

Cisco FM1200 Volo

Powerful wireless backhaul
(formerly Fluidmesh)

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The Cisco FM1200 Volo is part of the Cisco Ultra-Reliable Wireless Backhaul portfolio. It is a high-performance radio transceiver, designed for fast, reliable backhaul of mission-critical video, voice and data.

It is intuitive, easy to deploy, and can be used to create point-to-point, point-to-multipoint and mesh networks with real throughput of up to 150 Mbps.

Vertical markets in which the FM1200 Volo can be exploited include - but are not limited to - smart cities, schools, government organizations and universities. It is also well-suited to fixed-architecture applications, such as video surveillance in ports, terminal operations, and mining.



Reduce the cost of network ownership by selecting the amount of throughput you need

Limit the cost of ownership with FluidThrottle by selecting only the amount of throughput required. More throughput can be easily achieved by upgrading the system with software plug-ins when the traffic requirements increase. FluidThrottle makes the Cisco FM1200 Volo cost-effective and future-ready.

Prodigy 2.0 reliable wireless transmission for mission-critical applications

Our Multiprotocol Label Switching (MPLS)-based transmission protocol is built to overcome the limits of standard wireless protocols and to deliver an infrastructure with a higher level of reliability. At the base of our innovative transmission protocol is a traffic optimization algorithm that allows every Cisco FM radio to assign a specific level of priority and reliability to every packet transmitted. The result is a better, more reliable, multiservice wireless infrastructure.

Up to 150 Mbps of usable throughput with Virtual Gigabit

The innovative FluidThrottle pricing allows throughput to scale as you grow by installing additional plug-ins. Virtual Gigabit allows you to continue growing all the way up to 150 Mbps. By virtually bonding the Ethernet interfaces, real throughput above 100 Mbps is just a click away.

Web interface configures, monitors, and troubleshoots the wireless network

The Cisco FM1200 Volo includes the FMQuadro web interface that allows you to configure, monitor, and troubleshoot the wireless network in real time, without any additional software. To simplify the configuration of the wireless network, the radio has a built-in spectrum analyzer and a real-time bandwidth monitoring tool.

Your investment is protected

Your investment is safe when business needs change. With FluidMAX, you don't have to replace your radios when you change the network's architecture from point-to-point to point-to-multipoint or mesh. The Cisco FM1200 Volo can operate in CSMA or TDMA.

Easy installation

IP66 rated, the Cisco FM1200 Volo is designed for low visual impact and easy installation in harsh environments. To facilitate installation, the Cisco FM1200 Volo has a two-cord watertight cable gland with a standard NPT-1 thread so you can run premade CAT5/6 shielded cables or conduit directly to the radio. The highly visible LEDs show the LAN activity and signal strength. The low-power PoE injector enables easy setup.

Wi-Fi service portal

Quick troubleshooting and firmware upgrades can be done without getting out of your truck. For fast and low-cost servicing, you can now wirelessly connect to the Cisco FM1200 Volo via a secure Wi-Fi 802.11n hotspot. The SSID is undetectable and password protected.

Supported architectures

- Point to point
- Point to multipoint
- Mesh
- Mixed

Quick peek

FluidThrottle

Select only the throughput you need

Prodigy 2.0

MPLS transmission protocol with intelligent QoS

Virtual Gigabit

Up to 150 Mbps usable throughput

FMQuadro

Web-based interface to easily configure, monitor, and troubleshoot the network

FluidMAX

Change the network's architecture, not the radios

Multiple frequencies

4.9 GHz and 5.1 to 5.8 GHz

Dual Ethernet ports

Support PoE and multiple IP devices

Table 1. Product specifications

Radio	
Range	Up to 5 miles/8 km*
Frequency bands	5150 to 5350 MHz / 5470 to 5850 MHz 4940 to 4990 MHz *depending on country code
Throughput	Up to 150 Mbps
Modulation	OFDM (BPSK, QPSK, 16QAM, 64QAM)
Transmission power	Up to 27 dBm, depending on configuration and regulations
Receiving sensitivity	-96 dB at 6.5 Mbps -75 dB at 300 Mbps
Latency per hop	< 0.3 ms
Antenna type	Built-in 2x2 MIMO panel
Antenna gain	12 dBi
Polarization	Dual linear
Cross-pol isolation	22 dB minimum
Max voltage standing wave ratio	2.0:1
Horizontal beamwidth coverage	33 deg
Vertical beamwidth coverage	17 deg
Communication protocols	
Prodigy 1.0 and 2.0	Cisco FM Intelligent Transmission Protocol

