

HD/SD BNC to “ST” VMC Series



Product Overview

The Emerson Network Power Connectivity Solutions VMC-T-x-2 media converter transmitter module is a high performance integrated data link for uni-directional communication over single mode fiber. The VMC-T-S-2 is designed to be used in SMPTE 259M/297M/305M/310M applications with data transfer rate up to 540Mbps. The VMC-T-H-2 is designed to be used in multi-protocol video applications with data transfer rate up to 1.485Gbps (SMPTE 292M/297M/259M/305M/310M). The media converter module is designed to connect to electrical high speed serial digital video links that require extended distance performance. It permits replacement of copper cable with optical fiber to provide a solution for systems requiring increased media interconnect distance.

Ordering Information

VMC - T - X - 2

Protocol

S = SMPTE 259M/297M/305M/310M
(19.4/143/177/270/360/540Mbps)

H = SMPTE 292M/297M/259M/305M/310M
(19.4/143/177/270/360/540/1485Mbps)

Key Features & Benefits

- SMPTE 292M/297M/259M/305M compliant (VMC-T-H-2)
- SMPTE 259M/297M/305M compliant (VMC-T-S-2)
- DVB/ASI compliant (VMC-T-H-2 and VMC-T-S-2)
- ATSC/SMPTE 310M compliant; 19.4 to 38.8Mbps (VMC-T-H-2 and VMC-T-S-2)
- RoHS-6 compliant
- Rugged die cast/over molded construction
- Digital Diagnostics Monitoring interface
- Unit to unit pitch (Port Density) of 0.75”
- Rugged “ST” simplex optical interface with dust cover
- Line Equalized 75Ω BNC (male) simplex electrical interface
- Error free pathological pattern operation
- Typical wall plug or 12V battery supply (+4.5V to +16V)
- LED indicator (See Table below)
- LED legend code on unit
- Accessories available
- Red overmold to distinguish from Receiver (Blue) unit
- Class 1 Laser Safety compliant

Stratos

VMC-T-x-2 Video Media Converter (Transmitter)

Connectivity for
Business-Critical Continuity™

Module Specifications – Electrical: $-30^{\circ}\text{C} < \text{Tc} < +70^{\circ}\text{C}$

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Input Signal		SMPTE 259M/297M/292M			mVpp	
Input Impedance	Z_{IN}		75		Ω	Male BNC (note 1)
Return Loss		15	20		dB	
Propagation Delay				1.5	ns	

VMC-T-x-2 Optical Specifications – 1310nm FP Singlemode Laser: $-30^{\circ}\text{C} < \text{Tc} < +70^{\circ}\text{C}$

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Link Distance						
9.0 μm Core Diameter SMF (note 2)		16 29	33 43		km	BER<1E-10 @ 360/540/1485Mbps BER<1E-10 @ 143/177/270Mbps
Transmitter						
Optical Center	λ	1290	1310	1330	nm	
Optical Transmit Power	Popt	-9		-3	dBm	Average @ 1310nm
Extinction Ratio	ER	9	10		dB	P1/P0
Spectral Width	$\Delta\lambda$			2	nm	RMS
Total Jitter	Tj			135 740	ps	Measured with Color Bar Test Signal @ 1.485Gbps Measured with Color Bar Test Signal @ 143/177/270/360/540Mbps
Output Rise/Fall Time	t_r, t_f			270 1.5	ps ns	20%-80%; Measured unfiltered @ 1.485Gbps 20%-80%; Measured unfiltered @ 143/177/270/360/540Mbps

Note 1: Equalized for 140m Belden 1694A @ 1/485Gbps and 350m Belden 1694A @ 270Mbps

Note 2: The specified minimum link distances are based on IEEE link budget models. Assumes minimum transmitter output power of -9dBm with minimum extinction ratio of 9dB over 9/125 μm Single Mode Fiber (SMF) at 140/177/270/360/540/1485Mbps. The minimum link distances are based on worst case receiver sensitivity (VMC-R-x-2 simplex receiver video media converter) with color bar test signal. The minimum link distances will be reduced with SDI test matrix.

For more information on this product consult the VMC-T-x-2 product data sheet.

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