Feature Matrix for Cisco Wireless Access Points

First Published: April 23, 2019
Last Updated: November 22, 2022

Table of Contents

Cisco Systems, Inc.   www.cisco.com

Support of Wi-Fi 6/6E Access Points in Cisco IOS XE Releases

This section lists support information for various features in 802.11ax (Wi-Fi 6/6E) Access Points in Cisco IOS XE releases.

Note: For a better reading experience, we recommend that you view this document with your browser window in full-screen mode.

Table 1 Access Points and First Supported Cisco IOS XE Release

Access Points	First Supported Cisco IOS XE Release
802.11ax (Wi-Fi 6E) APs: CW9162I	Cisco IOS XE Cupertino 17.9.2 / Cisco IOS XE Dublin 17.10.1
802.11ax (Wi-Fi 6E) APs: CW9164I, CW9166I	Cisco IOS XE Cupertino 17.9.1
802.11ax (Wi-Fi 6E) APs: C9136I	Cisco IOS XE Cupertino 17.7
802.11ax (Wi-Fi 6) APs: C9124AXE	**Cisco IOS XE Bengaluru 17.6 /** **Cisco IOS XE Amsterdam 17.3.5 (limited regulatory domains, see [here](#))**
802.11ax (Wi-Fi 6) APs: C9124AXI and C9124AXD	**Cisco IOS XE Amsterdam 17.5 /** **Cisco IOS XE Amsterdam 17.3.4 (limited regulatory domains, see [here](#))**
802.11ax (Wi-Fi 6) APs: C9105AXI and C9105AXW	Cisco IOS XE Amsterdam 17.3
802.11ax (Wi-Fi 6) APs: C9130AXE	Cisco IOS XE Amsterdam 17.1
802.11ax (Wi-Fi 6) APs: C9120AXE, C9120AXP, C9130AXI	Cisco IOS XE Gibraltar 16.12
802.11ax (Wi-Fi 6) APs: C9115AXI/E, C9117AXI, and C9120AXI	Cisco IOS XE Gibraltar 16.11

Note:

1. Running EWC on C9136 and CW916xx is not supported but these APs are supported on EWC running on C9K switches in Fabric Mode.

2. C9136 and CW916xx APs supports site survey mode, other APs do not.

3. C9124 is an 802.11ax outdoor access point.

4. Mesh Mode is supported on 17.3.6 and 17.6.2 onwards on C9124.

Radio Frequency Feature Matrix (IOS XE)

Table 2 Radio Frequency Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
6GHz	NA	NA	Yes	Yes
RRM-DCA, TPC, CHDM	Yes	Yes	Yes	Yes
FRA	No	Yes	Yes	Yes
Band Select	Yes	Yes	Yes	Yes
Load Balancing	Yes	Yes	Yes for 2.4 and 5 GHz	Yes for 2.4 and 5 GHz
Client Steering (Steer client towards 6 GHz through 802.11v BTM)	NA	NA	Yes for 6 GHz	Yes for 6 GHz
Optimized Roaming	Yes	Yes	Yes	Yes
RX-SOP	Yes	Yes	Yes	Yes
DBS	Yes	Yes	Yes	Yes
Off-channel Scanning	Yes	Yes	Yes	Yes
Off-channel Scan Defer	Yes	Yes	Yes	Yes
Flex DFS	Yes	Yes	Yes	Yes
ClientLink	TxBF	TxBF	TxBF	TxBF
A-MSDU/A-MPDU aggregation config per priority	Yes	Yes	Yes	Yes
EDRRM	Yes	Yes	Future	Future
Spectrum Intelligence /	SI for 9105 and	CleanAir	CleanAir	CleanAir Pro

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
CleanAir / CleanAir Pro	9115; No for 9117		Pro	
Spectrum Expert	No	No	No	No
ATF	No	No	No	No
UL OFDMA	No for 9117	Yes	Yes	Yes
DL OFDMA	Yes	Yes	Yes	Yes
UL MU MIMO	No	Yes, for C9124/C9130	Yes	9164/9166: Yes 9162: Yes for 6GHz Radio.
DL MU MIMO	Yes	Yes	Yes	Yes
TWT	No for C9105/C9117	Yes	Yes	Yes
BSS Coloring	No for C9117	Yes	Yes	Yes
Wi-Fi 6/6E Analytics	No for C9117	Yes	Yes	Yes
iCap - Anomaly/Scheduled PCAP Capture	No for C9117	Yes	Yes	Yes
iCap - Full Packet Capture	NA	Yes for C9124/C9130	Yes	Yes for CW9166
iCap - Spectrum Analysis	NA	Yes	Yes	Yes
Apple iOS Analytics	Yes	Yes	Yes	Yes
Samsung Analytics	Yes	Yes	Yes	Yes
Intel Connectivity Analytics	Yes	Yes	Yes	Yes
Zero wait DFS	No	Yes for C9130	Planned in future release	Planned in future release for CW9166

