



CISCO WP-WIFI6-x Wi-Fi Interface Module WIM User Guide

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CISCO WP-WIFI6-x Wi-Fi Interface Module WIM



Product Information

Specifications

- **PID:** WP-WIFI6-x (x signifies the regulatory domain)
- **Hardware:** Cisco Wi-Fi Interface Module (WIM)
- **Front Panel:** Refer to Table 1 for details
- **Supported Models:** IR1800 series
- **Software Requirement:** IR1800 router software running IOS-XE version 17.7.1 or greater

Hardware Overview

The Cisco Wi-Fi Interface Module (WIM) is connected to the IR1800 series Switch port (named wlan-GigabitEthernet 0/1/4). Refer to the front panel diagram for a visual representation of the WIM.

Front Panel

Item	Description
1	Flexible Antenna Port (refer to additional details)
2	Enable LED (refer to LED Status descriptions)

Software Overview

The WIM software features depend on the IOS XE software version of the router and the mode the WIM is running in. The following table provides details:

Router IOS XE Release	WIM IOS XE Release Feature	WIM Software Image Type
17.7.1 and Greater	Three Modes Supported:	ap1g8-k9w8
17.6.1 to 17.10.x	CAPWAP	C9800-AP-iosxe-wlc.bin
17.6.1 to 17.10.x	EWC	ap1g8-k9w8
17.6.1 to 17.10.x	WGB	ap1g8-k9w8
17.7.1 and Greater	17.11.1 and Greater Unified Industrial Wireless (UIW)	ap1g8t-k9c1

Ordering Information

In Cisco Commerce Configuration, Wi-Fi software offers three types of configurations bundled with different image types. The WIM module is shipped with a pre-installed image bundle accordingly.

Product Usage Instructions

Step 1: Hardware Installation

1. Connect the WIM to the IR1800 series Switch port (wlan-GigabitEthernet 0/1/4).
2. Ensure the Flexible Antenna Port is securely attached.

Step 2: Software Configuration

1. Make sure the IR1800 router software is running IOS-XE version 17.7.1 or greater.
2. Choose the appropriate WIM Software Image Type based on the desired mode of operation (CAPWAP, EWC, or WGB).
3. Download the corresponding software from the Software Download page.
4. Install the software on the WIM module following the provided instructions.

Step 3: LED Status

The WIM module has two LEDs: Enable LED and Wi-Fi LED. Here are the descriptions of their statuses:

Enable LED

LED Status	Description
Off	No Power
Yellow	The power is on, module is not yet functional
Green	The module is fully functional

Wi-Fi LED

Note: LED status information does not apply to concurrent radio mode.

LED Status	Description
Solid Green	Normal operating condition, but no wireless client associated
Solid Blue	Association Status
Flashing Green	Boot Loader Status
Flashing Blue	Boot Loader Status
Alternate between Green and Red	Operating Status
Cycle through Red-Off-Green-Off-Blue-Off	System error

FAQ

- **Q: What is the PID of the Cisco Wi-Fi Interface Module?**
- **A:** The PID is WP-WIFI6-x, where x signifies the regulatory domain.
- **Q: Which models of the IR1800 series support the WIM?**
- **A:** The WIM is supported on all four models of the IR1800 series.
- **Q: What software version is required for the IR1800 router to support the WIM?**
- **A:** The IR1800 router software must be running IOS-XE version 17.7.1 or greater.
- **Q: What are the available modes of operation for the WIM?**
- **A:** The available modes are CAPWAP, EWC, and WGB.
- **Q: What are the LED statuses for the WIM module?**
- **A:** The Enable LED can be Off (No Power), Yellow (Power is on, the module is not yet functional), or Green (Module is fully functional). The Wi-Fi LED can have various statuses indicating different conditions such as normal operation, boot loader status, operating status, and system error.

