



C1G (DOCSIS 3.0 Release) Cable Modem Termination System

Features

- **DOCSIS 3.0 Compliant**
Multi-channel DRFI RF for Annex A, B & C, downstream channel bonding up to 8 channels, upstream channel bonding up to 8 channels, IPv6, AES encryption/decryption, multicast QoS, bonded channel multicast, full DOCSIS 3.0 MIBs and IPDR
- **Extremely Compact**
38.1 cm x 22.2cm x 1RU
(15 in x 8.75 in x 1.75 in)
- **Cost Effectiveness**
Industries lowest cost per DOCSIS 3.0 channel for this class of product, delivering an economical solution for high bandwidth multimedia applications
- **Easily Upgraded**
Add channels remotely by adding SW license keys
- **Best Multi-Channel RF Performance**
Exceeds DOCSIS DRFI specification
- **Extended Frequency Range**
Downstream frequency range up to 1GHz (48~1002MHz)



Overview

The C1G CMTS comes in a compact 38.1cm x 22.2cm x 1RU (15 in x 8.75 in x 1RU) chassis that provides operators the maximum flexibility in deploying cost-effective solutions. The C1G is a complete CMTS solution with 1 downstream QAM port, 2 DOCSIS upstream ports and 2 GbE (SFP) network ports.

The C1G can scale from a 2DS x 2US to an 8DS x 8US configuration as your subscriber base grows. Channels can be added remotely by simply activating license keys.

The C1G supports industry standard Comm and Line Interface (CLI) and SNMP for configuration and management. Operational features such as show cable modem, spectral management, CPU and memory resource reporting and user privilege management are available. It also comes with factory-installed basic configuration to bring up GigE ports and CLI on boot-up.

The C1G functions as a Layer3 routing device. It supports static as well as dynamic routing protocols. For route redundancy, multiple default routes can be configured. Layer 2 bridging, VLAN, RIP, BGP, OSPF, IS-IS, PIM-M and L2VPNs are supported.

Extensive IP features such as DHCP Relay and option 82, multiple DHCP servers, proxy ARP, IGMP snooping, IGMP v2 and v3 are available.

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Specifications

System

- 2x1 Gbps network interfaces
- 1 downstream interface per system
- 2 upstream interfaces per system

DOCSIS Features

- Full DOCSIS 3.0 compliant
- Full EuroDOCSIS 3.0 compliant
- DOCSIS 3.0 downstream channel bonding from 2 to 8 channels
- DOCSIS 3.0 upstream channel bonding from 2 to 8 channels
- DOCSIS 3.0 AES encryption/decryption
- DOCSIS 3.0 IPv6
- DOCSIS 3.0 Multicast
- Complete DOCSIS/EuroDOCSIS 1.1 features
- DOCSIS/EuroDOCSIS 2.0 A-TDMA
- PacketCable 1.5 compliant
- PacketCable MultiMedia
- DSG
- L2VPN

IP Features

- DHCP Relay & option 82
- Multiple DHCP servers
- Proxy ARP
- IP subnet bundling
- Static IP routing
- Multiple default routes
- IGMP snooping
- IGMP v2 & v3
- Access control list
- BGP, RIPv2, OSPFv2 & IS-IS PIM-SM
- L2VPN VLAN tagging

GigE Interfaces

- Dual SFP fiber/copper 1 GigE
- CWDM
- Full line-rate support

Management

- RS232 Serial port (RJ45)
- Command line interface (CLI)
- Telnet & SSH
- SNMPv1, v2 & v3
- Standard DOCSIS & IETF MIBs
- IPDR
- Casa Systems Enterprise MIBs
- Event logging through syslog
- Electronic mail notification
- Resource usage reporting
- TACACS+ & RADIUS

DOCSIS QAM Interface

- Number of ports 1 port per system
- Number of channels 2-8 channels per port
- QAM modulation Annex A, B or C
- QAM constellations 64, 128 & 256 QAM
- Data rates (DOCSIS) 27 Mbps @ 64 QAM
38 Mbps @ 256 QAM
- Data rates (EuroDOCSIS) 36 Mbps @ 64 QAM
51 Mbps @ 256 QAM
- Connector F-Type, 75 Ω
- Frequency range 48 to 999 MHz (standard) (center)
- Frequency accuracy +/- 5 ppm
- Frequency step size 5 kHz
- Channel width 6 to 8 MHz (tunable)
- Maximum output power per channel 61 dBmV @ 1-ch/port
57 dBmV @ 2-ch/port
53 dBmV @ 4-ch/port
- Output step size 0.1 dB
- Return loss 50 ~ 870 MHz, 14 dB
870 ~ 1002 MHz, 10 dB
- Modulation error rate 43 dB (equalized)
- Wideband noise -73 dBc

Additional Features

- Dynamic upstream & downstream load balancing
- Spectrum management
- Software-defined MAC domains
- Software channel licensing
- Ingress cancellation filtering

DOCSIS Upstream Interface

- Number of ports 2 ports per system
- Number of channels 1-4 channels per port
- Logical channels 2 logical per physical channel
- Modulation QPSK, 8, 16, 32 & 64 QAM
- Data rate per channel 0.32 – 30.72 Mbps
- Input frequency range 5 – 42 MHz (DOCSIS)
5 – 65 MHz (EuroDOCSIS)
5 – 55 MHz (J-DOCSIS)
- Connector F-Type, 75 Ω
- Input range -4 to 26 dBmV

Mechanical

- Form Factor 1RU
- Height 1.75 in. / 4.4 cm
- Width 8.75 in. / 22.2 cm
- Depth 15 in. / 38.1 cm
- Weight 6 lbs / 2.72 kg
- Mounting 19 in., 1 rack unit high
- Front Panel LED Power, alarm

Environmental

- Operating Temperature 0° to 50° C
- Storage Temperature -40° to 70° C
- Operating Humidity 5% to 95%, non-cond.
- Power Supply 110 to 240 V
- AC operating range (Dual external)
- Power consumption < 80 W (max)

Regulatory Compliance

- Safety: UL/CSA/EN60950-1
- EMC: FCC Part 15, Subpart B
- EN55022
- EN55024