ChromaFlex

Chromadigm
- inside

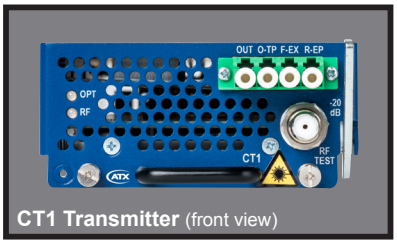
ChromaFlex Chromadigm CT1 DWDM Transmitter Modules:

Applications:

- High density node segmentation
- Hub eliminations
- Solving long distance applications with high performance
- RFoG service segmentation

Features:

- 1.218 GHz
- Chirp-free transmitter for improved MER & distance independent performance
- Clipping mitigation for error-free QAM performance & improved MER
- Up to 40 standard ITU wavelengths per fiber
- Extended reach, over 100 km, eliminates remote hubs
- Provides higher Optical Modulation Index (OMI) for improved network performance
- Fixed 6 dBm or variable 9-15 dBm output options



CT1 Transmitter (front view)

The CT1 full 1.218 GHz RF spectrum DWDM transmitters incorporate ATX's Chromadigm chirp cancellation & clipping mitigation technology, significantly advancing the performance of analog optical DWDM systems.

The technology allows up to 40 consecutive, 100 GHz spaced ITU channels, while delivering exceptional MER & error-free, pre-FEC BER performance. Being void of distance tuning provides the flexibility to simply split the optical output into route diverse fiber rings without performance degradation or having to retune the transmitter when switched between different lengths of fiber.

The CT1 transmitter with its innovative technology sets the performance standard for DWDM full band systems offering a unique set of benefits:

- Chirp cancellation eliminates distance tuned pre-distortion, immunity to filter ripple induced distortions & improved MER performance
- Adaptive clipping mitigation for error-free QAM performance & a high OMI for superior MER performance
- Reduces optical launch power requirement to avoid four wave mixing & crosstalk issues

The CT1 is offered with either a +6 dBm fixed or a variable (+9 to +15 dBm) to support a wide variety of applications with one module. The CT1 delivers very high MER/BER performance for redundant link or applications where a single wavelength per module is desired. Integrated, optical express ports can be added for extracting return path wavelengths along with an optical test point. The CT1 occupies a single-width module providing eight transmitters in a ChromaFlex 2RU chassis.

ChromaFlex Chromadigm CT1 DWDM Transmitter Modules:

CT1 DWDM Transmitter Module Specifications

SPECIFICATIONS				
OPTICAL PARAMETER	**CT11-***	**CT16-***		
WAVELENGTH[1]	1530-1562nm, ITU Channels: 20-63			
OPTICAL POWER[2]	6 dBm	15 dBm Variable, (9-15 dBm)		
OPTICAL CONNECTOR[3]	SC/APC			
RIN	< -155 dB/Hz			
RF PARAMETER				
BROADCAST BANDWIDTH	54-1218 MHz			
NARROWCAST FREQUENCY	54-1218 MHz			
FLATNESS	± 0.75 dB (54-1218 MHz)			
RETURN LOSS	> 16 dB up to 1002 MHz; > 14 dB 1002-1218 MHz			
RF TEST POINT[4]	-10 dB, Flatness Accuracy ± 0.75 dB (54-1218 MHz)			
TOTAL COMPOSITE RF INPUT (Broadcast + Narrowcast)[5]	35 dBmV			
MANAGEMENT				
LOCAL	Hand-held Display, CLI, GUI			
REMOTE	SNMP Enterprise MIB, GUI, Telnet			
ELECTRICAL & OPERATIONAL				
POWER CONSUMPTION	Max. 35W			
OPERATING TEMPERATURE	0ºC to +50ºC (+32ºF to +122ºF)			
STORAGE TEMPERATURE	-40ºC to +65ºC (-40ºF to +149ºF)			
DIMENSIONS[6]	ChromaFlex One-slot Module, 1.25"H x 3.5"W x 14.5"D (3.18H x 8.89W x 36.83D cm)			
WEIGHT	2.5 lbs (1.1 kg)			
CHANNEL LOADING[7]	**BC ANALOG**	**BC & NC QAM**	**RESERVE GAIN (AGC)**	
80 AN + 75 QAM	15 dBmV	9 dBmV	Stated RF Levels Provide about 3-4 dB of Reserve Gain	
60 AN + 95 QAM	16 dBmV	10 dBmV		
30 AN + 125 QAM	17 dBmV	11 dBmV		
155 QAM	n/a	13 dBmV		
LINK PERFORMANCE (Excluding Source)	**CNR**	**CTB/CSO**	**MER**	**BER[8]**
80 AN + 75 QAM	50 dB	-65/-62 dBc	40 dB	< 1.0E-9
60 AN + 95 QAM	50.5 dB	-65/-62 dBc	40 dB	< 1.0E-9
30 AN + 125 QAM	51 dB	-65/-62 dBc	41 dB	< 1.0E-9
155 QAM	n/a	n/a	41 dB	< 1.0E-9

NOTES:
(1) 100 GHz or 200 GHz spacing following standard ITU channel assignments.
(2) Derate 0.5 dB for each expansion port & test port (optional).
(3) LC/APC available (required with expansion ports).
(4) Relative to module RF input.
(5) RF reads 0 in transmitter status menu, provides 3-4 dB gain reserve.
(6) Eight CT1 transmitter modules in a 2RU chassis.
(7) 'n An' means tested with n*contiguous NTSC channels starting at 54 MHz.
'n QAM' means tested with n*contiguous ITU-T J.83 ANNEX B QAM 256 channels starting at 54 MHz (or last analog).
RF input levels given are nominal (recommended). Internal AGC will compensate for +/- 3 dB change from these levels.
(8) pre-FEC BER for 256 QAM channels.

Ordering Information

CT1**	-	ITU**	-	***
Base Model		**ITU Channels**		**Optical Ports: Number of Output Ports, Test Points, Express Ports & Reflector Port Type (Max. of 4)**
*** = Power Options**		** = from 20-63		**Number of Output Ports & Test Points**
1 = 6 dBm				1 = Single Output with LC/APC
6 = 15 dBm Variable				3 = Single Output with SC/APC
*** = Enhanced XTALK**				**Express Port Types**
N = None				0 = None
				Return Reflector Port Type
				0 = None

Specifications subject to change without notice.

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