Security Feature Matrix (IOS XE)

Table 3 Security Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
WPA2-AES	Yes	Yes	Yes	Yes (2.4/5GHz)

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
			(2.4/5GHz)	
WPA3-Personal (SAE)	Yes	Yes	Yes	Yes
WPA3 - Enterprise-192	No	No for C9120; Yes, for C9124/C9130	Yes	Yes
WPA3-Enterprise	Yes	Yes	Yes	Yes
WPA3-OWE	Yes	Yes	Yes	Yes
TKIP	Yes	Yes	Yes (2.4GHz and 5GHz)	Yes (2.4GHz and 5GHz)
Peer-to-Peer Blocking	Yes	Yes	Yes	Yes
Adaptive wIPS	Yes	Yes	Yes	Yes
Client Exclusion	Yes	Yes	Yes	Yes
Rogue Detection	Yes	Yes	Yes	Yes
11r	Yes	Yes	Yes	Yes
11k	Yes	Yes	Yes	Yes
11v BSS Transition Management	Yes	Yes	Yes	Yes
802.11v DMS	Yes	Yes	Yes	Yes
PMF (802.11w)	Yes	Yes	Yes	Yes
Local Policy with QoS and AVC	Yes	Yes	Yes	Yes
TrustSec SXP, SGT	No for 9105	Yes	Yes	Yes
LSC	Yes	Yes	Yes	Yes
TCP MSS Adjust	Yes	Yes	Yes	Yes
MAC Authentication	Yes	Yes	Yes	Yes
OKC	Yes	Yes	Yes	Yes
CCKM	Yes	Yes	Yes	Yes
NDP Encryption	No	No	No	No

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
HW DTLS Encryption	Yes	Yes	Yes	Yes
802.1x on AP (EAP-FAST)	Yes TLS 1.2	Yes TLS 1.2	Yes TLS 1.2	Yes TLS 1.2
802.1x on AP (EAP-PEAP, EAP-TLS)	Yes	Yes	Yes	Yes

Services Feature Matrix (IOS XE)

Table 4 Services Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
AVC-Mark, Drop, RL	Yes	Yes	Yes	Yes
AAA Override-VLAN	Yes	Yes	Yes	Yes
AAA Override-ACL, QoS	Yes	Yes	Yes	Yes
AAA Override-Session Timeout	Yes	Yes	Yes	Yes
AAA Override of AVC profile	Yes	Yes	Yes	Yes
AAA Override BW contract	Yes	Yes	Yes	Yes
Local Profiling	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
RADIUS Profiling	Yes	Yes	Yes	Yes
Per-User Bandwidth Contract	Yes	Yes	Yes	Yes
Per-SSID Bandwidth contract	Yes	Yes	Yes	Yes
VideoStream	Yes	Yes	Yes	Yes
CAC, WMM Policy	Yes	Yes	Yes	Yes
QoS Profiles	Yes	Yes	Yes	Yes
Bonjour GW, mDNS AP	Yes	Yes	Yes	Yes
LSS	Yes	Yes	Yes	Yes
Adaptive 11r	Yes	Yes	Yes	Yes
Fastlane	Yes	Yes	Yes	Yes
Fastlane+	No	Yes, for C9130 and C9124	Yes	Yes
MAC Authentication	Yes	Yes	Yes	Yes
802.11u	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
BYOD, NAC RADIUS, CWA	Yes	Yes	Yes	Yes
AP Power Optimization - Power Save Mode	Yes, for C9115	Yes, for C9130/C9120	Yes	Yes

Infrastructure Feature Matrix (IOS XE)

Table 5 Infrastructure Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
CDP, LLDP	Yes	Yes	Yes	Yes
Pre-image Download	Yes	Yes	Yes	Yes
Fast SSID Change	Yes	Yes	Yes	Yes
BLE	Yes	Yes	Yes	Yes
User idle timeout per WLAN	Yes	Yes	Yes	Yes
DHCP Option 60	Yes	Yes	Yes	Yes
Passpoint	Yes	Yes	Yes	Yes
Fast Locate	No	Yes, except 9124	Yes	Yes
AP Multicast Mode	Yes	Yes	Yes	Yes
Multicast VLAN	Yes	Yes	Yes	Yes
IGMPv3	Yes	Yes	Yes	Yes
Client IPv6	Yes	Yes	Yes	Yes
AP PnP	Yes	Yes	Yes	Yes
FlexConnect	Yes	Yes	Yes	Yes
Local, Sniffer, and Monitor	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
Mode				
RFID Tagging	Yes	Yes	Yes	Yes
FIPS Certification	No for 9105	Yes	Future	Future
Native IPv6	Yes	Yes	Yes	Yes
Allow WGB Connection	Yes	Yes	Yes	Yes
Allow uWGB Connection	Yes	Yes	Yes	Yes
CAPWAP VLAN Tagging	Yes	Yes	Yes	Yes
DHCP Option 82	Yes	Yes	Yes	Yes
WebAuth-Internal/External	Yes	Yes	Yes	Yes
Mesh Mode	No	Yes for C9124	No	No
Env Sensors (Humidity, Air quality, Temp)	No	No	Yes	Yes for CW9166
Power Redundancy	No	No	Yes	No