Environmental	
Operating temperature	0° C to 50° C 32° to 122° F
Humidity	95% noncondensing
Weather rating	IP66
Wind survivability	193 Km/h 120 mph
Shock and vibration	ETSI 300 - 019 - 1.4
Wind loading at 125 mph/200 km/h	<25 lb/11 kg

Supplied accessories	
POE injector 24 VDC with US/EU/UK cord	Yes
Staging kit	Yes

Electrical	
Power input	Passive PoE 24 VDC
Power consumption	Max 8W
Power over Ethernet injector	Included, 90 to 260V, 50/60 Hz AC input

Physical	
Interfaces	2 internal RJ45 ports. Shielded CAT5/6 cables and connectors are recommended.
Coupling	NPT-1 threaded cable gland
Dimensions (in)	13 (H) x 6.1 (W) x 3.1(D)
Dimensions (mm)	330.5 (H) x 156.6(W) x 79.9 (D)
Weight	18.34 oz / 0.519 kg

Point-to-point usable throughput*		
Throughput	Miles	Km
100	3	5

Point-to-point usable throughput*

Throughput	Miles	Km
50	4	6
20	5	8

Network

Protocols	UDP, TCP, IP, RTP, RTCP, RTSP, HTTP, HTTPS, ICMP, ARP
Web-based interface	Yes
Multicast support	Yes
UPnP	Yes
SNMP	Yes
802.1Q VLAN	Yes

Security

VPN	AES optional
AES link-level encryption	Yes
Full compatibility with AES, 3DES, RSA, HTTPS, SSL	Yes

Approvals

FCC CFR 47 Part 15, class B	Yes
Industry Canada RSS 210	Yes
CE	Yes

Warranty

2 years	Limited on parts and labor
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* In optimal environmental conditions.

Plug-Ins and Licenses

FM1200-V (Volo)

- Volo radios come pre-configured with basic throughput support up to 2.5Mbps
- Volo licenses can be upgraded once purchased

Table 2. Plugins and Licenses

		Cisco FM1200 Volo: Plugin and License Summary		
Type of Plugin or License	Part Numbers	Description	Cisco PID	
Hardware P/N	FM1200V-HW	Cisco FM1200 Volo, single MIMO radio device, up to 2.5 Mbit/s Ethernet Throughput, 4.9-5.8 GHz with integrated panel antennas. Two (2) Ethernet Ports. Includes passive PoE injector and AC 90-240V Power Supply. Does not include fluidcare support plan.	FLMESH-HW-VOLO-1	Rest of the World version
			FLMESH-HW-VOLO-1NA	NAM/LAM/Taiwan version
			FLMESH-HW-VOLO-1UK	UK version
Point-to-Multipoint (PtMP) Master	FM1200V-05	Enable up to 5Mbit/s ethernet throughput in FM1200V Devices for fix backhaul	L-FLMESH-VOLO-2	
	FM1200V-10	Enable up to 10Mbit/s ethernet throughput in FM1200V Devices for fix backhaul	L-FLMESH-VOLO-3	
	FM1200V-30	Enable up to 30Mbit/s ethernet throughput in FM1200V Devices for fix backhaul	L-FLMESH-VOLO-4	
	FM1200V-60	Enable up to 60Mbit/s ethernet throughput in FM1200V Devices for fix backhaul	L-FLMESH-VOLO-5	
	FM1200V-UN	Enable up to UNLIMITED ethernet throughput (100 Mpbs) in FM1200V Devices for fixed backhaul	L-FLMESH-VOLO-6	

