

## HIGHLIGHTS

- Low noise figure and high output power Erbium Doped Fiber Amplifiers (EDFA) optimized for CATV networks
- Excellent for long distance transport with minimal signal degradation
- Convenient, stand-alone, rack-mount form factor
- Embedded SNMP agent (v1, v2c, v3)
- Support of SCTE HMC MIBs
- Embedded Web (HTTP) server for user-friendly graphical interface

Harmonic's HOA 7100 and HOA 7300 series optical amplifiers are optimized for single wavelength operation and are ideal for long haul transport. Harmonic's MAXLink™ and SUPRALink™ transmission systems include transmitters and optical amplifiers designed for 1550 nm-based applications. Both systems provide a cost-effective solution for a variety of applications and architectures, including long haul applications that are beyond the reach of 1310 nm transmitters and fiber dense architectures that take advantage of high power optical amplifiers. In addition, this system is ideally suited for new, evolving transport architectures such as redundant rings, broadcast layer transmission, and hub interconnects used in broadband networks.

Six models are available: +14, +17, +20, and 26 dBm total output power, the first two with and without an input optical isolator. The input isolator minimizes noise in networks with long fiber runs while the models without isolators offer slightly better noise figure. The HOA7320 has a single output port with +20 dBm output power while the HOA7326 features four ports each with +20 dBm output for a total of +26 dBm.

Full monitoring and configuration are available through the embedded SNMP agent and HTTP server.

## OPTICAL

## Operating Wavelength Range

HOA 7114 and HOA 7114i	1540 to 1564 nm
HOA 7117 and HOA 7117i	1540 to 1564 nm
HOA 7320	1535 to 1565 nm
HOA7326	1540 to 1565 nm

Input Power Range	-5 to +10 dBm
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## Number of Ports

HOA 7114, HOA 7114i, HOA 7117, HOA 7117i, and HOA7320	1
HOA7326	4

## Output Power per port

HOA 7114 and HOA 7114i	+14 dBm (25 mW)
HOA 7117 and HOA 7117i	+17 dBm (50 mW)
HOA7320 <sup>1</sup>	+20 dBm (100 mW)
HOA7326	20 dBm typical

## Optical Power Adjustment Range

HOA 7114 and HOA 7114i	3 dB down from maximum
HOA 7117 and HOA 7117i	3 dB down from maximum
HOA7320 and HOA7326	4 dB down from maximum

## Input isolator

HOA7114 and HOA 7117	No
HOA7114i and HOA 7117i	Yes
HOA7320 and HOA7326	Yes

Noise Figure<sup>2</sup>

HOA 7114 and HOA 7117 HOA 7114i	< 4.3 dB
HOA 7117i	< 4.7 dB
HOA7320	< 4.8 dB
HOA7326	< 4.5 dB
	< 5.0 dB typical, <6.0 dB Maximum

Optical Return Loss<sup>3</sup>

HOA 7114 and HOA 7114i	> 40 dB
HOA 7117 and HOA 7117i	> 40 dB
HOA7320 and HOA7326	> 50 dB

Polarization Sensitivity	< 0.5 dB
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## Laser Shutdown

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	Interlock on fiber tray
HOA7320	Switch on rear panel

Connector Type	SC/APC or E2000
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## POWERING

AC Version	110/220 V 50/60 Hz
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DC Version	-48 V
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## Consumption

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	60 W maximum
HOA7320 and HOA7326	75 W maximum

## USER INTERFACE

## Front Panel

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	Full numeric keypad and multi-line alphanumeric display
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HOA7320 and HOA7326	
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## LED indicators

Power (green)
Status (green/red)
Laser output enabled (green)
Laser on (green)

## Optical Monitor Point

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	-16 dB relative to optical output, on front panel
HOA7320	Power Level -3 to 0 dBm
HOA7326	Power Level -2 to +2 dBm

## Rear Panel

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	Power connector Fiber tray
HOA 7320	Power connector Laser enabled/off switch Low optical power mode manual switch
HOA7326	LED Laser output enabled Power connector

## NETWORK MANAGEMENT

SNMP Protocol	v1, v2c, v3
HTTP Protocol	HTTP 1.1 (with Web browser-based authentication)

## ENVIRONMENTAL

## Operating Temperature Range

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	-4° to +140° F (-20° to +60° C)
HOA 7320 and HOA 7326	32° to 122° F (0° to +50° C)

Storage Temperature Range	40° to +158° F (-40° to +70° C)
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Maximum Relative Humidity	85%, non-condensing
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## PHYSICAL

## Dimensions (W x H x D)

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	19.0" x 1.7" x 11.0" (1-RU) 48.3 cm x 4.3 cm x 28.0 cm
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HOA 7320 and HOA 7326	19.0" x 3.4" x 12.0" (2-RU) 48.2 cm x 8.6 cm x 30.5 cm
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## Weight

HOA 7114, HOA 7114i, HOA 7117, and HOA 7117i	15.4 lbs / 7.0 kg
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HOA 7320 and HOA 7326	20 lbs / 9.2 kg
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## ORDERING INFORMATION

HOA 71xx-xx-xx	Powering	AC AC DC DC
	Optical Connector	AS SC/APC AE E2000
	Output Power	14 14 dBm 17 dBm

HOA 71xxi-xx-xx	Powering	AC AC DC DC
	Optical Connector	AS SPC/APC AE E2000
	Output Power	14 14 dBm 17 17dBm

HOA 7320-xx-xx	Powering	AC AC DC DC
	Optical Connector	AS SC/APC AE E2000

HOA 7326-4-xx-xx	Powering	AC AC DC DC
	Optical Connector	AS SC/APC AE E2000

## Notes

1. 1550-1560 nm
2. At 0 dBm optical input
3. Amplifier off, output only

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