

## Features

- 9.5 dBm minimum output power
- 1-GHz RF bandwidth
- 64-channel PAL B/G
- 65 km and 100 km path length options
- Multiple broadcast wavelength options (1545 nm or 1563 nm), or optional selection of DWDM ITU grid channel
- OMI adjustment
- AGC Select: CW, Video, Manual (no AGC)
- Front access –20 dB input test point
- LED status indicators
- Front panel Laser On/Off interlock switch and indicators
- Additional back panel “Laser On” indicator
- Hot plug-in/out
- Local and remote status monitoring and management features

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## Analog 1550nm Broadcast Transmitter 46–1002 MHz for 64-channel PAL B/G



The Aurora AT3550 series high performance 1550 nm externally modulated analog transmitters are available in several optional configurations to meet various network requirements and feature minimum output power of 9.5 dBm with 14 to 18 dBm SBS suppression. The compact design minimizes rack space requirements and permits plugging the three-slot-wide, full-depth transmitter module in either the front or rear of the CH3000 3RU chassis to optimize equipment installation and operating conditions.

Several wavelength options are available to include broadcast center wavelengths at 1545.3 nm or 1563.0 nm, or channel selection on the DWDM ITU grid (ITU-T G.694.1).

The characteristics of the transmitter's source laser allow high carrier-to-noise ratio (CNR) while the proprietary predistortion circuit that drives the optical modulator provides excellent CSO and CTB performance, with 450 MHz of digital channel loading 6 dB below the analog channels. AT3550 series transmitters are digital ready, and can be fully loaded with 100% digital 256QAM signals. This family of transmitters is part of the full complement of products developed by Aurora Networks to support and enhance the deployment of traditional HFC, passive HFC and fiber to the home (FTTH) networks.

# AT3550 (46–1002 MHz)

## Product Specifications

## 64-ch PAL B/G

### Physical:

- Dimensions: 13.0" D x 4.3" H x 3.0" W (33 cm x 11 cm x 7.6 cm) (3 chassis slots wide)
- Weight: 4.0 lbs (1.8 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: 20% to 85% non-condensing

### RF & Optical Interface:

- Wavelength:
  - 1545.3 nm ± 0.9 nm (Broadcast, "BC" models)
  - 1563.0 nm ± 0.9 nm (Broadcast, "BA" models)
  - (DWDM ITU grid available by special order)
- Optical connector: SC/APC on standard back plate BP-A9
- RF input F-type (female connector at back plate) BP-A9
- Input RF test point: G-type (male connector at front panel -20 dB)

Performance over Operating Temperature Range		PAL B/G	
		65 km (AT3553A **_*_**)	100 km (AT3554A **_*_**)
SBS Suppression	dBm	16	14
Carrier-to-noise Ratio (CNR) <sup>1</sup> In band (47–552 MHz)	dB	53	51.5
Composite Second Order (CSO) <sup>2</sup> In band (47–552 MHz)	dB	67	65
Composite Triple Beat (CTB) In band (47–552 MHz)	dB	66	64
Cross Modulation (XMOD)	dB	65	64

<sup>1</sup> 64 PAL B/G analog channels (5 MHz NBW), 46–550 MHz. CNR degradation ≤ 1.5 dB with 450 MHz QAM signal loading in 552–1002 MHz, 6 dB below analog channels.

<sup>2</sup> All values are specified with unmodulated carriers of equal power at the input of the transmitter.

### Power Requirements:

- Input voltage: 12 V<sub>DC</sub>
- Power consumption: <40 W

### General:

- Channel plans: 64-channel PAL B/G
- Specified link length: 65 km or 100 km options
- Optical output power, minimum: 9.5 dBm
- Operating modes: Video and CW (both with AGC), and Manual (without AGC)

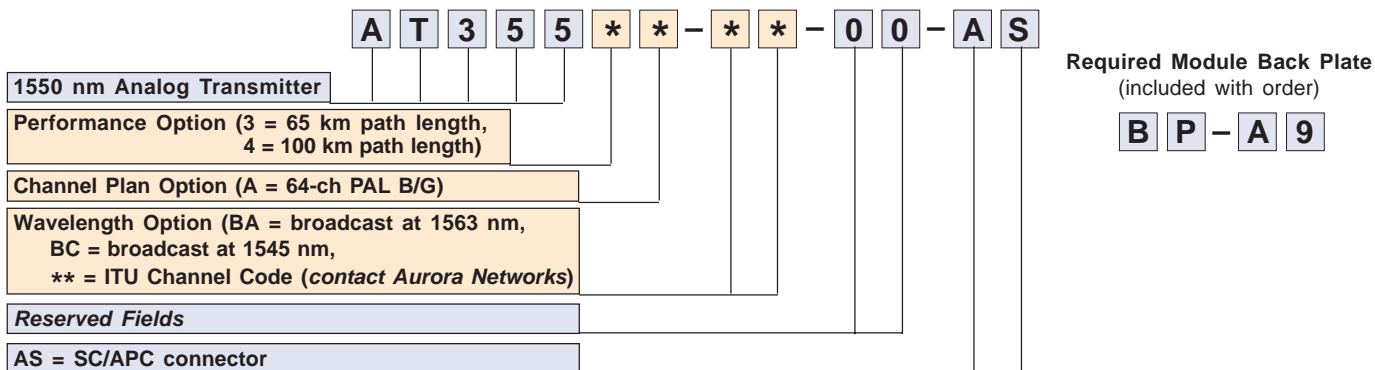
### Electrical:

- Pass band: 46–1002 MHz
- Nominal Input level (dBmV/ch, CW):
  - 17.8 (Manual Mode) / 19.8 (AGC Modes)
- Frequency response flatness (including slope):
  - ± 0.5 dB (46 to 550 MHz), ± 0.75 dB (46 to 1002 MHz)
- Input return loss, minimum: 17 dB
- Level stability: ± 0.6 dB
- AGC range: ± 3 dB
- Manual gain control range: 0 to -6.0 dB
- Manual gain control step size: 0.25 dB

### Status Indicators, Alarms and Monitoring:

- Front panel LEDs (Laser On/Off and Alarms)
- Local and remote status monitoring via Aurora Opti-Trace applications
- Firmware download capability by local serial port

## Ordering Information



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