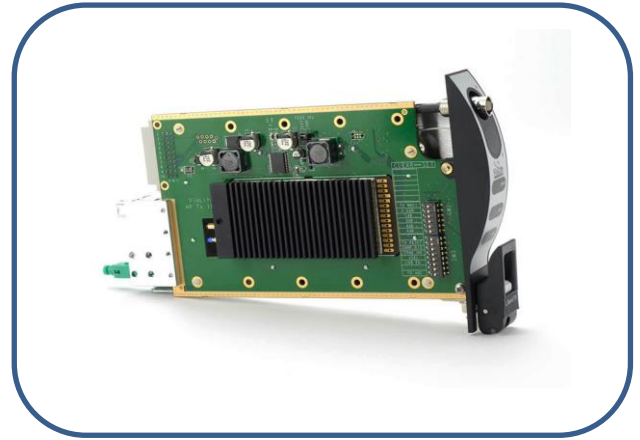


ViaLiteHD[®] – L-Band HTS HWDR Links

Hyper-Wide Dynamic Range (S1)

- Hyper-Wide Dynamic Range (HWDR)
- L-Band HTS (400-2500 MHz)
- Up to 114 dB/Hz^{2/3} SFDR
- Supports 50+ km range
- Uses 5 mW laser
- DWDM channels available
- Standard 5-year warranty



The **ViaLiteHD** L-Band HTS HWDR RF over fiber links have been designed for customers who need even greater dynamic range. The HWDR Series 1 (S1) links have a Spurious-Free Dynamic Range (SFDR) with an extra 4 dB/Hz over the standard **ViaLiteHD** product. This increase in SFDR allows an extra 4 dB of dynamic range for High Throughput Satellite (HTS) transponder bandwidths of 500, 800 or even 1500 MHz, allowing customers to improve intermodulation performance and/or reduce the minimum signal that can be detected. This is extremely important in HTS and Signals Intelligence (SIGINT) applications.

Options include

- 50 Ω RF: SMA
- Optical: SC/APC, FC/APC & E2000/APC
- Test ports on Tx and Rx modules
- Built-in Bias-T for LNB powering through RF connection
- LNB control circuit with 13/18 VDC & 22 kHz tone
- Blind mate connection (LC/APC only)



The HWDR cards are available with **ViaLiteHD** blind mate, which allows all cables to be connected at the rear of the chassis when installed. Blind mate also allows configuration changes to be completed without disturbing the connections and very fast changeover of cards; enabling five 9s reliability.

Applications

- Full Satcom transponder applications
- Defence Signals Intelligence (SIGINT)
- Fixed Satcom earth stations and teleports
- Telemetry
- Government installations
- Remote monitoring stations

Enclosure formats

- 3U Chassis
- 1U Chassis
- Yellow OEM
- Outdoor enclosures

Technical specification

	Units	Note	50 Ohm L-Band HTS – HWDR Series 1 (S1)
Frequency range	MHz		400-2500
Impedance, RF connector			50Ω SMA, blind mate
VSWR	(typ)		1:1.5
Link gain (Tx gain / Rx gain), default	dB (nom)		0 (-5 / +5)
Tx gain adjustment range	dB (typ)		10
Tx gain adjustment from default gain	dB (typ)		-6.5 to +3.5
Rx gain adjustment range	dB (typ)		14
Rx gain adjustment from default gain	dB (typ)		-10 to +4
Gain adjustment step size Rx and Tx	dB (typ)		0.5
Flatness, fullband, L-Band	dB (max)		±1.5
Flatness, fullband, L-Band	dB (typ)		±0.5
Flatness, 36 MHz, L-Band	dB (typ)		±0.2
Gain stability over temperature range	dB (max)		±1
Gain stability	dB (typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (typ)		-63
CNR @ nominal input power, 36MHz	dB (typ)		60
P1 dB _{input}	dBm (typ)		-1.5
P1 dB _{input} , at maximum Tx gain	dBm (typ)		-5
IP3 _{input} , at default gain	dBm (typ)		+9
Noise figure, at default gain	dB (typ)		14
Noise figure, at maximum Tx gain	dB (typ)		11.5
Noise figure, 5 dB optical loss	dB (typ)		21
SFDR, at default gain	dB/Hz ^{3/2} (typ)		112.5
Test port gain, transmitter	dB (typ)		-20
Test port gain, receiver	dB (typ)		-20
Test port flatness	dB (typ)		±1
No damage input power	dBm		15
LNB power			Internal 13/18/22 V @ 700 mA with switchable tone
Power Consumption Tx	W (typ)	^a	3.5
Power Consumption Rx	W (typ)		2.8
Optical connector			SC/APC, blind mate
Optical wavelength	nm		1550 ± 0.3 or DWDM
Laser power	mW		5 (10 for DWDM)
Laser type			DFB (Distributed feedback), thermo-electric cooled laser
Optical power output	mW (typ)		+7.0
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range			-20 °C to +60 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95% non-condensing humidity

^a - excluding LNA power