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IRT Eurocard
Type OFM-3241
Fibre Optic Multiplexer/Demultiplexer

Designed and manufactured in Australia

**IRT can be found on the Internet at:
<http://www.irtelectronics.com>**

IRT Eurocard
Type OFM-3241
Fibre optic Multiplexer/Demultiplexer
Instruction Book

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This instruction book applies to units later than S/N 0303001.

Operational Safety:

WARNING

Operation of electronic equipment involves the use of voltages and currents that may be dangerous to human life. Note that under certain conditions dangerous potentials may exist in some circuits when power controls are in the **OFF** position. Maintenance personnel should observe all safety regulations.

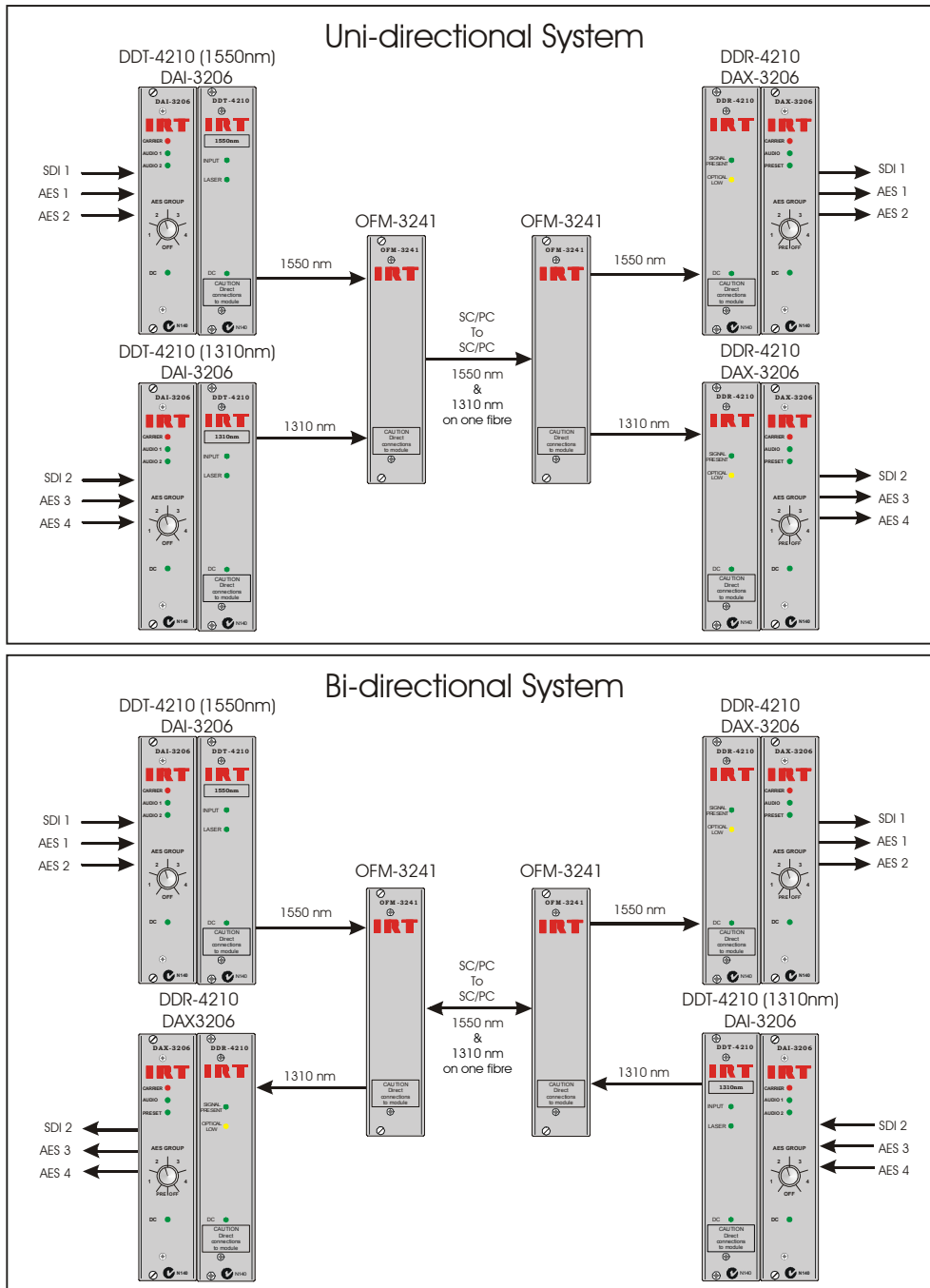
Do not make any adjustments inside equipment with power **ON** unless proper precautions are observed. All internal adjustments should only be made by suitably qualified personnel. All operational adjustments are available externally without the need for removing covers or use of extender cards.

