

ViaLiteHD[®] – Serial Digital Link

Serial Digital RF over Fiber Link

- Intelligent embedded control
- DC to 10 Mbps for RS422, RS485 and TTL
- DC to 460 kbps for RS232
- TTL input impedance 50 Ω , 600 Ω or 10k Ω
- Max data rate for RS422 / 485 configurable at 115 kbps, 500 kbps or 10 Mbps for EMC control
- Dual LED display for signal or alarm
- Intelligent control via SNMP
(Requires ViaLiteHD M&C module)



The **ViaLiteHD** Serial Digital Link provides full duplex transmission of RS422, RS485, RS232 and TTL signals over two single mode optical fibers. Distances of up to 50 km are achievable without the need for repeaters. This link is suitable for use with the digital signalling of unbalanced ones and zeros and any duty cycle ratios.

The **ViaLiteHD** Serial Digital Link can connect remote base stations in cellular and TETRA networks for software upload and system feedback. The Link also allows control and monitoring in satellite ground stations as well as distribution of network time server and clock signals.

Features/Options

- Low cost in comparison to coaxial cable
- Minimal carrier to noise degradation
- Intelligent control via SNMP
- TTL input impedance 50 Ω , 600 Ω or 10k Ω
- Frequency response independent of path length
- Compact OEM module for easy integration
- Non-conductive and immunity to electrical interference
- Optical Connectors: SC/APC, FC/APC and LC/APC [LC/APC not available for Blue OEM]
- Blind mate connectivity (LC/APC)

Applications

- Satcom for BUC, converter and antenna control
- Broadcast for camera control and battery monitoring
- Cellular/Network timing for digital GPS into base stations
- Telemetry for antenna control/switching
- Mining and public safety for digital GPS
- Government and defence for radar or secure rooms

Formats

- 3U Rack Chassis
- 1U Rack Chassis
- Blue OEM
- Yellow OEM
- Outdoor Enclosures

Technical Specification

	Units	Note	Serial Digital Fiber Optic Link
Module Type for RS232 / RS422 / RS485			HRB-1-00-8R-28-C1310
Module Type for TTL			HRB-1-00-8R-29-C1310
Data Rate 1 - RS422 and RS485	kbps	^a	0 – 115
Data Rate 2 - RS422 and RS485	kbps	^a	0 – 500
Data Rate 3 - RS422 and RS485	Mbps	^a	0 – 10
Data Rate - TTL	Mbps		0 – 10
Data Rate - RS232	kbps		0 – 460
Input Impedance - RS422 and RS485	Ω		120
Input Impedance - RS232	k Ω		≥ 3
Input Impedance 1 - TTL	Ω	^a	50
Input Impedance 2 - TTL	Ω	^a	600
Input Impedance 3 - TTL	k Ω	^a	10
TTL Drive Capability	Ω		50
Duty Cycle Distortion	%	^b	5
Bit Error Rate	10E-8		< 1
RS Output Rise/Fall Time	ns	^c	< 25
Jitter	mUI		< 10 (rms), 100 (peak)
Delay	ns (Typ)	^d	300
Optical Connector			FC/APC, SC/APC, LC/APC, E2000/APC [LC/APC not available for Blue OEM]
Optical Wavelength	nm		1310 (default) CWDM 1270-1610 nm $\pm$ 3nm
Laser Type			DFB - Distributed feedback laser
Optical Power Output	dBm (Typ)		-6
Optical Power Budget	dB		10
Power	W (Typ)		0.7
Power	W (Max)		1.2
Operating temperature range			-20 °C to +55 °C
Storage temperature range			-40 °C to +70 °C



- ^a configurable
- ^b @ 115 kbps
- ^c @ 10 Mbps
- ^d With 1m fiber

Communication Interface Connections

Product Type	Communication Interface Connector
3U and 1U Rack Chassis Cards	9-Way Female D-Type Connector
Blue OEM	15-Way Molex CGRID Connector
Yellow OEM	30 Pin Edge Connector

NOTE: Please refer to the **ViaLiteHD** Support Module Handbook for full details on the Pinouts for the communication interface connectors listed in the table above.