

Verizon Wireless Network Cisco CPE Device Compatibility

Guide for Which Verizon Wireless 4G and 5G
Services To Use with Cisco CPE Models

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Introduction

Cisco offers a variety of 4G and 5G CPE to meet enterprise requirements. The devices include enterprise fixed and modular routers, cellular gateways, and home worker devices. Deployment models include classic enterprise IP routing, IPsec VPN, SDWAN, all available with prem-based management or cloud-based managed with zero-touch provisioning.

Verizon offers a variety of 4G and 5G Fixed Wireless Access (FWA) public and private services to meet enterprise requirements. FWA is last mile access technology, a WAN link via the macro cellular network. FWA is currently used for WAN connections in mobile, temporary, primary, backup, and SDWAN deployments.

The purpose of this guide is to map which Cisco CPE can be used with which Verizon 4G/5G services.

Below is a summary of currently available Verizon 4G/5G services, followed by the compatibility table:

- Public Internet access and dynamic IP Machine-to-Machine (M2M) plan: This service enables a router to connect devices to the Internet (via Network Address Translation, NAT) or enterprise network (via VPN). The single IP address provided changes on reconnection or periodically.
- Public Internet access and static IP M2M plan: This service offers the same services as the previous one, except the 4G single IP address provided is consistent and predetermined.
- Mobile Private Network (MPN): 4G service providing access to a private network. This is accomplished via a private APN that interconnects to an enterprise's private wireline network. A 4G connection is via an APN. Connections on the same APN are segmented from connections on other APNs. An analogy is multiple SSIDs on a WiFi network (e.g. guest WiFi and internal network). They share the spectrum but they are isolated from each other.
- Dynamic Mobile Network Routing (DMNR) is a network-based 4G service supporting multiple devices behind a 4G router. It enables integration between 4G private wireless and wireline via the Mobile IPv4 Network Mobility (NeMo) protocol, without the need for end-to-end overlay tunneling. DMNR requires MPN. This is the only service that currently supports enterprise subnets behind 4G routers without CPE-based tunnels (e.g. SDWAN) or NAT.
- Private Network Traffic Management (PNTM) is a 4G QoS service that can be added to Mobile Private Network service (MPN). Without PNTM, the 4G connection offers best-effort service for traffic. With PNTM traffic marked with DSCP values mapping to IP Precedence 3, 4, or 5 receive priority across the Verizon 4G network. As it's based on DSCP values, it's easily integrated into an enterprise QoS design.
- Split Data Routing is 4G data service for enterprises that can be added to MPN service. It provides both Internet access and private network access. This allows a 4G router to directly access the Internet while also directly accessing the organization's private network, and is accomplished by supporting 2 active data APNs, each seen by the network device as a separate interface/IP address. This is accomplished with a single 4G radio and a single SIM.
- 5G Business Internet access (with either dynamic or static IP) M2M plan: This service offers similar service as 4G Public Internet services but with an unlimited data plan.

Device	Public Dyn.	Public Static	MPN	MPN/DMNR	MPN/PNTM	Split Data R	5G BI
CG 418	Y	Y	Y	pending	pending		
CG522	Pending	pending	pending	pending	pending		pending
Catalyst 8K Classic	Y	Y	Y	Y	Y	Y	Y
Catalyst 8K SDWAN	Y	Y	Y		Y		Y
ISR 1XXX Classic	Y	Y	Y	Y	Y	Y	
ISR 1XXX SDWAN	Y	Y	Y		Y		
IR1101, IR18XX, IR81XX	Y	Y	Y	Y	Y	Y	
IR809, IR829, IR807	Y	Y	Y	Y	Y	Y	
ISR819, ISR18XX, ISR28XX, ISR38XX	Y	Y	Y	Y	Y	Y	
ISR19XX, ISR29XX, ISR39XX	Y	Y	Y	Y	Y	Y	
MG41	Y	Y	Y				
MX67C, MX68CW	Y	Y	Y				
Z3/Z3C/MG21							



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