

Features:

- **Transports 270 Mb/s signals, such as ASI, SDI, etc.**
- **Path lengths up to 31dB optical path loss using 9/125µm single mode fibre.**
- **Passes SMPTE 259M 270 Mb/s SDI pathological test sequence.**
- **LED indicators and external alarm contacts.**
- **Fibre, video and alarm connections at rear.**
- **Optional plug-in SNMP monitoring module.**
- **Eliminates ground loop problems.**

General:

The IRT DDT-4210 transmitter and DDR-4210 receiver are modules designed principally for use as a 270 Mb/s SMPTE/EBU serial digital video fibre optic transmission link, using 9/125µm single mode fibre, with optical paths losses up to 31dB.

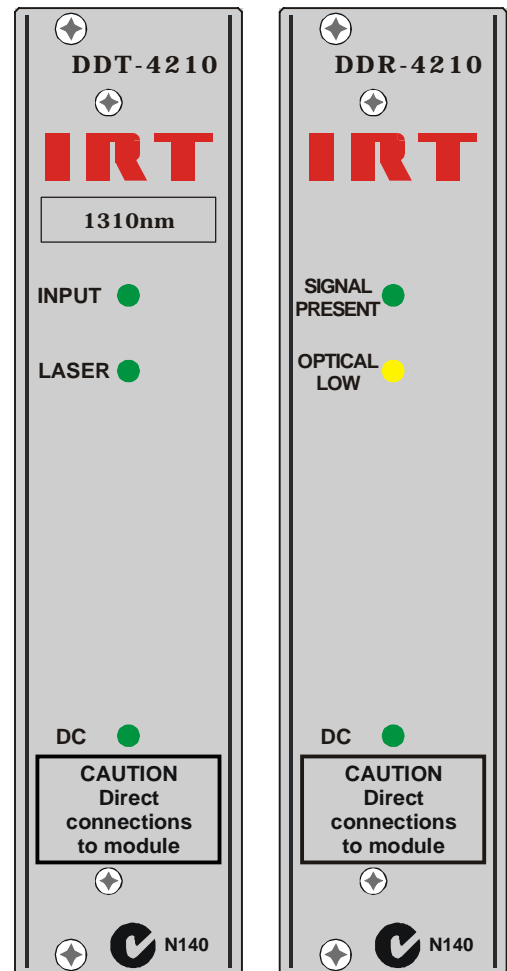
The transmit / receive system specifications apply to all signal conditions, including the SMPTE 259M pathological test sequence.

In addition, the link may be used for ASI transport streams for use with MPEG compressed video streams or other 270 Mb/s type data.

The DDC series of modules may be used to convert various data formats to ASI for transport over this link. See separate data sheets for details.

The transmitter features automatic input cable equalisation and a choice of plug-in LASER modules of various wavelengths (ordered separately).

LED indicators are provided for digital signal presence, DC power and LASER output power out of range.



The DDR-4210 receiver uses a PIN photodiode detector with signal conditioning and reclocking circuits. The data rate is factory set for 270 Mb/s operation. 360 Mb/s operation is available at time of ordering. Other data rates are also available on request.

Two serial digital outputs are provided. LED indicators are provided for digital signal presence and power.

Relay contact outputs are also provided for external use of alarm signals on both modules.

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 DDT-4210 and DDR-4210 are Eurocard modules designed to fit IRT's standard Eurocard frames as well as IRT's 4000 series frames for use with IRT's SNMP system and may be used alongside any other of IRT's analogue or digital Eurocards.

DDT-4210/DDR-4210 Technical Specifications

System performance

DDT-4210 - Transmitter

Signal input SMPTE/EBU 270 Mb/s (includes ASI & SDI).
360 Mb/s data rate available at time of ordering.
75 Ω >15 dB return loss to 360 MHz.

Cable compensation Automatic, better than 200 metres at 270 Mb/s
for Belden 8281 or equivalent cable.

Connector BNC on rear panel.

DDR-4210 - Receiver

Video outputs 2 x ASI/SDI, 0.8V \pm 10%.
75 Ω >15 dB return loss to 360 MHz.

Receiver reclocking Factory set for 270 Mb/s operation.
360 Mb/s data rate available at time of ordering.
(Other data rates available on request).

Output rise time <1.0 ns, (700 ps typically).

Residual jitter <200 ps at 270 Mb/s.

Connectors BNC on rear panel.

Optical

Optical path loss* 5 to 31 dB.

Optical fibre Designed for use with 9/125 single mode fibre.

Optical wavelength See laser sub-board ordering information.

Optical connectors SC/PC (standard).

DDT-4210 optical output With LASER sub-board fitted, 0 dBm typically.

Laser sub-board ordering information:

SOO-1300	1310 nm \pm 50 nm FP laser (SC/PC) - (standard).
SOO-1300/APC	1310 nm \pm 50 nm FP laser (SC/APC).
SOO-1310	1310 nm \pm 3 nm DFB laser (SC/PC).
SOO-1510	1510 nm \pm 3 nm DFB laser (SC/PC).
SOO-1530	1530 nm \pm 3 nm DFB laser (SC/PC).
SOO-1550	1550 nm \pm 3 nm DFB laser (SC/PC).
SOO-1570	1570 nm \pm 3 nm DFB laser (SC/PC).

DDR-4210 optical input PIN detector, -5 to -31 dBm input level.

Power requirements:

Voltage 28 Vac CT (14-0-14) or \pm 16 Vdc.

Consumption DDT-4210 2.8 VA, DDR-4210 3.0 VA

Indicators on DDT-4210 and DDR-4210:

Power LED (green) for +5V.

Serial digital signal present LED (green) for signal present.

Optical output fail LED (red) on DDT-4210 panel

Optical input low LED (yellow) on DDR-4210 panel.

General:

Operating temperature 0 to 50° C ambient.

Mechanical Suitable for mounting in IRT 19" rack chassis types with input, output and power connections to the rear.

Size 6 HP x 3U Extended Eurocard (220 mm x 100 mm).

Weight With rear assembly <410 gm for each module.

Front panel Grey background, black lettering & red IRT logo.

Rear assembly Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals.

Optional accessories SMU-4000 SNMP plug in module for use with 4000 series frame fitted with SNMP "Agent".

Note: * Optical attenuator recommended for DDR-4210 when optical path loss is less than 5dB (for pathological test signals – live video generally ok from 0dB).

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

Detailed specifications available from:

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