



## C4<sup>®</sup> CMTS

### System Release 8.0



#### New Features

- New 24U Cable Access Module (CAM)
  - 24 DOCSIS 3.0 upstream receivers with 8 F connectors per 24U CAM
  - Supports up to 9+1 Hitless RF Sparing across 24U CAMs
  - Same Physical Interface Card (PIC) as 12U CAM for easy upgrade path
- Hitless RF Redundancy Expansion for 16D CAMs and XD CAMs to 8+1
- IS-IS Multi-Topology (MT) Support
  - Includes MT #0 (IPv4 unicast) and MT #2 (IPv6 unicast) per RFC 5120
- IPv6 Support for TFTP Enforce and Dynamic Shared Secret
- Multicast CAC for IP Video (Phase 1)
- FQDN Support for Static IGMP Joins
- Enhanced Control-Plane Overload Monitoring

ARRIS continues to expand the advantages provided by its industry-leading DOCSIS<sup>®</sup> 3.0 C4<sup>®</sup> CMTS with new capabilities provided in System Release 8.0. Release 8.0 incorporates another set of major feature additions that increase profitability and operational efficiency for cable operators, including a new double-density upstream module. The C4 CMTS allows an operator to cost-effectively deploy DOCSIS, PacketCable<sup>™</sup>, DSG/ADSG, and PacketCable Multimedia (PCMM<sup>™</sup>) services. The C4 CMTS increases subscriber satisfaction and retention via a self-healing design that maintains system services without interruption, providing industry-leading 99.999% system availability.

With Release 8.0, ARRIS is introducing a new, double-density upstream module—the 24U Cable Access Module (24U CAM). This new module provides 24 DOCSIS 3.0 upstream receivers cable of supporting any of the modulations defined in DOCSIS 3.0 as well as DOCSIS 3.0 channel bonding. The 24U CAM supports 8 physical F connectors and uses the same Physical Interface Card (PIC) as the existing 12U CAM, enabling easy migration from the 12U CAM to the 24U CAM, preventing the need for re-cabling.

In addition to the 24U CAM, Release 8.0 includes several new features, including support for Hitless Redundancy Expansion for 16D CAMs and XD CAMs to 8+1; IS-IS Multi-Topology; TFTP Enforce and Dynamic Shared Secret for IPv6-addressed cable modems; the use of a fully qualified domain name (FQDN) when defining static multicast joins; a first phase of support for Multicast Connection Admission Control (CAC); and an enhanced interface for monitoring the C4 CMTS control-plane overload status. As in previous releases, Release 8.0 supports DOCSIS 3.0 channel bonding (up to eight bonded downstream channels and up to four bonded upstream channels with BPI/BPI+ encryption). All of these features are supported with high availability, at maximum subscriber density, and with independent configuration of upstream and downstream channels using dedicated upstream (12U and 24U) and downstream (16D and XD) CAMS. The C4 CMTS is selected by operators desiring a highly available, dense, and stable solution for large-scale deployments of converged services.

## C4® CMTS System Release 8.0

The ARRIS C4 CMTS features a 21 slot chassis with a mid-plane-based architecture designed for continuous system operation. This unique architecture allows the C4 CMTS to provide carrier-grade integrated Layer 3 edge routing, hitless RF sparing, and advanced CMTS functionality combined in a single chassis. Six types of modules are supported:

- System Control Module (SCM), including support for the SCM II, SCM II EM, and SCM II EM(U)
- Router Control Module (RCM)
- Downstream and Upstream Cable Access Modules (CAMs) — 16D CAM, XD CAM, 12U CAM, 24U CAM

A 2Dx12U CAM must be configured as a 12U CAM with C4 CMTS Release 8.0 (2Dx12U CAM not supported).

### 24U CAM (24 DOCSIS 3.0 Upstream Receivers)

The 24U CAM is a new design using the latest DOCSIS 3.0 PHY and MAC silicon and enhanced ARRIS FPGAs for high performance. The 24U CAM provides 24 DOCSIS 3.0 upstream receivers shared across the eight available F connectors. Release 8.0 supports up to 9+1 hitless RF sparing of the 24U CAM. The Physical Interface Card (PIC) is the same as used with the 12U CAM, so customers can deploy the 24U CAM with minimal of cabling changes.

### Hitless RF Redundancy Expansion for 16D CAMs and XD CAMs

C4 CMTS Release 8.0 expands support for Hitless RF Redundancy for 16D CAMs and XD CAMs to 8+1 in parallel with the introduction of the 24U CAM in order to more flexibly leverage the density enhancements on the C4 CMTS.

### IS-IS Multi-Topology (MT) Support

IS-IS Multi-Topology supports two independent topologies (IPv4 unicast and IPv6 unicast as described in RFC 5120) for IS-IS routing and is particularly useful when IS-IS is being used for both IPv4 and IPv6 routing.

### IPv6 Support for TFTP Enforce and Dynamic Shared Secret

These cable modem configuration file security mechanisms provided by the C4 CMTS for IPv4-addressed cable modems have been extended to provide the same security for cable modems with IPv6 management addresses.

### Fully Qualified Domain Name (FQDN) Support for Static IGMP Joins

The FQDN for Static IGMP Joins feature allows the CMTS to accept an FQDN as the IP multicast source address for statically provisioned IGMP configurations. The CMTS will resolve the FQDN via DNS and re-initiate IGMP joins as needed.

### Multicast CAC for IP Video (Phase 1)

The Multicast CAC (Phase 1) feature extends the existing voice-oriented Connection Admission Control function to multicast service flows (intended for IP Video applications).

### Enhanced Control-Plane Overload Monitoring

The Enhanced Control-Plane Overload Monitoring feature provides a new SNMP MIB for monitoring the overload status of the C4 control plane, including a new trap for overload indication, at both the module and system levels.

[www.arrisi.com](http://www.arrisi.com)

Find more information about the C4 CMTS and C4c CMTS and other ARRIS products at [www.arrisi.com](http://www.arrisi.com).

### Customer Care

Contact Customer Care for product information and sales

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