FlexConnect Feature Matrix (IOS XE)

Table 6 FlexConnect Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	C9105/C9115/C9117	C9120/C9124/ C9130	C9136	CW9162/CW9164/CW9166
Local Switching	Yes	Yes	Yes	Yes
Central Switching	Yes	Yes	Yes	Yes
WLAN-VLAN Mapping	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117	C9120/C9124/C9130	C9136	CW9162/CW9164/CW9166
Local Auth w/External RADIUS Server	Yes	Yes	Yes	Yes
Local Auth internal Server	No	No	No	No
TKIP	Yes	Yes	Yes	Yes
WPA2/AES	Yes	Yes	Yes	Yes
WPA3/Personal	Yes	Yes	Yes	Yes
WPA3/Enterprise	Yes	Yes	Yes	Yes
WPA3/Enterprise-192	No	No	No	No
WPA3/OWE	Yes	Yes	Yes	Yes
OEAP	Yes	Yes	Yes	Yes
Webauth-Internal/External	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
EoGREv4/v6 on FlexConnect AP	Yes	Yes	Yes	Yes
VLAN-based Central Switching	Yes	Yes	Yes	Yes
WIPS	Yes	Yes	Yes	Yes
aWIPS	Yes	Yes	Yes	Yes
Rogue detection and Mitigation	Yes	Yes	Yes	Yes
CCKM Fast Roaming	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
802.11r	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
Adaptive 11r	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117	C9120/C9124/C9130	C9136	CW9162/CW9164/CW9166
OKC	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override-VLAN ID, ACL	Yes	Yes	Yes	Yes
AAA Override + WebAuth-VLAN ID	No	No	No	No
AAA Override-VLAN Name	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override-QoS	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override-Session Timeout	Yes	Yes	Yes	Yes
AAA Override of AVC Profile	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth))	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override Bandwidth contract	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
VLAN ACL	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
DNS ACL	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
Limit Clients per WLAN/Radio	Yes	Yes	Yes	Yes
NetFlow Export	No	No	No	No
WGB	Yes for C9105/C9115	Yes for C9120 from	No	No

Features	C9105/C9115/C9117	C9120/C9124/C9130	C9136	CW9162/CW9164/CW9166
	from 17.8 onwards	17.8 onwards. Yes for C9124 and C9130 from 17.10 onwards.		
Split Tunneling	Yes	Yes	Yes	Yes
Passive Clients	Yes	Yes	Yes	Yes
Client exclusion	Yes	Yes	Yes	Yes
TrustSec SXP/SGT	Yes	Yes	Yes	Yes
QoS Markings DSCP/dot1p Markings	Yes	Yes	Yes	Yes
Native VLAN and VLAN Support on FlexConnect Group	Yes	Yes	Yes	Yes
AVC Policy	Yes	Yes	Yes	Yes
Proxy ARP	Yes	Yes	Yes	Yes
Syslog (no support for facility setting)	Yes	Yes	Yes	Yes
ClientLink	TxBF	TxBF	TxBF	TxBF
Load Balancing	Yes	Yes	Yes	Yes
Band Select	Yes	Yes	Yes	Yes
Smart AP Image Upgrade	Yes	Yes	Yes	Yes
Default Flex Group	Yes	Yes	Yes	Yes
NAT/PAT	Yes	Yes	Yes	Yes
Fallback Radio Shut	Yes	Yes	Yes	Yes
Bidirectional rate-limiting (Per Client, Per BSSID)	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117	C9120/C9124/C9130	C9136	CW9162/CW9164/CW9166
Bidirectional rate-limiting Per WLAN	Yes	Yes	Yes	Yes
Peer to Peer Blocking	Yes	Yes	Yes	Yes
PMF (802.11w)	Yes	Yes	Yes	Yes
BYOD, NAC RADIUS, CWA Flex Central Auth.	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
BYOD, NAC RADIUS, CWA Local Auth	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
MAC Authentication Flex Central Auth	No for 9115	Yes	Yes	Yes
GTK Randomization	No	No	No	No
VideoStream	Yes	Yes	Yes	Yes
Multicast Direct	Yes	Yes	Yes	Yes
CAC	No	No	No	No
Umbrella	No	No	No	No
mDNS	Yes	Yes	Yes	Yes

Support in Cisco AireOS Releases

This section lists the support information for various features in Cisco Wave 2 and 802.11ax (Wi-Fi 6) Access Points in Cisco AireOS releases.

