
AIR-PWRINJ-60-PMK=	Pole mount kit for AIR-PWRINJ-60RGD1= and AIR-PWRINJ-60RGD2=

The Cisco Industrial Wireless 3700 Series Access Points use M12 Ethernet connectors. Cisco offers an M12 to RJ-45 Ethernet cable as listed in Table 12.

Table 12. M12 to RJ-45 Ethernet Cable

Part Number	Description
CAB-ETHRJ45-M12-10=	M12 to RJ-45 Ethernet cable, 8 pins, X-Code, 10 ft

AC and DC Power

The Cisco Industrial Wireless 3700 Series Access Points support power from an external DC power source. Refer to the [data sheet](#) for the supported input voltage range and power consumption. The M12 DC power cable listed in Table 13 can be used for the DC power connection. When using DC power, see the [Cisco IW3702 Access Point Getting Started Guide](#) for instructions about how to connect the protective ground and power.

To power the Cisco Industrial Wireless 3700 Series Access Points from an AC power source, the **AIR-PWRADPT-3700=** AC to DC power adapter can be used.

Table 13. M12 DC Power Cable and AC to DC Power Adapter

Part Number	Description
CAB-PWR-M12-10=	M12 DC power cable, 4 pins, A-Code, 10 ft
AIR-PWRADPT3700NA= ²	AC to DC power adapter, with North American plug
AIR-PWRADPT3700IN= ³	AC to DC power adapter, international version without AC plug

5. Part Numbers for Ordering

Table 14 lists all part numbers available for the Cisco Industrial Wireless 3700 Series Access Points.

Table 14. Part Numbers

Product	Description
Access Points	
IW3702-2E-x-K9	IW3702, 2: Two antenna ports on the top panel (four antenna ports total, the other two antenna ports are located on the bottom panel), compatible with directly attached external antennas or cabled external antennas. E: External antennas, x: Regulatory domain.
IW3702-4E-x-K9	IW3702, 4: Four antenna ports on the top panel, compatible with cabled external antennas. E: External antennas, x: Regularity domain.
IW3702-2E-UXK9	IW3702, 2: Two antenna ports on the top panel (four antenna ports total, the other two antenna ports are located on the bottom panel), compatible with directly attached external antennas or cabled external antennas. E: External antennas, UX: Universal access point.
IW3702-4E-UXK9	IW3702, 4: Four antenna ports on the top panel, compatible with cabled external antennas. E: External antennas, UX: Universal access point.
Software	
SWIW3702-MESH-K9	SW Cisco IW3702: Unified Mesh (e.g., 8.0.xxx) + Cisco IOS (for example, 15.3.3-yyy)
SWIW3702-RCOVRY-K9	SW Cisco IW3702: Unified Local (e.g., 8.0.xxx) + Cisco IOS (for example, 15.3.3-yyy)
Antennas	
AIR-ANT2547V-N=	Antenna, omnidirectional, 2.4/5 GHz, 4/7 dBi, white (four per each access point); compatible with IW3702-2E
AIR-ANT2547VG-N=	Antenna, omnidirectional, 2.4/5 GHz, 4/7 dBi, gray (four per each access point); compatible with IW3702-2E
AIR-ANT2524V4C-R=	Antenna, omnidirectional, 2.4/5 GHz, 2/4 dBi (one per each access point); compatible with IW3702-2E and IW3702-4E
AIR-ANT2544V4M-R=	Antenna, omnidirectional, 2.4/5 GHz, 4/4 dBi (one per each access point); compatible with IW3702-2E and IW3702-4E
AIR-ANT2524Dx-R	Antenna, omnidirectional, 2.4/5 GHz, 2/4 dBi (four per each access point); compatible with IW3702-2E
AIR-ANT2566P4W-R=	Antenna, directional, 2.4/5 GHz, 6/6 dBi (one per each access point); compatible with IW3702-2E and IW3702-4E

