

Introduction

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Overview of the Access Point

The Cisco Catalyst IW9167E Heavy Duty Access Point provides reliable wireless connectivity for mission-critical applications in a state-of-the art platform. It can operate as Cisco Catalyst Wi-Fi (CAPWAP) mode or Cisco Ultra-Reliable Wireless Backhaul (Cisco URWB) mode starting from IOS XE Cupertino 17.9.3 Software Release. The IW9167EH access point has the flexibility to change the operating mode from Wi-Fi to Cisco URWB, and vice versa.

Starting from Cisco IOS XE Dublin 17.11.1, Workgroup Bridge (WGB) and Universal WGB (uWGB) are supported on the Cisco Catalyst IW9167E Heavy Duty Access Points.

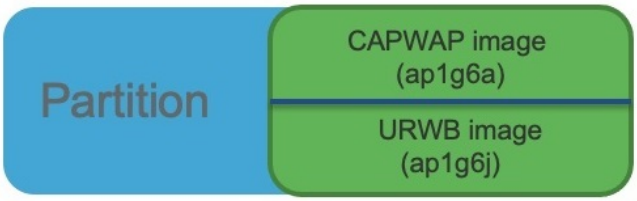
This document covers configuration of CAPWAP mode and WGB/uWGB mode specific to the IW9167EH access points.

For CAPWAP mode, the access points can operate in the following modes:

- Local
- Flexconnect
- Bridge
- Flexconnect + Bridge
- Sniffer
- Monitor
- Site survey

Determine Image on IW9167EH

Software images are stored under different folders on the same partition on IW9167EH.



You need to choose the image to boot up with according to the mode your AP is runnning, CAPWAP, Cisco URWB, or WGB/uWGB. The following table provides the software images of each mode:

Table 1: IW9167EH Software Images

IW9167EH Mode	Software Image
CAPWAP	**ap1g6a-k9w8-xxx.tar**
Cisco URWB	Unified Industrial Wireless image **ap1g6j-k9c1-xxx.tar**
WGB/uWGB	

To determine the image that your IW9167EH is running, use the **show version** command.

- If the **show version** output displays **Cisco AP Software, (ap1g6a)** as shown in the following example, it means that AP is running the CAPWAP image **ap1g6a-k9w8-xxx.tar**, which supports the CAPWAP mode.

```
Cisco AP Software, (ap1g6a), C9167, RELEASE SOFTWARE
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2022 by Cisco Systems, Inc.
Compiled Fri Jul 29 01:56:00 PDT 2022

ROM: Bootstrap program is U-Boot boot loader
BOOTLDR: U-Boot boot loader Version 2022010100

APFC58.9A16.E648 uptime is 0 days, 1 hours, 03 minutes
Last reload time   : Mon Sep 19 02:23:13 UTC 2022
Last reload reason : Image Upgrade

cisco IW9167EH-B ARMv8 Processor rev 4 (v8l) with 1757076/1006864K bytes of memory.
```

- If the **show version** output displays **Cisco AP Software (ap1g6j)** as shown in the following example, it means that AP is running **ap1g6j-k9c1-xxx.tar** image, which supports the Cisco URWB mode or Cisco WGB/uWGB.

```
Cisco AP Software, (ap1g6j), C9167, RELEASE SOFTWARE
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2022 by Cisco Systems, Inc.
Compiled Thu Aug 18 01:01:29 PDT 2022

ROM: Bootstrap program is U-Boot boot loader
BOOTLDR: U-Boot boot loader Version 2022010100

APFC58.9A16.E464 uptime is 1 days, 3 hours, 58 minutes
```

```
Last reload time   : Wed Sep 7 11:17:00 UTC 2022
Last reload reason : reload command

cisco IW9167EH-B ARMv8 Processor rev 4 (v8l) with 1759128/1091316K bytes of memory.
```

Configuring AP to Boot up with Different Image Options

To configure the access point to boot up with CAPWAP, URWB, or WGB/uWGB mode, follow these steps:

Note Switching between different modes performs full factory reset. Any configuration and data will be removed completely.