IRT Eurocard Type OFM-3241 Fibre Optic Multiplexer/Demultiplexer

General Description

The OFM-3241 is an optical wavelength division multiplexer / demultiplexer (WDM) for combining or separating two optical signals of 1310nm and 1550nm wavelengths on the one fibre. Either uni-directional or bi-directional signals on the fibre can be accommodated using the same device.

The OFM-3241 is designed to mount in IRT's standard 1 RU frame and 4000 series frames.



The examples given above are to illustrate the principles involved. Additional audio channels may be added as required by linking more DAI & DAX-3206 modules. The OFM-3241 works equally as well with IRT's other range of fibre optic transmitters and receivers.

Technical Specifications

IRT Eurocard module Type OFM-3241

Type	WDM multiplexer / demultiplexer.
Wavelengths	1310 nm & 1550 nm \pm 20 nm.
Fibre	Single mode.
Connector type	SC/PC.
Insertion loss	< 0.5 dB @ 1550 nm. < 0.5 dB @ 1310 nm.
Isolation	> 20 dB.

Other

Temperature range	0 - 50° C ambient
Mechanical	Suitable for mounting in IRT 19" 1RU or 4000 series 3RU rack chassis with input and output connections on the rear panel
Finish	Front panel Rear assembly
Dimensions	Grey background, black lettering & red IRT logo Common connection mounted on bracket from main PCB. 6 HP x 3 U x 220 mm IRT Eurocard

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

Installation

Installation in frame or chassis:

Due to the rear panel being a part of the main card, the OFM-3241 will only fit within IRT's 1RU or 4000 series 3RU frames. To install, slide the OFM-3241 in through the front of the frame on the frame's Eurocard slide rails. With the 1RU frame it may be necessary to remove the top cover in order to assist the rear of the OFM-3241 past an internal bracket. On either type of frame ensure that the rear blanking plate of the frame has been removed before inserting the card.

The OFM-3241 is a passive device and does not need any power to be connected.

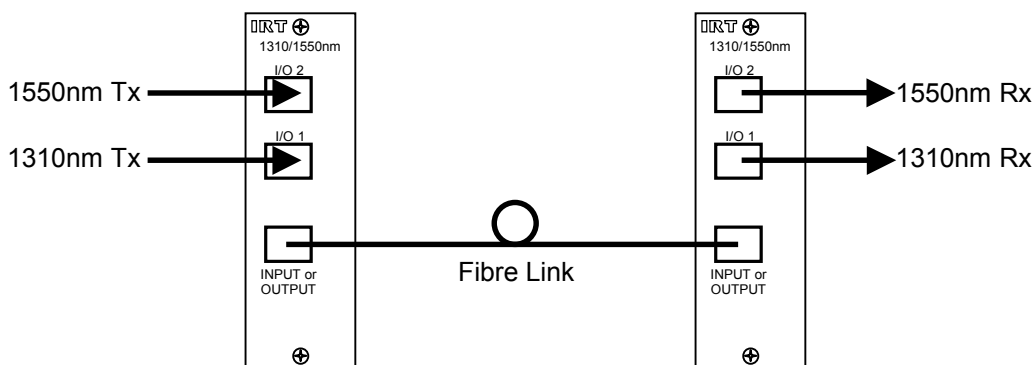
Fibre Connections:

The OFM-3241 is used for combining 1310nm and 1550nm wavelengths for either uni-directional or bi-directional signal transmissions on a single single-mode optic fibre. Two units are required – one at each end of the fibre link. An example of which is shown in the diagrams in the *General Description* section of this manual. The same principle applies to any other of IRT's optical fibre transmitter/receivers fitted with the appropriate lasers. It is also possible to mix the types of fibre transmitter/receivers, just so long as one set operates at 1310nm and the other at 1550nm.