² Available in May 2017

Product	Description
AIR-ANT2513P4M-N=	Antenna, directional, 2.4/5 GHz, 13/13 dBi (one per each access point); compatible with IW3702-2E and IW3702-4E
AIR-ANT2413P2M-N=	Antenna, directional, 2.4 GHz, 13 dBi (one or two per each access point); compatible with IW3702-2E and IW3702-4E
AIR-ANT5114P2M-N=	Antenna, directional, 5 GHz, 14 dBi (one or two per each access point); compatible with IW3702-2E and IW3702-4E; must be deployed in conjunction with at least 4' of LMR-240 cable, or 8' of LMR-400 cable, or 12' of LMR-600 cable to achieve 1 dBi attenuation for compliance
RF Adapters	
AIR-ACC370-NF-NF=	RF adapter, N(f) to N(f), spare
AIR-ACC370-NF-NF	RF adapter, N(f) to N(f)
AIR-ACC370-NM-RF=	RF adapter, N(m) to RP-TNC(f), spare
AIR-ACC370-NM-RF	RF adapter, N(m) to RP-TNC(f)
RF Cables	
CAB-L400-5-N-N=	RF cable, 5 ft, LMR-400-DB, RA-N(m) to N(m), spare
CAB-L400-5-N-N	RF cable, 5 ft, LMR-400-DB, RA-N(m) to N(m)
CAB-L240-10-N-R=	RF cable, 10 ft, LMR-240-DB, RA-N(m) to RP-TNC(f), spare
CAB-L240-10-N-R	RF cable, 10 ft, LMR-240-DB, RA-N(m) to RP-TNC(f)
CAB-L400-20-N-R=	RF cable, 20 ft, LMR-400-DB, RA-N(m) to RP-TNC(f), spare
CAB-L400-20-N-R	RF cable, 20 ft, LMR-400-DB, RA-N(m) to RP-TNC(f)
CAB-L400-20-N-N=	RF cable, 20 ft, LMR-400-DB, RA-N(m) to N(m), spare
CAB-L600-30-N-N=	RF cable, 30 ft, LMR-600-DB, RA-N(m) to N(m), spare
RF Port Protective Covers	
AIR-ACC15-N-CAP=	Outdoor AP cover caps for N-connector, bag of 10 units
Lightning Arrestors	
CGR-LA-NF-NF=	Lightning arrestor, DC pass, N(f) connectors, spare
CGR-LA-NM-NF=	Lightning arrestor, DC pass, N(m) to N(f), spare
AIR-ACC245LA-N=	Lightning arrestor, DC pass, N(m) to N(f), spare
Mounting Kits	
AIR-ACCPMK3700=	Pole mounting kit, vertical pole only (2 to 3 inches in diameter); does not require special band installation tool, spare
AIR-ACCPMK3700-2=	Accessory, pole mounting kit; for poles with 2 to 16 inches in diameter, spare
AIR-ACCDMK3700=	DIN rail mounting kit, spare
M12 Cables	
CAB-ETHRJ45-M12-10=	M12 to RJ-45 Ethernet cable, 8 pins, X-Code, 10 ft
CAB-PWR-M12-10=	M12 DC power cable, 4 pins, A-Code, 10 ft
Power Injectors	
AIR-PWRINJ1500-2=	PoE+ power injector, for indoor environments
AIR-PWRINJ-60RGD1=	PoE+ power injector; for outdoor environments; with North American plug
AIR-PWRINJ-60RGD2=	PoE+ power injector; for outdoor environments; international version without AC plug
AIR-PWRINJ-60-PMK=	Pole mount kit for AIR-PWRINJ-60RGD1= and AIR-PWRINJ-60RGD2=
Others	
AIR-PWRADPT3700NA= ³	AC to DC power adapter, with North American plug
AIR-PWRADPT3700IN= ³	AC to DC power adapter, international version without AC plug

³ Available in May 2017

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 box in which the access point is shipped. These items are identified by the absence of an = character at the end of the part number.

6. Cisco Services

Cisco Technical Services

Table 15 lists the Cisco Technical Services available for the Industrial Wireless 3700 Series access points.

Table 15. Part Numbers

Service	Description
Cisco Smart Net Total Care at 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 replacement⁴ 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 updates⁵ 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

Cisco Tools for Quoting and Ordering

To place an order, visit the [Cisco Ordering Website](#).

7. Cisco Capital Financing

The significant benefits offered by the Cisco Industrial Wireless 3700 Series Access Points make it the natural choice for outdoor Wi-Fi connectivity. As with any technology investment, you always have to consider the affordability of the new system. Cisco Capital[®] financing can make this easier. Whether through flexible repayments matching expenditure to benefit, mitigating cash flow issues, or negating capital expenditures (CapEx) with an operating lease, we can give you access to the right technology for your business, right when you need it.

Flexible Options

Cisco Capital financing can usually help remove or reduce barriers preventing you from obtaining the technology that can most benefit your business. Cisco Capital can:

⁴ 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 SMARTnet[®] service descriptions for details.

⁵ Cisco OS updates include maintenance releases, minor updates, and major updates within the licensed feature set, if applicable.

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- **Remove cash flow issues**, allowing you to spread the cost of its investment over a number of years
 - **Offer you flexible repayment terms matching expenditure to benefits**, which means that payments can be timed to coincide with business benefits that may be seen later in the project or deferred to meet a company's budget cycle
 - **Turn CapEx into operating expenditures (OpEx)** through an operating lease with which you can benefit from the value of the technology upfront
 - **Offer you a sale and lease-back arrangement** (where available) that softens the initial costs by taking on existing commitments that may be attached to legacy equipment

For more information about Cisco Capital Financing, visit

http://www.cisco.com/cisco/web/UK/products/ciscocapital/why_finance.html#WJwjw1LSGg3CmUrd.97.



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