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ViaLiteHD® – DVB-T Link

DVB-T RF over Fiber Link for Broadcast

- **Ultra-wide dynamic range**
- **Protocol transparent – transmits all video, data and audio modulation formats**
- **Superior linear performance**
- **Transmission distances of >50 km**
- **Interfaces with M&C systems for remote monitoring**
- **Multiple carrier transmission**

The ***ViaLiteHD*** DVB-T fiber optic link enables broadcast operators to transport multiple RF DVB-T feeds over optical fiber.

The DVB-T fiber optic link system is inserted between the antenna or down-converter and the electrical receiver. The fiber is lightweight with a small diameter, and a cross-site cable can provide power to the remote end. The fiber optic transmitter can be used to power the antenna / down-converter via a voltage feed from the RF input.

Features/Options

- Operation independent of data format
- Ultra-wide dynamic range means wireless cameras can roam freely without problems caused by signal variance
- Negligible signal degradation due to effects of noise and inter-modulation
- Inherently low phase noise
- Suitable for almost any type of analog or digital signal modulation, including FM and QPSK
- Automatic gain control mode maintains constant power output

Applications

- Outdoor Live Broadcasting
- Next generation roaming cameras

Formats

- Blue OEM
- Yellow OEM

Technical Specification

	Units	Note	DVB-T 75 ohms
Transmitter (Tx)			HRT-D6-8M-35-S1310
Receiver (Rx)			HRR-D6-8M-05
Frequency range	MHz		470-860
Impedance, RF connector			75Ω MCX
VSWR	(Typ)		1.5:1
Link gain (Tx gain / Rx gain) default	dB (nom)	a	0 (-15 / +15)
Tx gain adjustment range	dB (Typ)		15.5
Tx gain adjustment from default gain	dB (Typ)		-8.5 to +7.0
Rx gain adjustment range	dB (Typ)		15.5
Rx gain adjustment from default gain	dB (Typ)		-7.5 to +8.0
Gain adjustment step size Rx and Tx	dB (Typ)		0.5
Flatness, fullband	dB (Max)	a d	±1.0
Flatness, fullband	dB (Typ)	a d	±0.4
Gain stability over temperature, Link	dB (Max)	a	±3
Gain stability	dB (Typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (Typ)	c	-48
$P1dB_{input}$	dBm (Typ)	a e	2
$P1dB_{input}$, at minimum Tx gain	dBm (Typ)	a e	5
$IP3_{input}$, at default gain	dBm (Typ)	a e	14
Noise figure, at default gain	dB (Typ)	a e	23
Noise figure, at maximum Tx gain	dB (Typ)	a e	17.5
Noise figure, 5 dB optical loss	dB (Typ)	c e	28
SFDR	dB / Hz $^{2/3}$ (Typ)	a	110
Maximum RF input power without damage	dBm		15
LNA power			Internal 12 V @ 300 mA
Power Consumption, Tx	W (Typ)		1.9
Power Consumption, Rx	W (Typ)		1.3
Optical connector			FC/APC, SC/APC
Optical wavelength	nm		1310 ± 20 (1550 ± 20 yellow OEM only)
Laser type			DFB - Distributed feedback laser
Optical power output	dBm (Typ)		4.5
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range			-10 °C to +50 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95 % non-condensing humidity

a *nominal input power @ 0 dB optical loss*
b *nominal input power @ 1 dB optical loss*
c *nominal output power @ 5 dB optical loss*
d *default gain setting*
e *Measured @ 500 MHz*
All tests @ 25 °C after 15 minutes warm up