For information about the Cisco AireOS releases in which the APs were first supported, see the Software Release Support for Specific Access Point Modules section of the Cisco Wireless Solutions Software Compatibility Matrix document at:

https://www.cisco.com/c/en/us/td/docs/wireless/compatibility/matrix/compatibility-matrix.html

Note:

- ■ The Cisco Catalyst 9105 APs were first supported in Cisco AireOS Release 8.10.130.0

- ■ The Cisco Catalyst 9130 APs were first supported in Cisco AireOS Release 8.10.105.0.

- ■ The Cisco Catalyst 9120 APs were first supported in Cisco AireOS Release 8.9.111.0.

- ■ The Cisco Catalyst 9115 and 9117 APs were first supported in Cisco AireOS Release 8.9.100.0.

Note: This document is updated for Cisco AireOS Release 8.10.x.

Radio Frequency Feature Matrix (AireOS)

Table 7 Radio Frequency Feature Matrix for Cisco AireOS Controllers and Cisco Mobility Express

Features	C9105/C9115/ C9117		C9120/C9130		AP18xx		AP4800/3800/ 2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
RRM-DCA, TPC, CHDM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FRA	No	No	Yes	Yes	No	No	Yes	Yes	No	No
Band Select	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Load Balancing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RF Profiles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HDX Turbo Performance	No	No	Yes	Yes	No	No	Yes	Yes	Yes for 1560	Yes for 1560
Optimized Roaming	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RX-SOP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes for 1560; No for 1540	Yes for 1560; No for 1540
DBS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Off-channel Scanning	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Off-channel Scan Defer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Flex DFS	No	No	Yes	Yes	No	No	Yes	Yes	Yes for 1560	Yes for 1560
ClientLink	TxBF	TxBF	TxBF	TxBF	TxBF	TxBF	Yes	Yes	TxBF on 1540; Yes for 1560	TxBF on 1540; Yes for 1560
A-MSDU/A-MPDU aggregation config per priority	No for 9115	No for 9115	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EDRRM - Wi-Fi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EDRRM - Non-Wi-Fi	No	No	Yes	Yes	No	No	Yes	Yes	No for 1540; Yes for 1560	No for 1540; Yes for 1560
Configurable EDCA	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated
CleanAir/Spectrum Intelligence	No	No	CleanAir	CleanAir	Deprecated	Deprecated	CleanAir	CleanAir	SI for 1540; CleanAir for 1560	SI for 1540; CleanAir for 1560
SE Connect	No	No	Yes	Yes	No	No	Yes	Yes	No for 1540; Yes for 1560	No for 1540; Yes for 1560
Cisco DNA Center Spectrum Analyzer	NA	NA	Yes	Yes	NA	NA	Yes	Yes	No for 1540; Yes for 1560	No for 1540; Yes for 1560
ATF	No	No	No	No	No	No	Yes	Yes		
UL OFDMA	No for 9117	No for 9117	Yes	Yes	No	No	No	No	No	No
DL	Yes	Yes	Yes	Yes	No	No	No	No	No	No

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
OFDMA										
UL MU MIMO	No	No	Yes, for C9124/C9130	Yes, for C9124/C9130	No	No	No	No	No	No
DL MU MIMO	Yes	Yes	Yes	Yes	No	No	No	No	No	No
TWT	No for C9105/C9117	No for C9105/C9117	Yes	Yes	NA	NA	NA	NA	NA	NA
BSS Coloring	No for C9117	No for C9117	Yes	Yes	NA	NA	NA	NA	NA	NA
Wi-Fi 6 Analytics	No for C9117	No for C9117	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
iCap - Anomaly/Scheduled PCAP Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
iCap - Full Packet Capture	NA	NA	Yes for C9130	Yes for C9130	NA	NA	Yes	Yes	NA	NA
iCap - Spectrum Analysis	NA	NA	Yes for 9130	Yes for 9130	NA	NA	Yes for 4800	Yes for 4800	Yes for 1560	Yes for 1560
Apple iOS Analytics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Samsung Analytics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Security Feature Matrix (AireOS)

Table 8 Security Feature Matrix for Cisco AireOS Controllers and Cisco Mobility Express

Features	C9105/C9115/C9117	C9120/C9130	AP18xx	AP4800/3800/2800	AP1560/1540

	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
WPA2/AES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WPA3 -	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WPA3 - Enterprise -192	No	No	No for C9120; Yes for C9130	No for C9120; Yes for C9130	No	No	No	No	No	No
TKIP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Peer-to-Peer Blocking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wireless IDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adaptive wIPS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ELM	No for 9115; limited support in 9117	No for 9115; limited support in 9117	Yes, but limited	Yes, but limited	Yes, but limited	Yes, but limited	Yes, but limited	Yes, but limited	Yes, but limited	Yes, but limited
Client Exclusion	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rogue Detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11r	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11k	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11v BSS Transition Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
802.11v DMS	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No for 1540	No for 1540
PMF	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
(802.11w)										
Local Policy with QoS and AVC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TrustSec SXP, SGT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WEP	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated
Wi-Fi Direct blocking	No	No	No	No	No	No	No	No	No	No
LSC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TCP MSS Adjust	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MAC Authentication	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Facebook Express Wi-Fi – Web Authentication	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Facebook Express Wi-Fi – MAC Authentication	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
OKC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SKC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CCKM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NDP Encryption	Yes	Yes	No	No	Yes	Yes	No	No	No	No