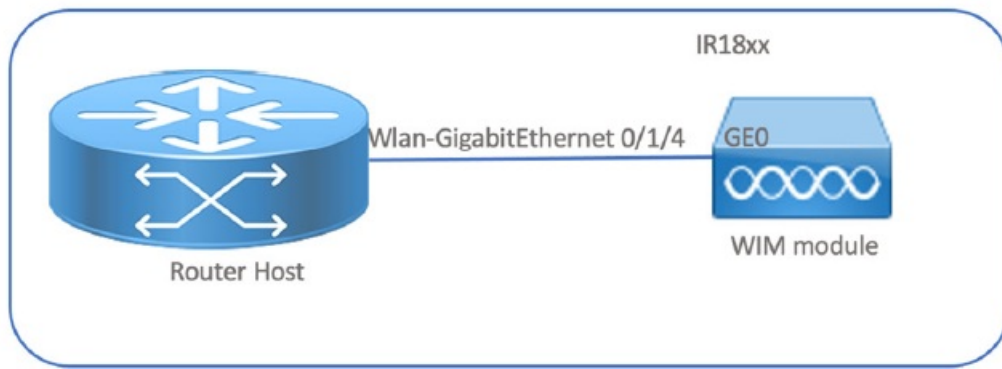
Cisco Wi-Fi Interface Module (WIM) Overview

This section provides an overview of the Cisco Wi-Fi Interface Module (WIM). The PID is WP-WIFI6-x where x signifies the regulatory domain. Highlights of the WIM are:

- Pluggable 802.11ax module for Cisco Catalyst IR1800 series
- WiFi-6 (802.11ax), 2x2 MIMO with 2 spatial streams
- Extended Temperature Range
- Field Replaceable Unit (FRU), however, does not support OIR (Online Insertion and Removal)
- Versatile RF coverage with external RP-SMA antenna connectors
- Flexible Antenna Port feature support
- Based on the Cisco AP 9105AXI

Hardware Overview

The following diagram shows the control and data path of the WIM. The wired interface is connected to the IR1800 series Switch port (named wlan-GigabitEthernet 0/1/4).



The following graphic shows the front panel of the WIM.

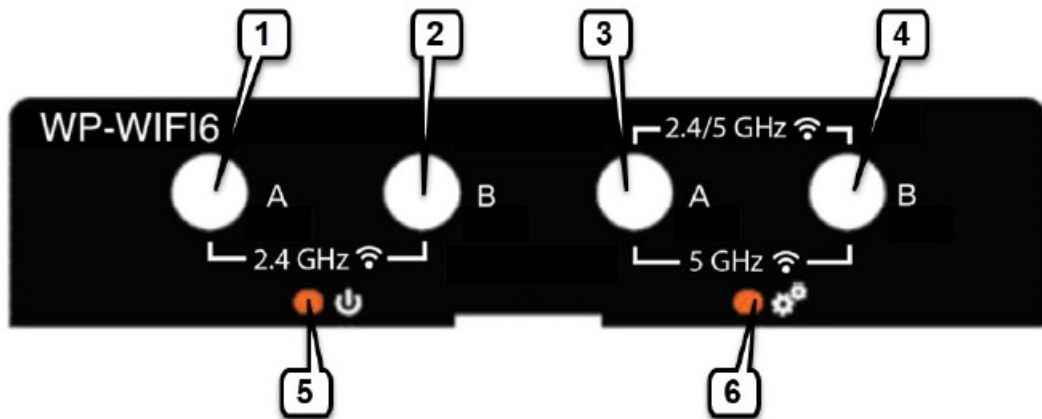


Table 1: WIM Front Panel

Item	Description
1	Disabled when the flexible antenna ports are set to dual-band mode (Default). 2.4 GHz when the flexible antenna ports are set to single-band mode.
2	Disabled when the flexible antenna ports are set to dual-band mode (Default). 2.4 GHz when the flexible antenna ports are set to single-band mode.
3	2.4/5 GHz when the flexible antenna ports are set to dual-band mode (Default). 5 GHz only when the flexible antenna ports are set to single-band mode.
4	2.4/5 GHz when the flexible antenna ports are set to dual-band mode (Default). 5 GHz only when the flexible antenna ports are set to single-band mode.
5	Enable LED
6	Wi-Fi LED

Note Refer to Flexible Antenna Port for additional details.

The following table describes the Enable LED:

LED Status	Description
Off	No Power
Yellow	The power is on, module is not yet functional
Green	The module is fully functional

The following table describes the Wi-Fi LED:

Note

LED status information does not apply to concurrent radio mode. Concurrent radio Root AP + wireless client displays the default LED behaviour — Alternate blinking red/green.

LED Status	Status Type	Description
Solid Green	Association Status	Normal operating condition, but no wireless client associated.
Solid Blue	Association Status	<ul style="list-style-type: none"> WP-WIFI6 (CAPWAP mode): Infra AP registered with WLC, Client connected to the AP WP-WIFI6 (UIW WGB): 1 — WGB registered with Infra AP 2 — Both Radio Root AP(second radio) + wireless client connected: NA
Solid Green	Boot Loader Status	Executing Boot Loader
Flashing Green	Boot Loader Status	Boot Loader Error, signing verification error.
Flashing Blue	Operating Status	Software upgrade in progress.
Alternate between Green and Red	Operating Status	Discovery/Join process is in progress.
Cycle through Red-Off-Green-Off-Blue-Off	Access Point operating system error	General warning; insufficient inline power.

