

### HD/SD “ST” to BNC VMC Series



#### Product Overview

The Emerson Network Power Connectivity Solutions VMC-R-x-2 media converter receiver module is a high performance integrated data link for uni-directional communication over single mode fiber. The VMC-R-S-2 is designed to be used in SMPTE 259M/297M/305M/310M applications with data transfer rate up to 540Mbps. The VMC-R-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 - R - 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-R-H-2)
- SMPTE 259M/297M/305M compliant (VMC-R-S-2)
- DVB/ASI compliant (VMC-R-H-2 and VMC-R-S-2)
- ATSC/SMPTE 310M compliant; 19.4 to 38.8Mbps (VMC-R-H-2 and VMC-R-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
- Re-Clocked/Line Driven 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
- Blue overmold to distinguish from Transmitter (Red) unit
- Class 1 Laser Safety compliant

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

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Output Voltage Level		SMPTE 259M/297M/292M			mVpp	
Output Impedance	Z <sub>OUT</sub>		75		Ω	Male BNC
Re-Clocked Output Rates		143, 177, 270, 360, & 540 143, 177, 270, 360, 540, 1483.5, & 1485			Mbps	VMC-R-S-2 VMC-R-H-2
Jitter	T <sub>j</sub>			135 740	ps	Measured with Color Bar Test Signal @ 1.485Gbps Measured with Color Bar Test Signal @ 143/177/270/360/540Mbps
Return Loss		15	20		dB	
Propagation Delay				40 50	ns	Re-Clocker OFF Re-Clocker ON

### VMC-R-x-2 Optical Specifications – 1310nm Singlemode Receiver: $-30^{\circ}\text{C} < \text{T}_c < +70^{\circ}\text{C}$

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
<b>Link Distance</b>						
9.0μm Core Diameter SMF (note 1)		16 29	33 43		km	BER<1E-10 @ 360/540/1485Mbps BER<1E-10 @ 143/177/270Mbps
<b>Receiver</b>						
Optical Input Wavelength	λ	1270		1610	nm	
Optical Input Power	P <sub>opt</sub>	-20 -23		-2 -2	dBm	VMC-R-H-2 (note 2) VMC-R-S-2 (note 3)
Optical Return Loss	ORL	29			dB	

Note 1: The specified minimum link distances are based on IEEE link budget models. Assumes minimum transmitter output power of -9dB with minimum extinction ratio of 9dB (VMC-T-x-2 simplex transmitter video media converter) over 9/125μm single Mode Fiber (SMF) at 140/177/270/360/540/1483Mbps. 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.

Note 2: Minimum receiver input power is defined for line BER < 1 x 10<sup>-10</sup> running PRBS 2<sup>23</sup>-1 at 1.485Gbps

Note 3: Minimum receiver input power is defined for line BER < 1 x 10<sup>-10</sup> running PRBS 2<sup>23</sup>-1 at 140/177/270/360/540Mbps

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

#### IMPORTANT NOTICE

Stratos International, Inc. reserves the right to make changes to or discontinue any optical link product or service identified in this publication, without notice. Stratos International, Inc. recommends that its customers obtain the latest version of the publications to verify, before placing orders, that the information being relied on is current. Stratos International, Inc. warrants performance of its optical link products to current specifications in accordance with the Stratos International, Inc. standard warranty. Testing and other quality control techniques are utilized to the extent that Stratos International, Inc. has determined it to be necessary to support this warranty. Specific testing of all parameters of each optical link product is not necessarily performed on all optical link products. Stratos International, Inc. products are not designed for use in life support appliances, devices, or systems where malfunction of a Stratos International, Inc. product can reasonably be expected to result in a personal injury. Stratos International, Inc. customers using or selling optical link products for use in such applications do so at their own risk and agree to fully indemnify Stratos International, Inc. for any damages resulting from such improper use or sale. Stratos International, Inc. assumes no liability for Stratos International, Inc. applications assistance, customer product design, software performance, or infringement of patents or services described here in. Nor does Stratos International, Inc. warrant or represent that a license, either expressed or implied is granted under any patent right, copyright, or intellectual property right, and makes no representations or warranties that these products are free from patent, copyright, or intellectual property rights. Applications that are described herein for any of the optical link products are for illustrative purposes only. Stratos International, Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.