Features	C9105/C9115/ C9117		C9120/C9130		AP18xx		AP4800/3800/ 2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Software Data DTLS Encryption	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
802.1x on AP (EAP-FAST	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
802.1x on AP (EAP-PEAP, EAP-TLS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: 802.11i "Sticky" Key Caching (SKC) is only supported for AireOS Controllers.

Services Feature Matrix (AireOS)

Table 9 Services Feature Matrix for Cisco AireOS Controllers and Cisco Mobility Express

Features	C9105/C9115/9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
AVC-Mark, Drop, RL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override-VLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override-ACL, QoS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override-Session Timeout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override of AVC profile	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override BW contract	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Features	C9105/C9115/9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Local Profiling	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RADIUS Profiling	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Per-User Bandwidth Contract	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Per-SSID Bandwidth contract	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VideoStream	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CAC, WMM Policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
QoS Profiles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bonjour GW, mDNS AP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSS	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Priority MAC	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Adaptive 11r	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fastlane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
802.11u	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full CCX Support	No	No	No	No	No	No	No	No	No	No
BYOD, NAC RADIUS, CWA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Infrastructure Feature Matrix (AireOS)

Table 10 Infrastructure Feature Matrix for Cisco AireOS Controllers and Cisco Mobility Express

Features	C9105/C9115/ C9117		C9120/C9130		AP18xx		AP4800/3800/ 2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
CDP, LLDP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pre-image Download	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fast SSID Change	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hyperlocation	No	No	No	No	No	No	Yes for 4800	No	No	No
Fast CAPWAP Heartbeat	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Client Packet Capture	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated	Deprecated
User idle timeout per WLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DHCP Option 60	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Passpoint	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fast Locate	No	No	Yes	No	No	No	Yes	No	Yes for 1560	No

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Multicast buffer configuration per WLAN	No	No	No	No	No	No	No	No	No	No
AP Multicast	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AP Multicast Mode	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Multicast VLAN	No	No	No	No	No	No	No	No	No	No
IGMPv3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Client IPv6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AP PnP	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
FlexConnect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local, Sniffer, and Monitor Mode	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
RFID Tagging	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No
FIPS Certification	No for 9105	No for 9105	Yes	Yes	Yes	Yes	Yes for 2800 and 3800 (Release 8.5); No for 4800	Yes for 2800 and 3800 (Release 8.5); No for 4800	No for 1540; Yes for 1560 (Release 8.5)	No for 1540; Yes for 1560 (Release 8.5)

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Native IPv6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Allow WGB Connection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Allow uWGB Connection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CAPWAP VLAN Tagging	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
DHCP Option 82	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WebAuth - Internal/External	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mesh Mode	No	No	No	No	1800i, 1810, 1815w, 1815t, 1840: No 1815i,1815m, 1830, 1850: Yes ME (1815m): No	1800i, 1810, 1815w, 1815t, 1840: No 1815i, 1815m, 1830, 1850: Yes ME (1815m): No	Yes	Yes	Yes	Yes

Note: Even though some AP radios support BLE, AireOS deployments do not support the BLE feature.

FlexConnect Feature Matrix (AireOS)

Table 11 FlexConnect Feature Matrix for Cisco AireOS Controllers and Cisco Mobility Express

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Local Switching	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Central Switching	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
WLAN-VLAN Mapping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local Auth w/External RADIUS Server	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local Auth internal Server	No	No	No	No	No	No	No	No	No	No
TKIP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WPA2/AES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OEAP	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Webauth-Internal/External	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
EoGREv4/v6 on FlexConnect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
AP										
VLAN-based Central Switching	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
WIPS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
aWIPS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rogue detection and Mitigation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RLDP	No	No	No	No	No	No	No	No	No	No
CCKM Fast Roaming	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
802.11r	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode	Yes - ME, Flex (Central Auth) & Local Mode
Adaptive 11r	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
OKC	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)
AAA Override-VLAN ID	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override-VLAN Name	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
AAA Override-ACL, QoS	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex	No - Flex (Local Auth), Yes - Local mode, ME	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex

