

COMMSCOPE AT3545G

FULL SPECTRUM DWDM TRANSMITTER

COMMSCOPE Networks' AT3545G full spectrum transmitter offers cable operators flexible channelloading options that are especially suitable for MTU applications. Operators can use the transmitter to deliver a mixture of analog broadcast and QAM channels, and evolve to all QAM transmission when needed. Because the transmitter supports standard ITU DWDM wavelengths, a single fiber can carry both upstream and downstream traffic, making the solution extremely fiber-efficient.



- DWDM transmitter
- Optimized for full spectrum loading
- Selectable RF gain allows lower RF input level
- Front access -20dB input test point
- Front panel laser On/of interlock switch
- Hot plug-in/out
- Local and remote status monitoring features
- Occupies one full-depth slot

SPECIFICATIONS

PHYSICAL		ENVIRONMENTAL	
Dimensions	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	–20° to +65°C (–4° to 149°F)
Weight	1.7 lbs (0.77 kg)	Storage Temperature Range	–40° to +85°C (–40° to 185°F)
		Humidity	5% to 95% non-condensing
RF AND OPTICAL INTERFACE		DWDM ITU CHANNEL PLANS	
RF input	F-type male (mates to BP-A4 or BP35M4x)	COMMSCOPE Networks supports DWDM network architectures with a variety of products on the standard DWDM ITU Grid (ITU-T G.694.1). For more complete description, please refer to the COMMSCOPE Networks DWDM ITU Grid Channel Plan data sheet.	
Input RF test point	G-type male (located at front panel, – 20 dB)		
Optical connector	SC/APC (mates to BP-A4 or BP35M4x)		
POWER REQUIREMENTS		OPTICAL	
Input voltage	12 VDC	Optical output power	10 ±0.25 dBm
		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)
Power consumption	12 W	Additional external dispersion compensation can be supported for some applications.	

ELECTRICAL

Pass band: 46–1002 MHz
Frequency response (including slope): ± 0.75 dB
(46–1002 MHz)

Nominal RF input levels (with input attenuator = 0 dB):

For models AT3545G-xx-1-AS:
Normal Gain Setting: 16 dBmV for analog channels, 10 dBmV for 256-QAM channels
High Gain Setting: 15 dB below Normal Gain Settings

For models AT3545G-xx-2-AS:
Normal Gain Setting: 15 dBmV for analog channels,
9 dBmV for 256-QAM channels
High Gain Setting: 15 dB below Normal Gain Settings

RF input impedance: 75 Ω , nom
RF input return loss: 18 dB, min
RF input attenuator range: 0 to –6 dB, minimum
RF input attenuator step size: 0.5 dB
Level stability: ± 0.6 dB (over operating temperature range) 256-QAM BER: $< 10^{-5}$ (pre-FEC, ITU-C) MER: > 37 dB
Link performance with CW + QAM loading:

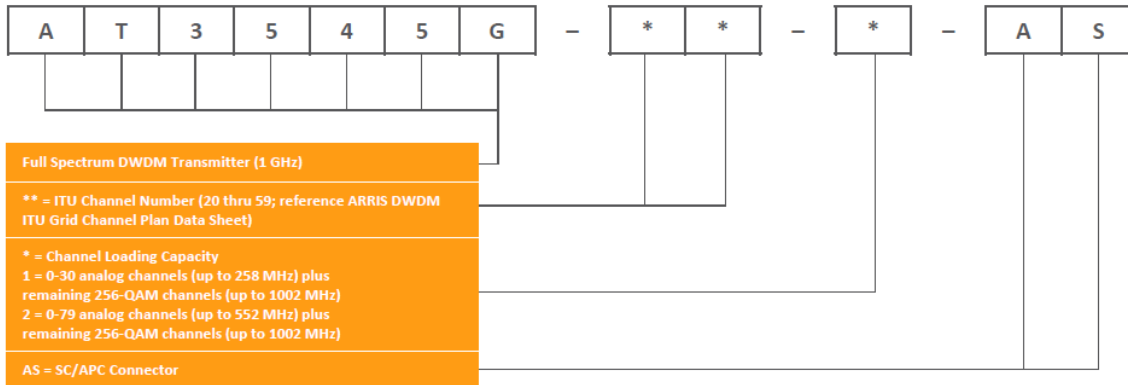
ELECTRICAL

	Transmitter Models			
	AT3545G-xx-1-AS		AT3545G-xx-2-AS	
	Link Length (km)			
	40	60	30	40
CNR** (dB):	52	50	51	50
CSO (dB):	61	58	60	58
CTB (dB):	65	65	65	65

An AT3545G-xx-1-AS transmitter can also be used as a full or partially loaded QAM transmitter.

For example, in BC/NC overlay systems, it would have the performance of an AT3535G-xx-1-AS transmitter.

ORDERING INFORMATION



Module Back Plates

AT3545G 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	4
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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	0	–	A	S
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