Software Overview

The WIM is supported on all four models of the IR1800 series. Feature support has changed through different versions that run on the WIM software. The IR1800 router software must be running IOS-XE version 17.7.1 or greater. Features available on the WIM depend on what is available on the IOS XE software version of the router, and what mode the WIM is running in. The following table provides details:

Table 2: Feature Matrix

Router IOS XE Release	WIM IOS XE Release	Feature	WIM Software Image Type
17.7.1 and Greater		Three Modes Supported:	
	17.6.1 to 17.10.x	CAPWAP	ap1g8-k9w8
	17.6.1 to 17.10.x	EWC	C9800-AP-iosxe-wlc.bin
	17.6.1 to 17.10.x	WGB	ap1g8-k9w8
17.7.1 and Greater	17.11.1 and Greater	<p>Unified Industrial Wireless (UIW) software image type is introduced to support the following:</p> <ul style="list-style-type: none"> • UIW: WGB mode support move from ap1g8-k9w8 to ap1g8t-k9c1 • UIW: Concurrent Radio support with WGB uplink and Root AP mode • UIW: Concurrent Radio support with dual Root AP mode <p>See more about the UIW image here .</p> <p>Note that WGB mode in ap1g8-k9w8 was discontinued starting with 17.11.1.</p>	ap1g8t-k9c1

The feature set is aligned on AP 9105AXI. See the **Feature Matrix for Cisco Wireless Access Points**. See the **Software Download** page for the different WIM software.

Ordering Information

In Cisco Commerce Configuration, Wi-Fi software offers three types of configurations, bundled with different image types. WIM module is shipped with a pre-installed image bundle accordingly:

- SW-WPWIFI6-EWC — Default EWC Access Point with C9800-AP-ios xe-wlc.bin + ap1g8-k9w8 image bundle (EWC + CAPWAP)
- SW-WPWIFI6-CW — Default CAPWAP Access Point with ap1g8-k9w8 + ap1g8t-k9c1 image bundle (CAPWAP + UIW WGB)
- SW-WPWIFI6-WGB — Default WGB Access Point with ap1g8-k9w8 + ap1g8t-k9c1 image bundle (CAPWAP + UIW WGB)

The WIM is capable of booting up different images and converting the AP type to support different modes of operation, within the programmed image bundle capability. See the conversion section for details. EWC and WGB are exclusive.

Tip

Cisco recommends you map the typical deployment use cases and order Wi-Fi software with a pre-installed


image bundle.

Related Documentation

Many different options can be configured on the Access Point depending on your installation scenario. Other sources of documentation are available here:

- [Cisco Catalyst 9100 Family of Access Points.](#)
 - [Cisco Wireless Controller Configuration Guide.](#)
 - [Cisco Embedded Wireless Controller on Catalyst Access Points FAQ.](#)
 - [Cisco Catalyst 9800 Series Configuration Best Practices.](#)
 - [Cisco Wave 2 Access Points as Workgroup Bridges.](#)
 - [Cisco Industrial Wireless Workgroup Bridge and Universal WGB Deployment Guide.](#)
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Documents / Resources

 Cisco WP-WIFI6-x Wi-Fi Interface Module WIM [pdf] User Guide WP-WIFI6-x Wi-Fi Interface Module WIM, WP-WIFI6-x, Wi-Fi Interface Module WIM, Interface Module WIM, Module WIM	
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References

- [Cisco Catalyst 9800 Series Configuration Best Practices - Cisco](#)
- [Cisco Embedded Wireless Controller on Catalyst Access Points FAQ - Cisco](#)
- [Cisco Catalyst 9100 Access Points - Cisco](#)
- [Feature Matrix for Cisco Wireless Access Points - Cisco](#)
- [Cisco Wireless Controller Configuration Guide, Release 8.10 - Cisco](#)
- [Cisco Wireless Controller Configuration Guide, Release 8.10 - Workgroup Bridges \[Cisco Wireless LAN Controller Software\] - Cisco](#)
- [Cisco Industrial Wireless Workgroup Bridge and Universal WGB Deployment Guide - Cisco](#)
- [User Manual](#)