CISCO RFGW-10

RF GATEWAY 10

The Cisco RF Gateway 10 defines a new category in cable network infrastructure — a highly intelligent, multifunction, carrier-class universal edge quadrature amplitude modulation modulator (U-EQAM) platform designed for high-availability services. The gateway offers concurrent support for standard and high definition digital broadcast television, switched digital video (SDV), video-on-demand (VoD), and DOCSIS modular cable modem termination system (M-CMTS) services.
The chassis has twenty six interface slots to accommodate:

- Dual supervisor and Ethernet switching line cards
- 1:N universal edge QAM line cards
- Dual timing and control line cards
- Dual load balancing and load sharing power supplies
- Integrated RF switching modules

FEATURES

- Up to 480 QAM channels per chassis with the Cisco RF Gateway 10 DS-48 universal edge QAM line card and the ability to grow to thousands of QAM channels per chassis with future QAM line cards
- Redundancy of all system components with RF Gateway 10 DS-48 universal edge QAM line card subsecond failover
- 100 percent link redundancy with 10 Gigabit Ethernet (10GE) and Gigabit Ethernet (GE) interfaces
- Universal edge QAM functionality to support all digital video and DOCSIS services concurrently on a single platform
- Non-service-affecting roadmap of incremental upgrades, including scalability to 200+ Gbps aggregate bandwidth per chassis

SPECIFICATIONS

GIGABIT ETHERNET INPUT INTERFACE	
Chassis dimensions	Height: 22.75 in. (578 mm) Width: 17 in. (432 mm) Depth: 23 in. (584 mm)
Dimensions in rack	• 13 rack units (RUs) high with up to three chassis per 7-foot rack (39 RUs) • Depth from the front rack mount bracket including rear UCH-2 cable headers, power supply handles, and RF cable management bracket 26 in. (660 mm)
Slots	2 supervisor slots, 10 universal RF slots, 2 timing and control module slots, 12 RF switch slots, 2 power supply slots, 1 fan tray, 1 front panel display module. All line cards and modules are hot-swappable.
Weight	Fully loaded: 275 lb (125 kg)
Mounting options	Front and midchassis mountable in a 19 in. (480mm) EIA standard two- or four-post rack
Power consumption	• Single or dual redundant, load-sharing and load-balancing DC power supplies. • DC input voltage –48 to –60 VDC with chassis capacity of 4536 W. • Fully loaded typical power consumption of 2250 W (480 QAMs @ 4.7W/QAM)
Front panel display	40 character front panel display (FPD) with push-button controls
Backplane capacity	240 Gbps

Operating temperature	32º to 104ºF (0º to 40ºC)
Storage temperature	–40º to 158ºF (–40º to 70ºC)
Airflow	Front to back flow with 800 CFM exhaust volume (main fan tray plus PS fans) at full flow
Relative humidity	10 to 85 percent, noncondensing
Operating altitude	–60 to 3000 m
Timing	• 2 timing and control modules, Compliant with CableLabs DOCSIS Timing Interface specification • 2 DTI client ports per module • Full-mesh redundancy for DTI modules and DTI ports
Physical Interfaces	• 10GE uplinks: X2 pluggable optics • GE uplinks: SFP pluggable optics • RF ports: UCH-2 header blocks holding 10 MCX RF connectors using mini coaxial cable. • DTI ports: UTP cable • Console ports: UTP cable • Management ports: UTP cable
REGULATORY COMPLIANCE	
Network Equipment Building Standards (NEBS)/European Telecommunications Standards Institute (ETSI)	UL 60950CAN/CSA-C22.2 No. 60950, EN 60950, IEC 60950, TS 001, AS/NZS 3260
EMC	FCC Part 15 (CFR 47) Class A, ICES-003 Class A, EN55022 Class A, AS/NZS CISPR22 Class A, AS/NZS 3548 Class A, VCCI Class A, ETS 300 386, EN 55022, KN22, EN 61000-3-2, EN 61000-3-3
EMI	EN550082-1, EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61000-6-1
Safety	GR-1089-Core Level 3, ETS 300 019 Storage Class 1.1, ETS 300 019 Transportation Class 2.3 (pending), ETS 300 019 Stationary Use Class 3.1, ETS 300 386
Industry EMC, safety, and environmental standards	Designed to meet NEBS Standard GR-63-CORE and GR-1089-CORE
Other industry standards	Cisco Corporate Compliance Standards

ORDERING INFORMATION

PRODUCT NAME	PRODUCT DESCRIPTION
Cisco RFGW System Bundles	
RFGW-10-36HA	RFGW-10 system bundle including RFGW-10 chassis, two supervisors, two TCC cards, two DC Power Entry Modules (PEMs), four DS48 universal edge QAM line cards
RFGW-10-72HA	RFGW-10 system bundle including RFGW-10 chassis, two supervisors, two TCC, two DC PEMs, seven DS48 universal edge QAM line cards
RFGW-10-108HA	RFGW-10 system bundle including RFGW-10 chassis, two supervisors, two TCC, two DC PEMs, 10 DS48 universal edge QAM line cards
Cisco RFGW Chassis	
RFGW-10	RFGW-10 with the following slots: Two supervisor, 10 RF, two TCC, and 12 RFSW slots. Front panel display, fan tray. Also includes 12x RFGW-10-RFSW1 modules.
Cisco RFGW Series Supervisors	
RFGW-X4516-10GE	RFGW supervisor V-10GE, 2x10GE (X2) and 4x1GE (SFP)
Cisco RFGW Series TCC+ Cards	
RFGW-TCC1	RFGW timing, communication, and control card v1
Cisco RFGW Series Line Cards	
RFGW-DS48	RFGW universal downstream edge QAM card, 12 RF ports,48 QAMs
Cisco RFGW Series Power Supply Options	
RFGW-10-PWR-DC1	RFGW DC PEM with monitoring v1
Cisco RFGW Series Supervisor Memory Options	
MEM-C4K-FLD128M	Cat 4500 IOS-based supervisor, compact Flash, 128MB option
Cisco RFGW Series Transceiver Modules	
SFP-GE-T*	1000BASE-T SFP (NEBS 3 ESD) (100m on Cat5 UTP)
SFP-GE-S	1000BASE-SX short wavelength; with DOM (550m of MMF)
SFP-GE-L	1000BASE-LX/LH short wavelength; with DOM (10Km on SMF)
X2-10GB-SR	10GBASE-SR X2 module (26m on MMF)
X2-10GB-LR	10GBASE-LR X2 module (10Km on SMF)

*Only supported on the RFGW-DS48