

270Mb/s / ASI / SDI 4 Channel MUX Fibre Link

FEATURES

- 270 Mb/s type signals, such as ASI and SDI, capability.
- External urgent and non-urgent alarms for system monitoring.
- Automatic cable equalisation for up to 200m on each input.
- Optional plug-in SNMP monitoring module.
- Maximum optical path loss of 32dB.

APPLICATIONS

- Multichannel digital with data on a single fibre.
- Maintain timing between related signals by ensuring same path transmission delay.
- Upgrade capacity of existing fibre.

GENERAL

The DDT-4220 accepts up to four 270 Mb/s input signals which may be ASI, SDI or a mixture of each type. The signals need not be phase or frequency synchronous.

The signals are time division multiplexed into a single 1.302 Gb/s stream and transmitted via single mode fibre to the DDR-4225 receiver, which performs the reverse operation and restores correct 270 Mb/s timing.

In addition to the four 270 Mb/s channels, a single RS422 channel is included for transmission of auxiliary data at rates of up to 9600 baud.

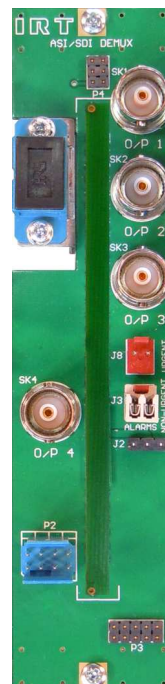
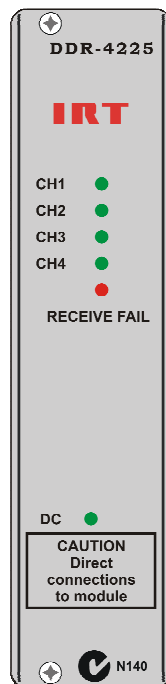
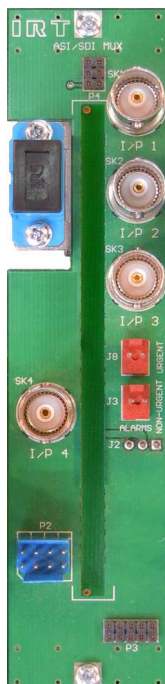
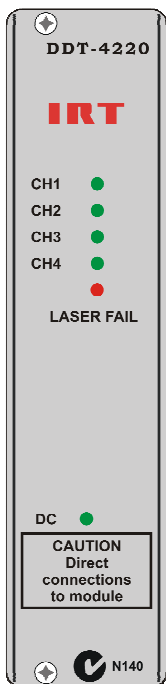
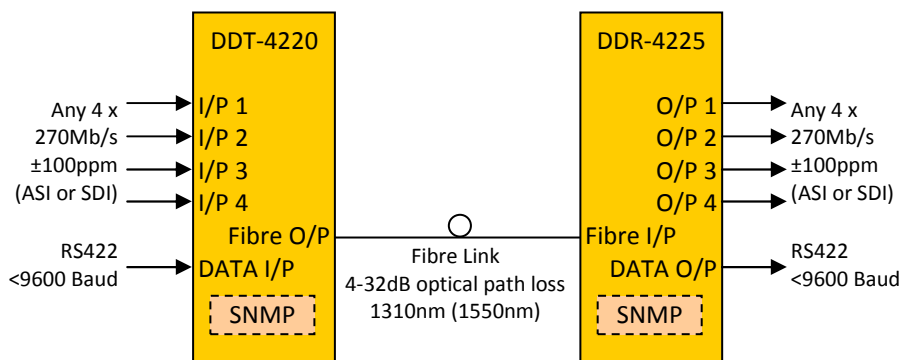
The DDT-4220/DDR-4225 optical system is primarily designed for use with a 9/125µm single mode fibre and will allow an optical path loss from 4dB up to 32dB.

An optional Simple Network Management Protocol (SNMP) plug-in module is available for remote monitoring of input and output status and alarm states.

The DDT-4220 transmitter comes available with a choice of standard 1310nm laser (order code DDT-4220/1300) or a DFB 1550nm laser (order code DDT-4220/1550). Other wavelengths are available on request. The DDR-4225 receiver is the same regardless of transmitter wavelength.

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

BLOCK DIAGRAM DDT-4220 & DDR-4225 SIGNAL PATH



TECHNICAL SPECIFICATIONS

DDT-4220:

Inputs:

Type	4 x 270 Mb/s \pm 100 ppm, 0.8 V _{p-p} ./ASI/SDI.
Equalisation	Automatic for up to 250 m of Belden 8281 or equivalent cable.
Format	Synchronous or asynchronous.
Connectors	BNC 75 Ω .

RS422:

Type	1 x 9600 baud, synchronous or asynchronous.
Connectors	HE 14/8 / matches DN 9.

Outputs:

Type	1 x 1.302 Gb/s optical (wavelength dependent on unit ordered).
Power level	0 dBm (1 mW) \pm 1 dB.
Connector	SC/PC.

Alarms:

Urgent	N/C relay for loss of power, TX lock error or LASER fail.
Non-urgent	N/C relay if no channels are present.

DDR-4225:

Input:

Type [†]	1 x 1.302 Gb/s optical.
Power Level [*]	-4 dBm to > - 32 dBm.
Connector	SC/PC.

Outputs:

Type	4 x 270 Mb/s \pm 100 ppm, 0.8 V _{p-p} ./ASI/SDI.
Format	synchronous or asynchronous.
Connectors	BNC 75 Ω .

RS422:

Type	1 x 9600 baud, synchronous or asynchronous.
Connectors	HE 14/8 / matches DN 9.

Alarms:

Urgent	N/C relay for loss of power, RX lock error or optical input fail.
Non-urgent	N/C relay if no channels are present.

Optical:

Optical path loss [*]	4 dB to 32 dB.
Optical fibre	Designed for use with 9/125 μ m single mode fibre.
Optical wavelength	1310nm or 1550nm. See ordering information below. Other wavelengths available on request.

Power requirement:

Voltage	28 Vac CT (14-0-14) or \pm 16 Vdc.
Consumption	DDT-4220 <10 VA, DDR-4225 <12.5 VA.

Other:

Temperature range	0 - 50° C ambient
Ordering Information	DDT-4220/1300 standard 1310 nm model; DDT-4220/1550 DFB 1550nm model.
Mechanical	Suitable for mounting in IRT 19" rack chassis with all connections at the rear.
Finish:	Grey background, black lettering & red IRT logo.
Front panel	
Rear assembly	Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals.
Dimensions	6 HP x 3 U x 220 mm IRT Eurocard.
Supplied accessories	Rear connector assembly including matching connector for switcher control.
Optional Accessories	SNMP plug-in module for use with 4000 series frame fitted with SNMP "Agent".

Note: * Optical attenuator must be used for DDR-4225 when optical path loss is less than 4 dB.
† Single mode tail on detector.