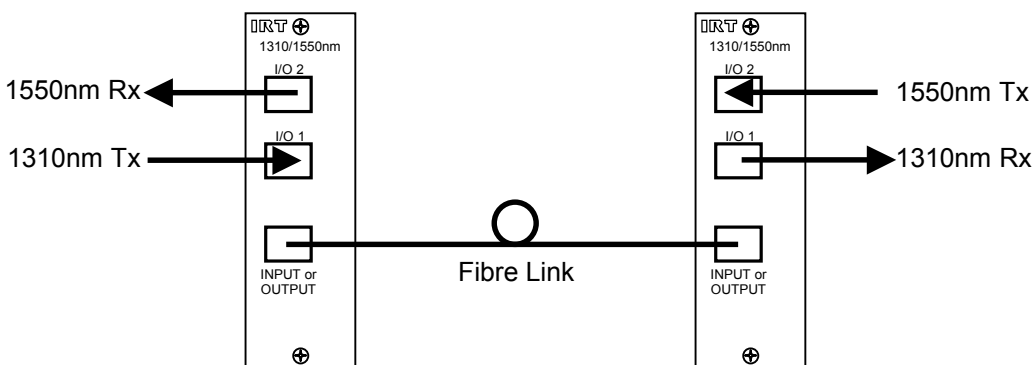
Standard fibre connections are SC/PC type (blue). The fibre link plugs into the lower "Input or Output" port on the rear of the unit. At the transmit end a laser transmitter with a wavelength of 1310nm plugs into the I/O 1 port. At the receive end the receiver corresponding to the 1310nm transmitter plugs into the I/O 1 port of the second OFM-3241. Likewise a laser transmitter with a wavelength of 1550nm plugs into the I/O 2 port at its transmit end, and its corresponding receiver plugs into the I/O 2 port at the receive end.

For uni-directional signal transmission the two laser transmitters are at one end of the link and the two receivers are at the other end of the link. For bi-directional signal transmission there is a laser transmitter at each end of the link and their corresponding receivers at the opposite ends of the link.

Uni-Directional setup:

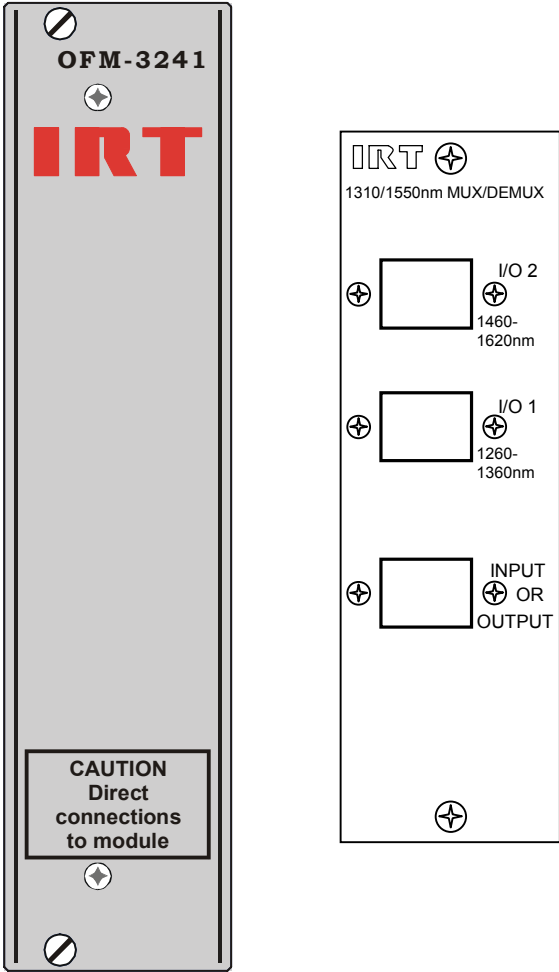


Bi-Directional setup:



Front & rear panel connector diagrams

The following front panel and rear assembly drawings are not to scale and are intended to show connection order and approximate layout only.



