



C4 CMTS®

Router Control Module

- High density
- High bandwidth for DOCSIS 3.0 applications
- Deployable in any C4 CMTS chassis
- Legendary C4 CMTS “hitless” and hot swappable redundancy



Application

The C4® CMTS Router Control Module (RCM) provides edge routing capability and DOCSIS® 3.0 services for the ARRIS C4 Cable Modem Termination System (CMTS). The C4 CMTS is a high-performance, carrier-class DOCSIS 3.0 CMTS for advanced IP services. The C4 CMTS with the RCM is DOCSIS 3.0 Bronze qualified and Euro-DOCSIS 3.0 capable.

Enhanced Routing & Networking Technology

The C4 CMTS with the RCM provides enhanced routing and forwarding, and includes integrated network interfaces for direct connection to a cable operator's IP network. The RCM supports advanced DOCSIS 3.0 services including IPv6 and service flow classification.

Advanced Routing Services

With the introduction of DOCSIS 3.0 technology, the Router Control Module enhances the C4 CMTS forwarding capacity to 25Gbps and adds native support for access control list (ACL) processing and IPv6 forwarding. The forwarding capacity provides the needed throughput required by the increased number of network side and cable side interfaces supported by the DOCSIS 3.0 C4 CMTS.

Ethernet Network Interfaces

The Router Control Module provides ten 1Gbps and one 10Gbps Ethernet interfaces. All interfaces can be active simultaneously. The interfaces accept a variety of electrical and optical modules with SFP pluggable interfaces for the 1Gbps ports and XFP pluggable interfaces for the 10Gbps port. The RCM includes support for multiple sub-interfaces per physical interface and active-active network-side interfaces on both RCMs in the C4 chassis.

Quality of Service & Traffic Management

The RCM classifies network side traffic into DOCSIS service flows before the traffic is queued in the switch fabric. This early classification is important for providing DOCSIS Quality of Service (QoS) by ensuring that the fair queuing mechanism of the switch fabric accounts for both DOCSIS and network priorities. In addition this allows the RCM to implement per flow policing. Early policing is also critical for QoS delivery. It ensures that when packets are policed that they are policed as soon as possible thus reducing the traffic burden on all system resources. The RCM implements advanced Congestion Control functionality to manage packet handling under congestion conditions and protocol throttling for a robust subscriber experience.

Upgrades Existing C4 CMTS Chassis

There are no changes to the C4 CMTS chassis to support DOCSIS 3.0. The RCM works equally well for new greenfield deployments as well as upgrades to existing deployed systems. In an upgrade scenario, a single slot RCM replaces one Fabric Control Module (FCM) and one Network Access Module (NAM). All FCMs and NAMs in the chassis must be upgraded to RCMs and the system must be running C4 Release 7.0 or higher to support the RCM and DOCSIS 3.0.

ARRIS C4 CMTS Router Control Module

Specifications

Protocol Support with C4 System Software Release 7.0	DOCSIS 3.0 (Bronze Qualified in CableLabs® CW56) Euro-DOCSIS 3.0 PacketCable 1.0/1.1 DOCSIS Set-top Gateway (DSG) PacketCable Multimedia Support RIPv2 (RFC 1723), OSPFv2 (RFC 2328), DHCP Relay Agent (Option 82) ICMP (RFC 792) CIDR (Classless Inter-Domain Routing) (RFC 1519) PIM-SSM, IGMPv2, and multicast flows (RFC1112) Interface Bundling across any number of RF interfaces Command Line Interface (CLI) SNMP v1, v2c and v3 DOCSIS MIBs and Cadant® enterprise MIBs Dynamic Cable Modem Load Balancing Flexible Full US to DS Mapping Telnet IP DiffServ Extended ACLs & Named ACLs
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Physical:	Power.....	-48 VDC(-44 to -72 VDC)
	Power Consumption	150 W max at -48VDC.
	Operating Temperature:	
	Short Term °F (°C).....	+23 to +131 (-5 to +55)
	Long Term °F (°C).....	+41 to +104 (+5 to +40)
	Storage Temperature °F (°C).....	-40 to 158 (-40 to +70)
	Operating Humidity (Min.-Max.)	5-85% (Non condensing)
	Dimensions (HxWxD) in. (cm).....	24.5 x 17.4 x 20.0 (64.6 x 44.2 x 50.8)
	Weight lbs (kg).....	approx 4 (1.8)

Ethernet Network Interfaces:	1Gbps	Small Form Factor Pluggable (SFP):
	10/100/1000Base-TX	SFP Electrical Interface
	1000Base-SX	SFP Optical Interface
	1000Base-LX.....	SFP Optical Interface
	10Gbps	Small Form Factor Pluggable (XFP):
	10GBase-SR	XFP Optical Interface
	10GBase-LR.....	XFP Optical Interface

Ordering Information

Part #	Description
722013	C4 CMTS Router Control Module
722891	C4 CMTS Router Control Module - Crossover Connector

Ethernet Network Interface Options

722093	C4 CMTS SFP Optical Interface, 1000Base-SX
722872	C4 CMTS SFP Electrical Interface, 1000Base-TX
728965	C4 CMTS SFP Optical Interface, 1000Base-LX
722873	C4 CMTS XFP Optical Interface, 10GBase-SR
728887	C4 CMTS XFP Optical Interface, 10GBase-LR/LW