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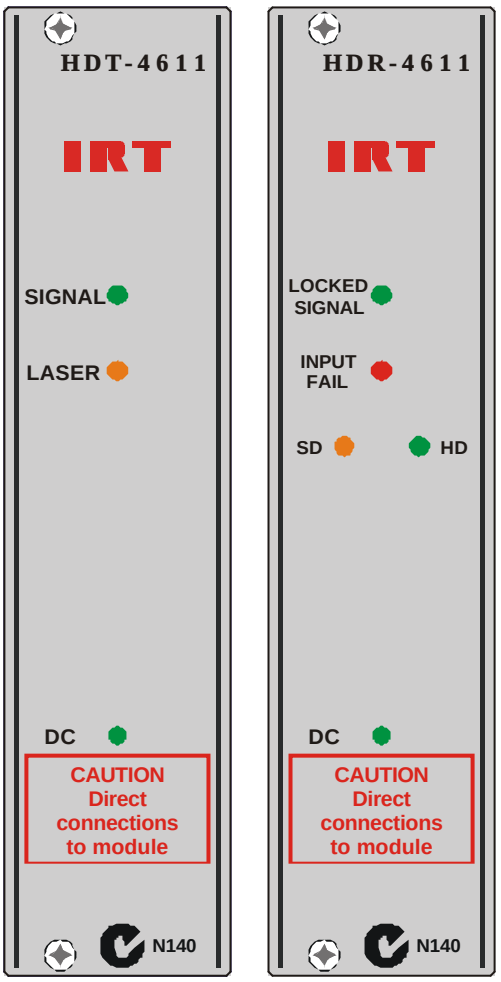
High Definition TV Fibre Optic Link HDT-4611 / HDR-4611

Features:

- One type covers 1.485 Gb/s High Definition or 270 Mb/s data signals
- Work reliably over 5 - 31dB optical path range using 9/125㎜ single mode fibre.
- Passes SMPTE 292M pathological test sequence at 1.485 Gb/s and 270 Mb/s data
- LED indicators and external alarm contacts
- Fibre, video and alarm connections at rear
- Optional plug-in SNMP monitoring module

Applications:

- Transmission of 1.485 Gb/s signals over distances > 100 meters



General:

The IRT HDT-4611 and HDR-4611 are transmit and receive modules designed principally for use as a SMPTE292M 1.485 Gb/s serial digital video Fibre Optic transmission link, using 9/125 single mode fibre for path lengths with path attenuation of 5-31 dB. This enables the use of space saving fibre optic cable for reliable transmission of digital video signals over lengths greater than can be provided with coaxial cable. The transmit / receive system specifications apply to all signal conditions, including the SMPTE 292M pathological test sequence.

The HDT-4611 transmitter features an input circuit with automatic cable equalisation for Belden 8281 (or equivalent) coaxial cable followed by a plug-in LASER transmitter.

The HDR-4611 receiver uses a plug-in APD detector preamplifier module, signal conditioning and a reclocking circuit for the 1.485 Gb/s data rate, or for 270 Mb/s SDI and ASI signals. Two in phase serial digital outputs are provided from the transmission link on the rear assembly.

On the HDT-4611 transmitter LED indicators on the front panel indicate the presence of signal, loss of laser power and presence of DC power. Relay contact outputs for remote indication will indicate failure of the laser operation, loss of input signal, and loss of power.

On the HDR-4611 receiver LED indicators on the front panel indicate PLL lock at 1.485Gb/s or 270 Mb/s operation, locked signal presence, optical input failure, and presence of DC power. Relay contact outputs for remote indication will indicate loss of signal, loss of optical input, and loss of power.

An optional SNMP (Simple Network Management Protocol) plug-in module is available, for each unit, for remote monitoring when used in conjunction with IRT's 4000 series frame fitted with SNMP capability.

The HDT-4611 and HDR-4611 are Eurocard modules designed to fit IRT's standard range of Eurocard frames[1] and may be used alongside any other of IRT's analogue or digital Eurocards.

[1] NOTE: For use with 1.485 Gb/s HD signals it is recommended that these modules be housed within an IRT 1RU or 4000 series 3RU frames only.

