COMMSCOPE AT3552H

1.218 GHZ ANALOG EXTERNALLY MODULATED HIGH SBS SUPPRESSION FULL SPECTRUM TRANSMITTER (65/85)

The COMMSCOPE AT3552H C-band externally modulated analog transmitters support 1.218 GHz bandwidth operation for DOCSIS 3.1 applications. These models provide high SBS suppression optimum for high launch powers into optical fiber for enhanced HFC, RFoG, PON, and FTTH applications.

Dual RF input ports allow combining of separate broadcast and narrowcast inputs within the transmitter to simplify deployment in the head end. AGC circuitry compensates for variations in the RF input level to the transmitter to maintain a constant RF drive level to the laser.

- 46–1218 MHz RF bandwidth
- Full spectrum transmitter on the DWDM ITU grid
- All QAM/OFDM loading or up to 22 PAL B/G channel plus 118 QAM channel RF loading supported
- Two RF input ports to simplify common Broadcast and Narrowcast content combining
- Level control: Manual or AGC
- Occupies only one full depth slot
- Front access –20 dB input test point
- LED status indicators
- Front panel Laser On/Off interlock switch and indicators
- Hot plug-in/out
- Local and remote status monitoring and management features

SPECIFICATIONS

PHYSICAL		ENVIRONMENTAL	
Dimensions	13.0” D x 4.3” H x 1.0” W (3RU) (33 cm x 11 cm x 2.5 cm)	Operating temperature range	0°to +50°C (32°to 122°F)
		Storage temperature range	-40°C to +85°C (-40°F to +185°F)
Weight	1.8 lbs (0.82 kg)	Humidity	5% to 95% non-condensing
RF AND OPTICAL INTERFACE		**GERNERAL**	
Wavelength	Available in 8 channels on DWDM ITU Grid (ITU-T G.694.1), ITU Ch. 29 typicalfor RFoG and PON applications	Channel plans	Up to 22-channels PAL B/G channel loading plus 118 QAM channels, or All QAM/OFDM
Optical connector	SC/APC on back plate	Link length	Up to 65 km
RF input	F-type (female connectors at back plate)	Optical output power, min.	11 dBm
Input RF test point	G-type (male connector at front panel – 20 dB)	Operating modes	Manual gain control and Automatic Gain Control (AGC)

POWER REQUIREMENTS		OPTICAL	
Input voltage	12 VDC	Optical output power	10 ±0.25 dBm
Power consumption	10 W	Wavelength	See DWDM ITU Channel Plans description
		Fiber length (user-settable, adjustable dispersion compensation)	AT3545G-xx-1-AS: 60 km (in 5 km steps) AT3545G-xx-2-AS: 40 km (in 1 km steps)
		Additional external dispersion compensation can be supported for some applications.	

ELECTRICAL	
Pass band	46-1218 MHz
79 NTSC analog channel loading	46-550 MHz
450 MHz QAM channel loading	550-1002 MHz (6 dB below analog channels)
Frequency response flatness (including slope)	±0.5 dB (46 to 550 MHz), ±0.75 dB (46 to 1002 MHz)
AGC range	±3 dB
Manual gain control range	0 to –6.0 dB
Manual gain control step size	0.1 dB
Input return loss, minimum	18 dB
Level stability	±1 dB
Nominal RF Input levels (dBmV/ch)	Mode •22 PAL B/G 54-258 MHz, BC RF input: AGC: 19 Manual: 16 •118 QAM 258-1218 MHz (using NC RF input): AGC 19 Manual 16 (Level of QAM signals through NC port RF input becomes 6 dB less after internal combiner. With AGC enabled, capture r ange is ±3 dB.) •143 QAM 54-1218 MHz, BC RF input: AGC: 14.5 Manual: 11.5

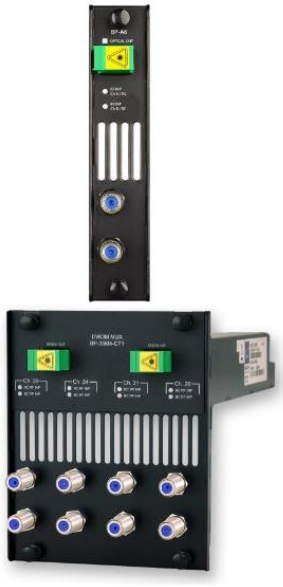
ELECTRICAL		
256-QAM BER (ITU-C PRE-FEC, WITH CW ANALOG CARRIERS)		
Fiber-only Link Performance (over operating temperature range)		Output Power Level
SBS Suppression[1]	dB m	20
Carrier-to-noise Ratio (CNR)[2] In band (54–258 MHz)	dB	51
Composite Second Order (CSO)[3] In band (54–258 MHz)	dB	65
Composite Triple Beat (CTB) In band (54–258 MHz)	dB	65
STATUS INDICATORS, ALARMS AND MONITORING		
Front panel LEDs (Laser On/Off and Alarms)		
Local and remote status monitoring via COMMSCOPE Opti-Trace applications		
Firmware download capability by local serial port		
For more information about full spectrum multiwavelength applications with up to 8 DWDM wavelengths, please contact your COMMSCOPE representative.		

NOTES:
1. 20 km fiber.
2. Full channel loading of 22 PAL B/G analog channels (5 MHz NBW) over 54–258 MHz, and 118 256-QAM channels over 258-1218 MHz.20 km receive optical power +0.25 dBm.
3. All values are specified with un-modulated carriers of equal power at the input of the transmitter.

ORDERING INFORMATION:

A	T	3	5	5	2	H	–	*	*	–	0	2	–	A	S

- 1.218 GHz Analog Externally Modulated High SBS Suppression Full Spectrum Transmitter
- Wavelength Option **=ITU Channel Number *(reference ARRIS DWDM ITU Grid Channel Plan Data Sheet)*
- *Reserved Fields*
- AS = SC/APC Connector



Module Back Plates

AT3552H series transmitters may be connected to one of two different styles of chassis back plates, which must be ordered separately depending on the application. One style provides connections for a single transmitter. This single-width back plate may be ordered as:

B	P	–	A	6

The second style provides connections for a group of four transmitters installed in adjacent chassis slots. These 4-channel mux back plates (for which outputs can be cascaded from one back plate to another) may be ordered for various channel groups. Please refer to the data sheet for these back plates for further information.

B	P	–	3	5	M	4	–	C	F	*	–	1	–	0	2	–	A	S