

# CHP Max Headend Optics Platform

CHP CORWave<sup>®</sup> 3 Dual Density  
1.2 GHz C-Band DWDM  
Forward Transmitters

## FEATURES

- 1.2 GHz full spectrum meeting DOCSIS<sup>®</sup> 3.1 requirements
- Maximize fiber assets with up to 44 wavelengths
- Optimize headend and hub efficiencies with industry leading density and low power consumption
- Simplify sparing and inventory with tunable wavelengths
- Support multiple optical architectures including full spectrum, overlay, and RFoG
- Configure, monitor, and manage with CORView<sup>™</sup> Element Management System



## PRODUCT OVERVIEW

ARRIS CHP CORWave<sup>®</sup> 3 1.2 GHz Forward Transmitters provide operators with significant operational and system benefits. Featuring the lowest power consumption among comparable forward transmitters in the industry, the CORWave 3 enables operators to decrease their headend footprint and significantly reduce powering costs. In addition, the CORWave 3's industry-leading Dual Density, with two transmitters in a single-wide application module, allows cable operators to add other application modules for new capacity and new services without increasing their current footprint. The CORWave 3's superior density also supports a 50% decrease in the number of physical devices operators need for forward path transmission, providing additional cost and power savings.

**Reduce Complexity and Headend Space**

The CHP CORWave 3 Dual Density is optimized for analog and digital channel loading. Available with front and rear fiber connections, the CHP CORWave 3 is backwards compatible with all current and legacy CHP chassis. It features two wavelengths in one single-wide application module to simplify operations, provide less headend “plumbing,” and provide easier module management. In addition, the CORWave 3 multiwavelength plan allows operators to reclaim fiber by leveraging their existing fiber infrastructures for up to 44 multiplexed C-band wavelengths with a long reach over a single fiber.

Lower RF input allows for less amplification in the headend, which reduces space and power consumption. To further reduce space in the headend, the single Broadcast input is internally split to both lasers, which reduces the number of external splitters and external cabling that is required.

**Reduce Inventory**

CORWave 3 transmitters come equipped with tunable lasers, which provide the ability to tune up or down. This feature reduces the required spares, saving operators capital and operational expenses.

**Add Value to Existing Assets**

Operators with a large base of active CHP Headend Optics Platforms can transition seamlessly to CHP CORWave 3 Dual Density. By doing so, they can deploy new, revenue-generating services, reduce complexity for existing deployments, and transition easily to new CHP installs. For added operational value, operators can monitor CORWave 3 transmitters via the CORView Element Management System, which provides an intuitive and user-friendly interface for security, discovery, configuration, and inventory functions.

**OPTIONS**

- CHP CORWave dual density multiwavelength transmitter

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- Front or rear fiber

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- CORView Element Management System

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- Flexible wavelength pairings

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**RELATED PRODUCTS**

- |                   |                       |
|-------------------|-----------------------|
| CHP Chassis       | Optical Patch Cords   |
| Power Supplies    | Optical Passives      |
| Management Module | Installation Services |

## GENERAL SPECIFICATIONS

### Transmitter Specifications

#### Optical

Output Power 10 dBm typical

#### RF

Bandwidth Operational Range 52 to 1218 MHz

Response flatness, P-V, typ./max. 1.0/2.0 dB

Input Return Loss 16 dB

RF Input Test Point -20 ±1.0 dB

Port-to-Port Isolation 50 dB

#### Mechanical

Optical Connector, -L LC/APC (8 degrees)

Optical Connector, -S SC/APC (8 degrees)

RF Connector F-type

Dimensions (W x H x D) in (cm) (Note 1) 1.25 x 3.4 x 18.5 in (3.2 x 8.7 x 47.0 cm)

Weight, Dual Density 3.0 lbs (1.4 kg)

#### Environmental

Operating Temperature (Note 2) 32 to 122° F (0 to 50° C)

Storage Temperature -40 to 158° F (-40 to 70° C)

Humidity 95% non-condensing, max.

### RFoG Application

SBS Limit 20 dBm (20 km fiber)

Channel Loading 190 ITU-T J.83 Annex B QAM 256 channels, 54-1218 MHz

### HFC Application

#### RF

Channel Loading 30 NTSC Analog channels from 55.25 MHz to 247.2625 MHz, 124 ITU-T J.83 Annex B QAM 256 channels (6dB below analog) to 1002 MHz  
 154 ITU-T J.83 Annex B QAM 256 channels, 54-1002 MHz  
 190 ITU-T J.83 Annex B QAM 256 channels, 54-1218 MHz  
 Note: Please contact your sales representative for higher analog channel loading count.

Nominal Input RF power 13 dBmV for 30 NTSC Analog channels from 55.25 MHz to 247.2625 MHz, 124 ITU-T J.83 Annex B QAM 256 channels (6dB below analog) to 1002 MHz  
 9 dBmV for 155 ITU-T J.83 Annex B QAM 256 channels, 54-1002 MHz  
 7 dBmV for 190 ITU-T J.83 Annex B QAM 256 channels, 54-1218 MHz

Minimum Input RF power 8 dBmV for 30 NTSC Analog channels from 55.25 MHz to 247.2625 MHz, 124 ITU-T J.83 Annex B QAM 256 channels (6dB below analog) to 1002 MHz  
 4 dBmV for 155 ITU-T J.83 Annex B QAM 256 channels, 54-1002 MHz  
 2 dBmV for 190 ITU-T J.83 Annex B QAM 256 channels, 54-1218 MHz

Input Level Range +3/-5 dB

#### Typical Link Performance

CCNR 51 dB (Notes 3, 4, 7)

CSO -60 dBc (Notes 3, 4, 7)

CTB -60 dBc (Notes 3, 4, 7)

MER 38 dB (for all cases) (Notes 5,6)

BER (Pre-FEC) 1E-8 (ITU-T J.83 Annex B QAM 256 channels) (Note 6)

#### Notes:

1. Includes handles and connectors
2. Temperature measured at transmitter module's air inlet
3. CNR and CTB/CSO may degrade up to 0.5 and 2 dB, respectively, over full operating temperature range.
4. Link performance based on single wavelength over 40 km, and 0 dBm into the receiver.
5. Source contribution not included.
6. For all RF Channel Loadings listed above.
7. For 30 NTSC Analog channels from 55.25 MHz to 247.2625 MHz, 124 ITU-T J.83 Annex B QAM channels (6 dB below analog) to 1002 MHz.

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

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## Customer Care

Contact Customer Care for product information and sales:

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(rev 06-2015)

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