

# CHP Max Headend Optics Platform

## CHP-CMM-1 and CHP-SMM-2 Control Modules

### FEATURES

- Optimize headend and hub efficiencies with industry leading density and low power consumption up to 20 transmitters or 40 receivers per 2RU chassis
- Up to 44 full spectrum wavelengths for harvesting new bandwidth through node segmentation
- Support multiple optical architectures including full spectrum, overlay, and RFoG
- DOCSIS® 3.1 support for future capacity expansion to 1.2 GHz downstream, 300 MHz upstream
- Transmitters with variable output reduce need for troublesome optical attenuators and front or rear fiber connection simplify installation and cable management
- Configure, monitor, and manage with CORView™ Element Management System



### PRODUCT OVERVIEW

ARRIS products and solutions can help cable operators attain new subscriber revenue and higher average revenue per subscriber without major CAPEX. Cable operators can seamlessly and easily stay in line with future goals, add new services, and strongly position against the competition.

As part of the CHP Max Headend Optics Platform, CHP Max5000® headend chassis applications unite HFC and digital transport onto a single scalable system, allowing service providers to accelerate deployment of VOD, high speed data, telephony, and other advanced services in a space-saving footprint.



**CHP Max5000 Management Modules**

The CHP Max5000 Craft Management Module (CMM) offers local compatible graphical user interface (GUI). The CHP Max5000 GUI simplifies installation, provides monitoring on easy-to-read screens, and displays all critical module information to assist in operational management.

The System Management Module (SMM) offers all the functionality of the CMM plus remote management through the Ethernet interface, using SNMP with HMS-compliant MIBs to interface with external element managers. The SMM also provides remote access to the CMM using an IP connection through the Ethernet interface from the remote GUI software, eliminating the need for an SNMP element manager. Both management modules offer an RS-485 interface, which interconnects multiple chassis at one site for single point control from an SMM. The SMM provides SNMP access for remote management and monitoring of the CHP Max5000 Headend equipment via both HMS public domain and enterprise MIBs.

To monitor up to 10 chassis, operators can install 1 CMM in up to 9 chassis and 1 SMM in a tenth chassis. The operator can then daisy chain the 10 chassis and use the Ethernet connection on the back of the SMM-2 chassis to program, provision, monitor, and manage the CHP Max5000 equipment via an SNMP element manager. To manage more than 10 chassis, operators can use a 10baseT Ethernet hub or switch between the Remote Management System and the chassis that contains the SMM Module.

The System Management Module (SMM-2) supports feature-rich modules such as CHP CORWave® II and CORWave® 3 full spectrum C-Band forward transmitters and CHP digital return receivers. Operators can enable backwards compatibility with legacy modules through regularly scheduled software releases provided by ARRIS. Please contact your ARRIS Representative to be sure you are receiving regularly scheduled updates.

RELATED PRODUCTS	
CHP Chassis	Optical Patch Cords
Power Supplies	Optical Passives
CHP Transmitters	Installation Services

### SPECIFICATIONS CMM AND SMM

RS-232	38.4 kbps
RS-485 (Shelf Interconnect, RJ-14 connectors on chassis)	38.4 kbps
Craft Interface Port (DB-9 female)	RS-232
RS-232 Debugging Port (SMM only)	19.2 kbps
RJ-45 (Ethernet)	10 Mbps
Serial Peripheral Interface Bus	480 kbps
Operational Temperature	0 to 50° C (32 to 122° F)

### Ordering Information

Craft Mgmt. Module	CHP-CMM-1	Allows local monitoring and management via laptop computer connected to the RS-232 connector on the front of the CMM-1.
Craft Mgmt. Software	CHP-CMS-1	Software that provides graphical user interface (GUI) and enables local communication for module setup and monitoring of a CHP Max5000 shelf from a portable computer.
System Mgmt. Module	CHP-SMM-2	Provides all CMM functionality and SNMP port for remote management. Also provides remote access to the CMM interface using an IP connection through the Ethernet interface on the back of the shelf from the remote GUI software.

## Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

**Note:** Specifications are subject to change without notice.

**Copyright Statement:** ©ARRIS Enterprises, Inc. 2015 All rights reserved. No part of this publication may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from ARRIS Enterprises, Inc. ("ARRIS"). ARRIS reserves the right to revise this publication and to make changes in content from time to time without obligation on the part of ARRIS to provide notification of such revision or change. ARRIS and the ARRIS logo are all registered trademarks of ARRIS Enterprises, Inc. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and the names of their products. ARRIS disclaims proprietary interest in the marks and names of others. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

CHP ManagementModules\_DS\_16OCT14

(rev 10-2014)