Headend Optics Platform (CH3000)

AT3300G-A-2 (65/85 System Applications)

Analog 1310 nm Transmitter (Standard Performance 1 GHz Model)

FEATURES

- Link loss budgets available from +3 to +14 dB
- 1 GHz RF bandwidth
- Enables very high rack density (14 transmitters per 3RU chassis)
- Occupies only one full-depth slot
- +15 dBmV/channel RF input drive level
- Second port for narrowcast input with AGC
- Superior flatness, ± 0.5 dB
- Front access –20 dB input test point
- Front panel laser On/Off interlock switch
- True dynamic plug and play
- Open standard TCP/IP SNMP support
- Local and remote status monitoring features
- Local and remote RF level control and alarm level settings

PRODUCT OVERVIEW

The ARRIS AT3300G-A-2 series 1 GHz 1310 nm Transmitter provides increased bandwidth capacity for the expanding service demands of HDTV, VoIP, VOD and high-speed DOCSIS. This transmitter is ideal for broadcast and narrowcast applications for optical transport with link losses ranging from 3 to 14 dB.

The AT3300G-A-2 is available with dual 46 to 1002 MHz RF inputs for combining separate broadcast and narrowcast inputs within the transmitter. These dual inputs are designed to provide 50 dB isolation between the narrowcast and broadcast inputs to protect against NC crosstalk on adjacent transmitters via the RF drive network. Its AGC circuitry compensates for variations in the RF input level to the transmitter to maintain constant transmitter output RF drive level to the laser.

High-density packaging enables network operators to install up to 14 transmitters per 3RU chassis, all of which can be monitored remotely or locally from the power supply module. Additionally, the compact single-width module design can be plugged into either the front or the rear of the CH3000 3RU chassis to optimize equipment installation and operating conditions.

The compact design minimizes rack space requirements in headends or hubs and enhances deployment of traditional HFC, passive HFC and fiber-to-the-home (FTTH) networks

RELATED PRODUCTS	
CH3000 Chassis	Optical Patch Cords
Optical Transmitters	Optical Passives
BP Back plates	Installation Services

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	13.0" D x 4.3" H x 1.0" W (3RU) (33 cm x 11 cm x 2.5 cm)
Weight	1.7 lbs (0.77 kg)
Environmental	
Operating temperature range	0° to +50°C (32° to 122°F)
Storage temperature range	-40° to +85°C (-40° to +185°F)
Humidity	5% to 95% non-condensing
Power Requirements	
Input voltage	12 V_{DC}
Power consumption	12 W
General	
Wavelength	1310 nm ± 20 nm
Hot plug-in/out	
Manual gain alignment	
AGC	
RF and Optical Interface	
RF inputs	F-type (at Back Plate BP-A8)
Input RF test point	G-type (at front panel, –20 dB)
Optical connector	SC/APC (at Back Plate BP-A8)
Electrical	
Pass band	46–1002 MHz
	• 64 PAL B/G analog channel loading: 85-598 MHz • 402 MHz QAM channel loading: 598-1002 MHz (6 dB below analog channels)
Frequency response (including slope)	• BC Input: ± 0.5 dB • NC Input: ± 0.75 dB
Nominal RF input levels (dBmV/ch)	Mode: AGC / Manual • PAL 85-598 MHz: 19 / 16 • QAM 598-1002 MHz: 19 / 16
	(Level of QAM signals through Aux RF input becomes 6 dB less after internal combiner. With AGC enabled, capture range is ± 3 dB.)
Manual gain control range	0 to –6 dB minimum
Manual gain control step	0.5 dB
Input impedance	75 Ω
Input return loss, minimum (all RF inputs)	18 dB, min (46–1002 MHz)
Level stability	± 1 dB (over operating temperature range)
Fiber-only link performance[1] (with full channel loading of 85-598 MHz analog and 598–1002 MHz QAM)	• CNR[2]: 52 dB • CSO: 65 dB • CTB: 70 dB • XMOD: 65 dB
	[1] Guaranteed over full operating temperature range [2] 1 dB less for transmitters with 13, 14, or 15 dBm output power. CNR measurements with 5 MHz noise bandwidth for PAL channels.
NC-BC RF input isolation	> 50 dB
256-QAM BER (ITU-C pre-FEC)	1.0×10^{-5}
MER	> 37

Optical Fiber Loss and Performance

Link Loss (dB)	Output Power (dBm)	Fiber Loss (min) (dB)
3	2.75 – 3.75	2.5
6	5.75 – 6.75	5.5
9	8.75 – 9.75	8.5
10	9.75 – 10.75	9.5
11	10.75 – 11.75	10.5
12	11.75 – 12.75	11.5
13	12.75 – 13.75	11.5
14	13.75 – 14.75	11.5

ORDERING INFORMATION

A	T	3	3	*	*	G	–	A	–	2	–	A	S

1310 nm Analog Transmitter

03 = 3 dB Link 1 GHz Transmitter
06 = 6 dB Link 1 GHz Transmitter
09 = 9 dB Link 1 GHz Transmitter
10 = 10 dB Link 1 GHz Transmitter
11 = 11 dB Link 1 GHz Transmitter
12 = 12 dB Link 1 GHz Transmitter
13 = 13 dB Link 1 GHz Transmitter
14 = 14 dB Link 1 GHz Transmitter

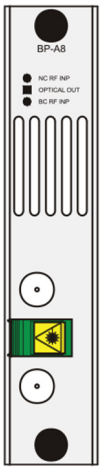
G = 46 to 1002 MHz RF Bandwidth

A–2 = Standard performance model with dual RF inputs and Automatic Gain Control (AGC)

AS = SC/APC Connector

Required Module Back Plates

Back plate is included with ordered module.



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Customer Care

Contact Customer Care for product information and sales:

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Note: Specifications are subject to change without notice.

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