Maintenance & Storage

Maintenance:

No regular maintenance is required.

Care however should be taken to ensure that all connectors are kept clean and free from contamination of any kind. This is especially important in fibre optic equipment where cleanliness of optical connections is critical to performance.

Storage:

If the equipment is not to be used for an extended period, it is recommended the whole unit be placed in a sealed plastic bag to prevent dust contamination. In areas of high humidity a suitably sized bag of silica gel should be included to deter corrosion.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Warranty & Service

Equipment is covered by a limited warranty period of three years from date of first delivery unless contrary conditions apply under a particular contract of supply. For situations when “**No Fault Found**” for repairs, a minimum charge of 1 hour’s labour, at IRT’s current labour charge rate, will apply, whether the equipment is within the warranty period or not.

Equipment warranty is limited to faults attributable to defects in original design or manufacture. Warranty on components shall be extended by IRT only to the extent obtainable from the component supplier.

Equipment return:

Before arranging service, ensure that the fault is in the unit to be serviced and not in associated equipment. If possible, confirm this by substitution.

Before returning equipment contact should be made with IRT or your local agent to determine whether the equipment can be serviced in the field or should be returned for repair.

The equipment should be properly packed for return observing antistatic procedures.

The following information should accompany the unit to be returned:

1. A fault report should be included indicating the nature of the fault
2. The operating conditions under which the fault initially occurred.
3. Any additional information, which may be of assistance in fault location and remedy.
4. A contact name and telephone and fax numbers.
5. Details of payment method for items not covered by warranty.
6. Full return address.
7. For situations when “**No Fault Found**” for repairs, a minimum charge of 1 hour’s labour will apply, whether the equipment is within the warranty period or not. Contact IRT for current hourly rate.

Please note that all freight charges are the responsibility of the customer.

The equipment should be returned **to the agent who originally supplied the equipment** or, where this is not possible, to IRT direct as follows.

Equipment Service
IRT Electronics Pty Ltd
26 Hotham Parade
ARTARMON
N.S.W. 2064
AUSTRALIA

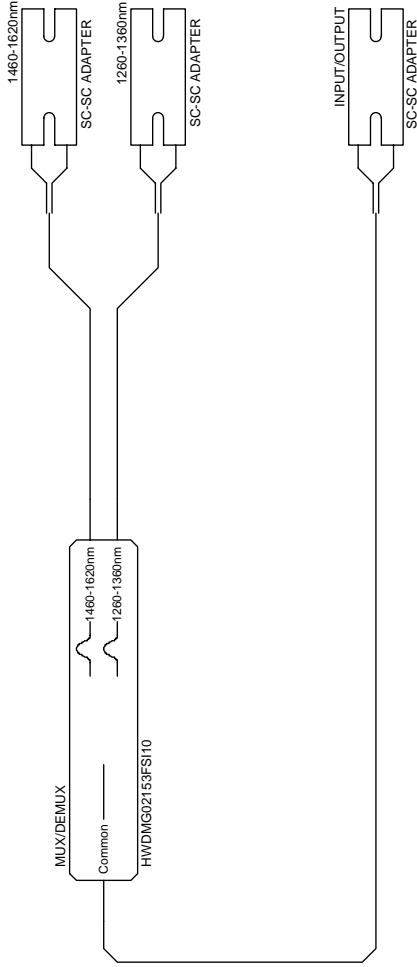
Phone: 61 2 9439 3744

Fax: 61 2 9439 7439

Email: service@irtelectronics.com

Drawing List Index

Drawing #	Sheet #	Description
804192		OFM-3241 schematic diagram



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 Revision: 1
 Date: 16-Oct-2007

- 1 03-11-2004
- 2 19-12-2006

IRT	
SIZE A3	Title 1310nm-1550nm MUX/DEMUX
SCALE N.T.S.	Drawing No. 804192
Sheet 1 of 1	
Date: 16-Oct-2007	