26

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
	(Central Auth)	Mode, Flex (Central Auth)	(Central Auth)	(Central Auth)		(Central Auth)	Auth)	(Central Auth)	Auth)	(Central Auth)
AAA Override-Session Timeout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AAA Override of AVC Profile	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
AAA Override Bandwidth contract	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
VLAN ACL	No - Flex	No - Flex	No - Flex	No - Flex	No - Flex (Local	No - Flex	No - Flex (Local	No - Flex	No - Flex (Local	No - Flex

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	(Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
DNS ACL	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
L2 ACL	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
		Auth)								
Limit Clients per WLAN/Radio	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NetFlow Export	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode	Yes-Flex-Central Auth, Flex-Local Auth; No-ME, Local Mode
WGB	No	No	No	No	No	No	Yes	Yes	Yes for 1560	Yes for 1560
Split Tunneling	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Passive Clients	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Client exclusion	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TrustSec SXP/SGT	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
QoS Markings DSCP/dot1p Markings	Yes	Yes, but no CAPWAP support on ME	Yes	Yes, but no CAPWAP support on ME	Yes	Yes, but no CAPWAP support on ME	Yes	Yes, but no CAPWAP support on ME	Yes	Yes, but no CAPWAP support on ME
CleanAir	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Native VLAN and VLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
Support on FlexConnect Group										
AVC Policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Proxy ARP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Syslog (no support for facility setting)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ClientLink	TxBF	TxBF	TxBF	TxBF	TxBF	TxBF	Yes	Yes	TxBF for 1540; Yes for 1560	TxBF for 1540; Yes for 1560
Load Balancing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Band Select	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Smart AP Image Upgrade	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Default Flex Group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NAT/PAT	Yes	No	Yes	No	Yes	Centralized NAT	Yes	Centralized NAT	Yes	Centralized NAT
Ethernet fallback	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode,	Yes - Flex (Central Auth), Flex (Local Auth), No -	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode,	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode, ME	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode,	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode, ME	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode,	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode,	Yes - Flex (Central Auth), Flex (Local Auth), No - Local Mode,

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
	ME	Local Mode, ME	ME	, ME		ME		ME	ME	ME
PPPoE client	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME	Yes – Flex (Central Auth), Flex (Local Auth), No – Local Mode, ME
Bidirectional rate-limiting (Per Client, Per BSSID)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bidirectional rate-limiting Per WLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Peer to Peer Blocking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PMF (802.11w)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BYOD, NAC RADIUS, CWA Flex Central Auth.	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central Auth)	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central al	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central Auth)	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central al	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Central Auth)	No – Flex (Local Auth), Yes – Local mode, ME Mode, Flex (Centra

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
	Auth)	(Central Auth)	Auth)	Auth)		Auth)		Auth)		l Auth)
BYOD, NAC RADIUS, CWA Local Auth	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)	No - Flex (Local Auth), Yes - Local mode, ME Mode, Flex (Central Auth)
MAC Authentication Flex Central Auth	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)
MAC Authentication Flex Local Auth	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Cent	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Centr	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Centr	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Central Auth)	No - Flex (Local Auth) Yes - Local Mode, ME, Flex (Centra

Features	C9105/C9115/C9117		C9120/C9130		AP18xx		AP4800/3800/2800		AP1560/1540	
	Controller	ME	Controller	ME	Controller	ME	Controller	ME	Controller	ME
		(Central Auth)		ral Auth)		al Auth)		al Auth)		l Auth)
GTK Randomization	No	No	No	No	No	No	No	No	No	No
VideoStream	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multicast Direct	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CAC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Data DTLS Encryption	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Umbrella	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WSA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TLS Tunnel	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
mDNS	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

Support of Wave 2 Access Points in Cisco IOS XE Releases

This section lists the support information for various features in Cisco Wave 2 Access Points in Cisco IOS XE releases.

Note: Cisco Wave 2 Access Points (18xx, 1540, 1560, 2800, 3800 and 4800) were first supported in Cisco IOS XE Gibraltar 16.10 Release.

Radio Frequency Feature Matrix (IOS XE)

