Triple Passive Splitter

IRT
ELECTRONICS

User Manual

Triple Passive Splitter

Revision History:

Revision	Date	By	Change Description	Applicable to:
00	21/10/2013	AL	Original Issue.	S/N ≥ 1310001

Table of Contents:

This instruction book applies to serial numbers ≥ 1310001.

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.

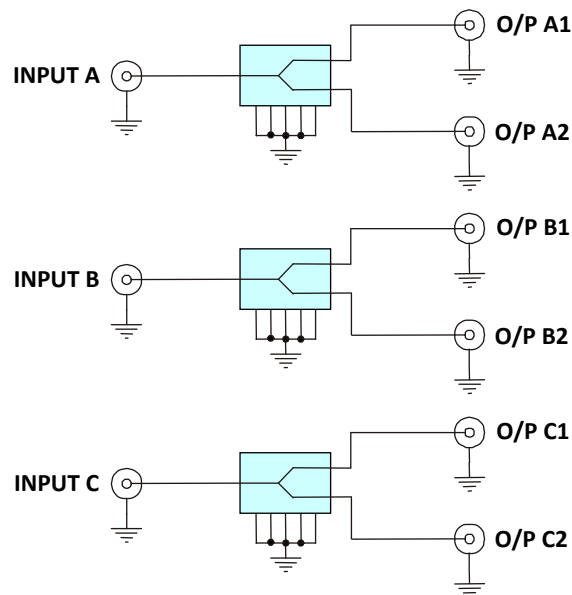## openGear® INTRODUCTION

Developed by Ross Video, openGear® is a standard where various manufacturers can design their equipment to fit a common frame allowing the end user to mix and match the various openGear® cards available in the market place together in one frame. This allows a single frame to be used instead of multiple different vendor's frames that each would otherwise be using their own proprietary standard.

A simple to use monitoring and control software called DashBoard™ is a free program downloadable from the openGear® website (www.opengear.tv) that allows the user to remotely monitor and control an openGear® type card fitted within an openGear® frame that meets the openGear® standard for DashBoard™ control. A link is also supplied via the IRT Electronics website (www.irtelectronics.com) under the openGear® navigation section.

IRT Electronics' openGear® cards are designed to meet the openGear® standard for mounting within the openGear® OG3-FR frame and its earlier version DFR-8300 frame, and is fully compliant with DashBoard™ control (DashBoard™ control not applicable to IRT-6100-DDF).

The openGear® frame manual, DashBoard™ control software and information regarding the frame's power supplies, controller card and frame accessories are available for download at the openGear® website.

The term openGear® is a registered trade mark of Ross Video Limited.

DashBoard software Control™ is a trade mark of Ross Video Limited.

GENERAL DESCRIPTION

BLOCK DIAGRAM IRT-6100-DDF SIGNAL PATH

INPUT A   O/P A1   O/P A2

INPUT B   O/P B1   O/P B2

INPUT C   O/P C1   O/P C2

The IRT-6100-DDF is a triple channel 2 way RF splitter in a standard 2 RU openGear format. It is primarily intended for use as a passive splitter for splitting data streams.

Each of the RF splitters is rated for 250 kHz to 300 MHz operation and is suitable for 34, 45 or 270 Mb/s data rates.

The IRT-6100-DDF is a passive unit that requires no power to operate.

The IRT-6100-DDF comes as a rear connector panel comprising of 75Ω BNC input and output connectors.

The IRT-6100-DDF is designed to fit the openGear® standard 2RU frames which allow a mixture of cards from various manufacturers to be mounted within the same frame.

Standard features:

- **Triple 2 way RF splitters.**
- **Operates in the frequency range of 0.25 MHz to 300 MHz.**
- **Suitable for 34/45/270 Mb/s data rates.**
- **No power required – totally passive.Connections made by BNC connectors.**
- **For mounting in an openGear® frame.**

TECHNICAL SPECIFICATIONS

Input / Output:

Number	3 (one input & two outputs per channel)
Type	75 Ohm.
Format	Passive 2 way split.

Performance:

Frequency range	0.25 to 300 MHz.

Isolation

0.25-2.5 MHz	> 15 dB;
2.5-150 MHz	> 15 dB;
150-300 MHz	> 15 dB.

Insertion loss above 3 dB

0.25-2.5 MHz	< 0.75 dB;
2.5-150 MHz	< 2.0 dB;
150-300 MHz	< 2.0 dB.

Phase unbalance

0.25-2.5 MHz	< 2.0°;
2.5-150 MHz	< 3.0°;
150-300 MHz	< 5.0°.

Amplitude unbalance

0.25-2.5 MHz	< 0.15 dB;
2.5-150 MHz	< 0.2 dB;
150-300 MHz	< 0.3 dB.

Maximum power dissipation	1 W.

Connectors: BNC.

Power requirement: Nil – totally passive.

Other:

Temperature range	0 - 50° C ambient.
Mechanical	Suitable for mounting in an openGear® 2RU rack chassis.
Dimensions (openGear® standard)	33.6 mm x 2U.

Ordering	**IRT-6100-DDF**	IRT-6100-DDF, rear connector assembly.

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INSTALLATION

Installation in openGear® frame:

See details in separate manual downloadable from the openGear® website (www.opengear.tv).

The IRT-6100-DDF consists of only a rear assembly and is fitted to the back of an openGear® frame. There is no main card to slot into the front section of the frame.

Signal Inputs & Outputs:

Inputs and Outputs are 75 Ω BNC type for connection with high quality 75 Ω coaxial cable. If one output of a splitter is not used, it should be terminated via a 75 Ω BNC terminator.

Rear Assembly Layout
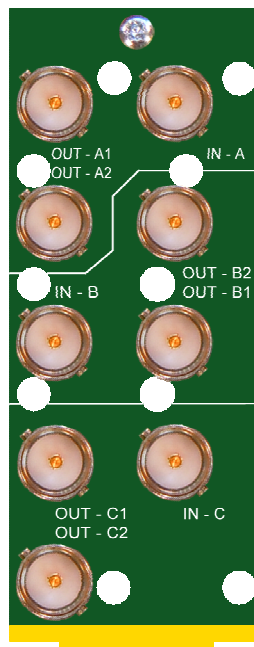
Standard
Rear Assembly
(IRT-6100-DDF)

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 directly. Details of IRT's direct address can be found at IRT Electronics' website.

Web address: www.irtelectronics.com

Email: sales@irtelectronics.com