Procedure

Step 1 **enable**

Enables privileged EXEC mode. Enter your password if prompted.

Step 2 **configure boot mode** {**capwap** | **urwb** | **wgb**}

Configures AP to CAPWAP, URWB, or WGB/uWGB mode. AP will reboot with specified mode.

Upgrade IW9167EH with 17.9.x to Support WGB/uWGB

If your IW9167EH is shipped with Cisco IOS XE Cupertino 17.9.3 software and operating as CAPWAP mode, and you want to upgrade your AP to Cisco IOS XE Dublin 17.11.1 to support WGB/uWGB mode, you need to switch your AP to Cisco URWB mode first, and then you can upgrade to 17.11.1.

To determine whether your IW9167EH is running CAPWAP mode or Cisco URWB mode, use the **show version** command.

- If the **show version** output displays **Cisco AP Software (ap1g6a)**, your AP is running as CAPWAP mode.
- If the **show version** output displays **Cisco AP Software (ap1g6j)**, your AP is running as Cisco URWB mode.

Cisco WGB/uWGB mode shares the same image with Cisco URWB. You cannot upgrade the **ap1g6j** image to 17.11.1 in CAPWAP mode (**ap1g6a**). Because the **archive download** command checks image type, upgrade gets aborted if image types mismatch.

Procedure

Step 1 Convert CAPWAP mode to Cisco URWB mode.

Example:

```
#configure boot mode urwb
       Before image swapping device need factory reset. Are you sure to proceed? (Y/N):y
       Converting to Cisco URWB Mode...
       <rebooting…>
```

Step 2 Log in with default credential (Cisco/Cisco/Cisco).

Step 3 Configure Cisco URWB, to make it work in **Offline** mode.

Example:

```
#configure iotod-iw offline
       Switching to IOTOD IW Offline mode...
       Will switch from Provisioning Mode to IOTOD IW offline Mode, device need to reboot: Y/N?  Y
       <rebooting…>
```

Step 4 Configure networking in Cisco URWB (IP/netmask/gateway, passphrase)

Example:

```
Cisco-23.174.76#configure wireless passphrase unit1
Cisco-23.174.76#configure ap address ipv4 static 192.168.1.200 255.255.255.0 192.168.1.1
Cisco-23.174.76#write
Cisco-23.174.76#reload
     <rebooting…>
```

Note
Passphrase is optional, but it is recommended to assign different passphrases if you are upgrading multiple units at the same time and they are connected to the same Layer 2 network. Because Cisco URWB forms MPLS network automatically if all nodes have the same passphrase, without further MPLS configuration, your IP service might not work properly.

Step 5 Upgrade to 17.11.1.

Example:

```
#archive download-sw /reload tftp://<TFTP_SERVER>/<ap1g6j-FILENAME>
          <rebooting…>
```

Step 6 Convert the AP from Cisco URWB mode to Cisco WGB/uWGB mode.

Example:

```
#configure boot mode wgb
           <rebooting…>
```

Related Documentation

To view all support information for the Cisco Catalyst IW9167E Heavy Duty Access Point, see https://www.cisco.com/c/en/us/support/wireless/catalyst-iw9167-series/series.html.

In addition to the documentation available on the support page, you will need to refer to the following guides:

- For information about IW9167EH hardware, see Cisco Catalyst IW9167E Heavy Duty Access Point Hardware Installation Guide.
- A full listing of the AP's features and specifications is provided in Cisco Catalyst IW9167E Heavy Duty Access Point Data Sheet.
- For more information about the configuration on Cisco Catalyst 9800 Series Wireless Controllers, see https://www.cisco.com/c/en/us/support/wireless/catalyst-9800-series-wireless-controllers/products-installation-and-configuration-guides-list.html.
- For information about Cisco URWB mode configuration, see the relevant documents at:

  https://www.cisco.com/c/en/us/support/wireless/catalyst-iw9167-series/series.html.
- For more information about Cisco IOS XE, see the relevant documents at:

  http://www.cisco.com/c/en/us/products/ios-nx-os-software/ios-xe/index.html