Table 12 Radio Frequency Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	AP18xx	AP4800/3800/2800	AP1560/1540
RRM-DCA, TPC, CHDM	Yes	Yes	Yes
FRA-2.4 operations	No	Yes	No
Band Select	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
Load Balancing	Yes	Yes	Yes
RF Profiles	Yes	Yes	Yes
HDX Turbo Performance	No	Yes	Yes for 1560
Optimized Roaming	Yes	Yes	Yes
RX-SOP	Yes	Yes	Yes for 1560
DBS	Yes	Yes	Yes
Off-channel Scanning	Yes	Yes	Yes
Off-channel Scan Defer	Yes	Yes	Yes
Flex DFS	No	Yes	Yes for 1560
ClientLink	TxBF	Yes	TxBF on 1540; Yes for 1560
A-MSDU/A-MPDU aggregation config per priority	Yes	Yes	Yes
EDRRM	Yes	Yes	Yes for 1560
CleanAir/Spectrum Intelligence	SI	CleanAir	SI/ CleanAir
CleanAir Pro	No	No	No
Spectrum Expert	No	Yes	Yes for 1560
ATF	No	Yes	Yes
UL OFDMA	No	No	No
DL OFDMA	No	No	No
UL MU MIMO	No	No	No
DL MU MIMO	No	Yes (VHT)	No
TWT	No	No	No
BSS Coloring	No	No	No
Wi-Fi 6 Analytics	Yes	Yes	Yes
iCap - Anomaly/Scheduled	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
PCAP Capture			
iCap - Full Packet Capture	NA	Yes for 4800	NA
iCap - Spectrum Analysis	NA	Yes	Yes for 1560
Apple iOS Analytics	Yes	Yes	Yes
Samsung Analytics	Yes	Yes	Yes
Intel Analytics	Yes	Yes	Yes
6-GHz	NA	NA	NA

Security Feature Matrix (IOS XE)

Table 13 Security Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	AP18xx	AP4800/3800/2800	AP1560/1540
WPA2/AES	Yes	Yes	Yes
WPA3	Yes	Yes	Yes
WPA3 - Enterprise-192	No	No	No
TKIP	Yes	Yes	Yes
Peer-to-Peer Blocking	Yes	Yes	Yes
Adaptive wIPS	Yes	Yes	Yes
Client Exclusion	Yes	Yes	Yes
Rogue Detection	Yes	Yes	Yes
11r	Yes	Yes	Yes
11k	Yes	Yes	Yes
11v BSS Transition Management	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
802.11v DMS	No	Yes	No for 1540
PMF (802.11w)	Yes	Yes	Yes
Local Policy with QoS and AVC	Yes	Yes	Yes
TrustSec SXP, SGT	Yes	Yes	Yes
WEP	Deprecated	Deprecated	Deprecated
LSC	Yes	Yes	Yes
TCP MSS Adjust	Yes	Yes	Yes
MAC Authentication	Yes	Yes	Yes
OKC	Yes	Yes	Yes
CCKM	Yes	Yes	Yes
NDP Encryption	No	No	No
HW DTLS Encryption	Yes	Yes	Yes
802.1x on AP (EAP-FAST)	Yes TLS 1.2	Yes TLS 1.2	Yes TLS 1.2
802.1x on AP (EAP-PEAP, EAP-TLS)	Yes	Yes	Yes

Services Feature Matrix (IOS XE)

Table 14 Services Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	AP18xx	AP4800/3800/2800	AP1560/1540

Features	AP18xx	AP4800/3800/2800	AP1560/1540
AVC-Mark, Drop, RL	Yes	Yes	Yes
AAA Override-VLAN	Yes	Yes	Yes
AAA Override-ACL, QoS	Yes	Yes	Yes
AAA Override-Session Timeout	Yes	Yes	Yes
AAA Override of AVC profile	Yes	Yes	Yes
AAA Override BW contract	Yes	Yes	Yes
Local Profiling	Yes	Yes	Yes
RADIUS Profiling	Yes	Yes	Yes
Per-User Bandwidth Contract	Yes	Yes	Yes
Per-SSID Bandwidth contract	Yes	Yes	Yes
VideoStream	No	No	No
CAC, WMM Policy	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
QoS Profiles	Yes	Yes	Yes
Bonjour GW, mDNS AP	Yes	Yes	Yes
LSS	Yes	Yes	Yes
Adaptive 11r	Yes	Yes	Yes
Fastlane	Yes	Yes	Yes
Fastlane+	No	No	No
MAC Authentication	Yes	Yes	Yes
802.11u	Yes	Yes	Yes
BYOD, NAC RADIUS, CWA	Yes	Yes	Yes
Power Policy ECO mode	No	No	No

Infrastructure Feature Matrix (IOS XE)

Table 15 Infrastructure Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	AP18xx	AP4800/3800/2800	AP1560/1540
CDP, LLDP	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
Pre-image Download	Yes	Yes	Yes
Fast SSID Change	Yes	Yes	Yes
BLE	Yes, for 1830 and 1850. (1830 and 1850 require an additional USB dongle.)	Yes. (2800 and 3800 require an additional USB dongle.)	No
Hyperlocation (AoA)	No	Yes for 4800	No
User idle timeout per WLAN	Yes	Yes	Yes
DHCP Option 60	Yes	Yes	Yes
Passpoint	Yes	Yes	Yes
Fast Locate	No	Yes	No
AP Multicast Mode	Yes	Yes	Yes
Multicast VLAN	Yes	Yes	Yes
IGMPv3	Yes	Yes	Yes
Client IPv6	Yes	Yes	Yes
AP PnP	Yes	Yes	Yes
FlexConnect	Yes	Yes	Yes
Local, Sniffer, and Monitor Mode	Yes	Yes	Yes
RFID Tagging	Yes	Yes	Yes
FIPS Certification	Yes	Yes	Yes
Native IPv6	Yes	Yes	Yes
Allow WGB	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
Connection			
Allow uWGB Connection	Yes	Yes	Yes
CAPWAP VLAN Tagging	Yes	Yes	Yes
DHCP Option 82	Yes	Yes	Yes
WebAuth-Internal/External	Yes	Yes	Yes
Mesh Mode	1800i, 1810, 1815w, 1815t, 1840: No 1815i, 1815m, 1830, 1850: Yes	Yes	Yes
Env Sensors (Humidity, Air quality, Temp)	NA	NA	NA
Power Redundancy	NA	NA	NA