Cisco FM1200 Volo: Plugin and License Summary

Type of Plugin or License	Part Numbers	Description	Cisco PID
Point-to Point (PtP)	FM1200V-PTP-UN	Enable UNLIMITED ethernet throughput (100 Mbit/sec) in FM1200V Devices for PTP ONLY	L-FLMESH-1200V-02
Point-to-Multipoint (PtMP) Client	FM1200V-PMCL-5	Enable Ethernet throughput up to 5 Mbps to FM1200 in Point to Multipoint Client Use ONLY	L-FLMESH-1200V-06
	FM1200V-PMCL-10	Enable Ethernet throughput up to 10 Mbps to FM1200 in Point to Multipoint Client Use ONLY	L-FLMESH-1200V-04
	FM1200V-PMCL-30	Enable Ethernet throughput up to 30 Mbps to FM1200 in Point to Multipoint Client Use ONLY	L-FLMESH-1200V-05
	FM1200V-PMCL-60	Enable Ethernet throughput up to 60 Mbps to FM1200 in Point to Multipoint Client Use ONLY	L-FLMESH-1200V-07
	FM1200V-PMCL-UN	Enable Ethernet throughput Unlimited (Up to 100 Mbps) in FM1200 for Point to Multipoint Client Use ONLY	L-FLMESH-1200V-08
General Licenses	FM-AES	AES Plug-in. Enables One plug-in is required for each hardware device where encryption is desired. ECCN 5D002 (Export Licensed Required to be exported in certain countries; no license required to be sold in North America and in the European Union).	L-FLMESH-ENCR-1
	FM1200-VGBE	Activate Virtual Gigabit Feature on FM1200 VOLO Radios. Also compatible with legacy FM1100 MITO.	L-FLMESH-1200V-03
	FM-PROFINET	PROFINET Plug-in. Enables support to Layer 2 ethertype 0x8892 on one Fluidmesh product. It requires also QoS support and the VLAN plug-in. All Fluidmesh hardware devices in a network must have these plug-ins to operate.	L-FLMESH-PROFINET

Cisco FM1200 Volo: Plugin and License Summary

Type of Plugin or License	Part Numbers	Description	Cisco PID
	FM-VLAN	VLAN Plug-in. Enables port-based and MAC address-based VLANs on a single Fluidmesh product. All Fluidmesh hardware devices in a network must have a plug-in for VLAN to operate.	L-FLMESH-VLAN-1
	FM-QNET	QNET Plug-in. Enables support to Layer 2 ethertype 0x8204 on one Fluidmesh product. All Fluidmesh hardware devices in a network must a plug-ins to operate.	L-FLMESH-QNET
	FM-CANBUS	CANBUS Plug-in. Enables CANBUS Support on Fluidmesh radios. All Fluidmesh devices in a network must have these plugin-ins to operate.	L-FLMESH-CANBUS
	FM-TITAN	TITAN Plug-in. Enables Fast Failover in case of network, radio or power failure on a single Fluidmesh product. All Fluidmesh devices in a network must have a plugin-in to operate.	L-FLMESH-TITAN-1

Product sustainability

Information about Cisco’s Environmental, Social and Governance (ESG) initiatives and performance is provided in Cisco’s CSR and sustainability [reporting](#).

Table 3. Cisco environmental sustainability information

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
	Countries and Regions Supported	Table: Regulatory compliance
Power	Power (Including Pluggable)	Table : Electrical
Material	Product packaging weight and materials	Contact: environment@cisco.com
	Weight	Table: Physical
Recycled Content	Pre-Consumer	0.68%
	Post-Consumer	2.47%

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

Document history

New or Revised Topic	Described In	Date
Typos and missing captions fixed	Table 1. Product Specifications Table 2. Plugins and Licenses	5/17/2022
New supported Region (Taiwan) for -NA PID version	Table 1	5/17/2022
Antenna Gain and Operating temperature update	Table 1	5/17/2022

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