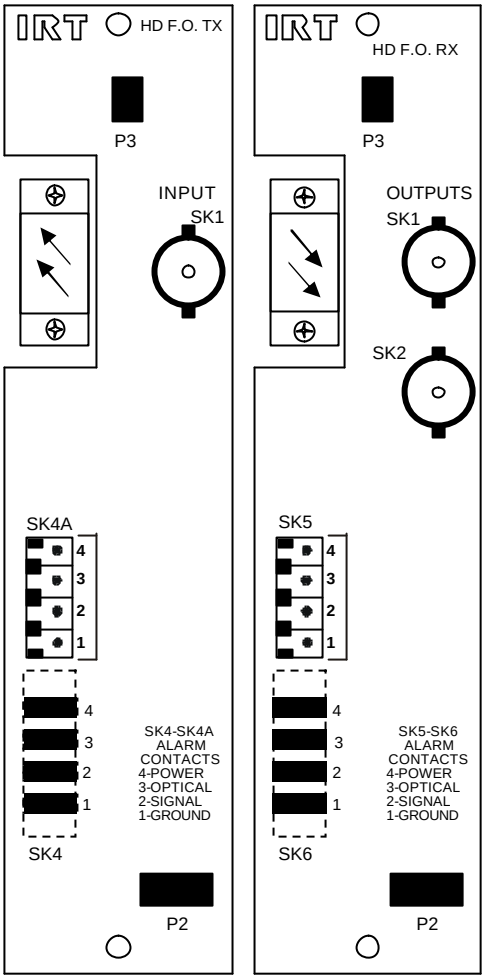
HDT-4611 / HDR-4611 Technical Specifications

HDT-4611 - Transmitter

Input impedance	75 Ω.
Input return loss	>15 dB 5 MHz to 1.5 GHz,
Input serial data signal	SMPTE/EBU 1.485 Gb/s or 270 Mb/s serial data (SDI or ASI).
Input circuit cable compensation	Automatic, up to 100 metres at 1.485 Gb/s and up to 250 metres at 270 Mb/s, for Belden 8281 or equivalent cable.
Input Connector	1, BNC on rear assembly.

HDR-4611 - Receiver

Number of outputs	2 data reclocked, AC coupled.
Output level	800 mV ±5% into 75 Ω.
Output impedance	75 Ω.
Output return loss	>15 dB 5 MHz to 1.5 GHz.
Residual Jitter	<0.2 UI at 1.485 Gb/s reclocked, <0.1 UI at 270 Mb/s reclocked.
Output Connector	2, BNC on rear assembly.



Optical

Optical path loss*	5 - 31 dB.
Optical fibre	Designed for use with 9/125 single mode fibre.
Optical wavelength (standard)	1310 nm ± 30 nm.
Optical connectors	SC/PC on bracket attached to module.
HDT-4611 optical output	0 dBm +0, -1 dB.
HDR-4611 optical input*	-31 dBm min, -5 dBm max.

Alarm/Control connections

Alarm outputs	Phoenix 4 pin terminal plug in block. Three relays energised in the normal condition to indicate loss of DC power, signal or laser power on the HDT-4611, or optical input low on the HDR-4611. Relay circuits are wired with contacts normally closed (or open) as set by a link on the circuit board.

Power requirement:

Voltage	28 Vac CT (14-0-14 Vac) or ±16 Vdc.
Consumption	HDT-4611 2.6 VA (90 mA), HDR-4611 3.7 VA (130 mA).

General:

Operating temperature		0 to 50° C ambient.
Mechanical		Suitable for mounting in IRT 19" rack chassis with input, output and power connections to the rear. For use with 1.485 Gb/s HD signals it is recommended that these modules be housed within an IRT 1RU or 4000 series 3RU frame only.
Size		6 HP x 3 RU Extended Eurocard (220 mm x 100 mm).
Weight		HDT-4611: 405g, HDR-4611: 410g (with rear assembly)
Finish	Front panel	Grey background, silk screened black lettering & red IRT logo.
	Rear assembly	Detachable PCB with connectors to Eurocard and external signals.
Standard accessories		Rear connector panel (supplied with module).
Optional accessories		SMU-4000 SNMP plug in module for use with 4000 series frame fitted with SNMP “Agent”.

NOTE: * 5 or 10dB optical attenuator must be used for HDR-4611 when optical path loss is less than 5dB.

Due to our policy of continuing development, these specifications are subject to change without notice.

Detailed specifications available from:

Manufacturer:

IRT Electronics Pty Ltd

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