FlexConnect Feature Matrix (IOS XE)

Table 16 FlexConnect Feature Matrix for Cisco Catalyst Controllers and Embedded Wireless Controllers

Features	AP18xx	AP4800/3800/2800	AP1560/1540
Local Switching	Yes	Yes	Yes
Central Switching	Yes	Yes	Yes
WLAN-VLAN Mapping	Yes	Yes	Yes
Local Auth w/External RADIUS Server	Yes	Yes	Yes
Local Auth	No	No	No

Features	AP18xx	AP4800/3800/2800	AP1560/1540
internal Server			
TKIP	Yes	Yes	Yes
WPA2/AES	Yes	Yes	Yes
OEAP	Yes	Yes	Yes
Webauth-Internal/External	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
EoGREv4/v6 on FlexConnect AP	Yes	Yes	Yes
VLAN-based Central Switching	Yes	Yes	Yes
WIPS	Yes	Yes	Yes
aWIPS	Yes	Yes	Yes
Rogue detection and Mitigation	Yes	Yes	Yes
CCKM Fast Roaming	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
802.11r	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
Adaptive 11r	Yes	Yes	Yes
OKC	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override-VLAN ID, ACL	Yes	Yes	Yes
AAA Override-VLAN Name	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)

Features	AP18xx	AP4800/3800/2800	AP1560/1540
AAA Override-QoS	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override-Session Timeout	Yes	Yes	Yes
AAA Override of AVC Profile	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
AAA Override Bandwidth contract	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
VLAN ACL	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
DNS ACL	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
Limit Clients per WLAN/Radio	Yes	Yes	Yes
NetFlow Export	No	No	No
WGB	No	Yes	Yes for 1560
Split Tunneling	1800i, 1810, 1815w, 1840, 1815i, 1815m, 1830, 1850: Yes 1815T: No	Yes	Yes
Passive Clients	Yes	Yes	Yes
Client exclusion	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
TrustSec SXP/SGT	Yes	Yes	Yes
QoS Markings DSCP/dot1p Markings	Yes	Yes	Yes
Native VLAN and VLAN Support on FlexConnect Group	Yes	Yes	Yes
AVC Policy	Yes	Yes	Yes
Proxy ARP	Yes	Yes	Yes
Syslog (no support for facility setting)	Yes	Yes	Yes
ClientLink	TxBF	Yes	TxBF on 1540; Yes for 1560
Load Balancing	Yes	Yes	Yes
Band Select	Yes	Yes	Yes
Smart AP Image Upgrade	Yes	Yes	Yes
Default Flex Group	Yes	Yes	Yes
NAT/PAT	Yes	Yes	Yes
Ethernet fallback	Yes	Yes	Yes
Bidirectional rate-limiting (Per Client, Per BSSID)	Yes	Yes	Yes
Bidirectional rate-limiting Per WLAN	Yes	Yes	Yes
Peer to Peer Blocking	Yes	Yes	Yes
PMF (802.11w)	Yes	Yes	Yes

Features	AP18xx	AP4800/3800/2800	AP1560/1540
BYOD, NAC RADIUS, CWA Flex Central Auth.	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
BYOD, NAC RADIUS, CWA Local Auth	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)	Yes(Central Auth) No(local Auth)
MAC Authentication Flex Central Auth	Yes	Yes	Yes
GTK Randomization	No	No	No
VideoStream	Yes	Yes	Yes
Multicast Direct	Yes	Yes	Yes
CAC	No	No	No
Umbrella	No	No	No
WSA	Yes	Yes	Yes
mDNS	Yes	Yes	Yes

Communications, Services, and Additional Information

- ■ To receive timely, relevant information from Cisco, sign up at Cisco Profile Manager.

- ■ **To get the business impact you're looking for with the technologies that matter, visit** Cisco Services.

- ■ To submit a service request, visit Cisco Support.

- ■ To discover and browse secure, validated enterprise-class apps, products, solutions, and services, visit Cisco DevNet.

- ■ To obtain general networking, training, and certification titles, visit Cisco Press.

- ■ To find warranty information for a specific product or product family, access Cisco Warranty Finder.

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

Documentation Feedback

To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.