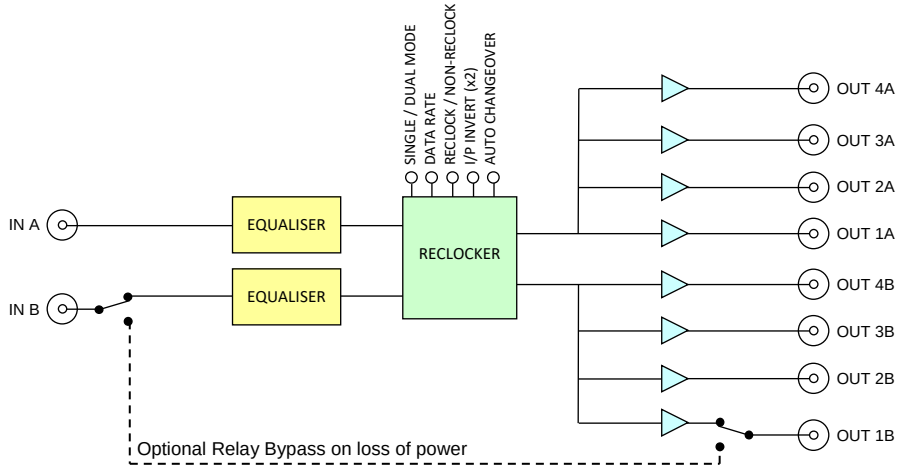
IRT-6010-DDA

Single 1 In, 8 Out / Dual 1 In, 4 Out 3G/HD/SD/ASI Reclocking/Non-Reclocking Distribution Amplifier

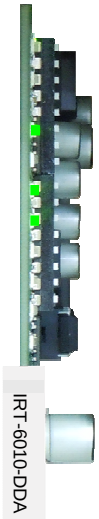
FEATURES

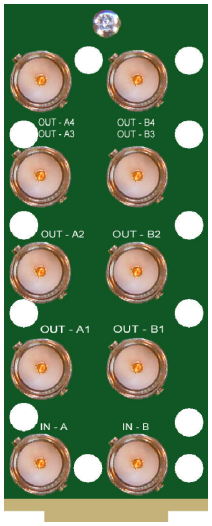
- **Switch selectable for single 1 in, 8 out or dual 1 in, 4 out distribution amplifier operation.**
- **In-phase reclocked / non-reclocked outputs on each amplifier.**
- **Selectable for either 3G/HD/SD-SDI or ASI applications.**
- **Automatic output muting on no input.**
- **Front edge indicators provide monitoring of presence of inputs and lock status.**
- **Automatic changeover to second input on loss of primary input (selectable).**
- **Optional relay bypass on loss of power.**
- **DashBoard™ software monitoring and control.**

BLOCK DIAGRAM IRT-6010-DDA SIGNAL PATH

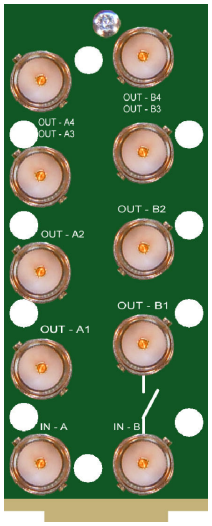


In Dual 1 In, 4 Out mode:
IN 1 & IN 2 independently either 3G/HD/SD-SDI or ASI





Standard
Rear Assembly
(IRT-6010-ZDA)



Optional
Relay Bypass Rear Assembly
(IRT-6010RL-ZDA)

GENERAL

The IRT-6010-DDA serial digital data distribution amplifier provides the user with a single module to cover a wide range of distribution and monitoring functions for 3G/HD/ SD-SDI or ASI signals.

Two quad output reclocking / non-reclocking distribution amplifiers are provided on the one card. On board switch settings allow either of the inputs to feed all outputs to create a one in, eight out distribution amplifier.

Where non-reclocking is required, on-board switch settings select between reclocking and non-reclocking modes.

The IRT-6010-DDA will automatically reclock to match the input at either 3G-SDI, HD-SDI, SD-SDI or ASI rates, or can be fixed to operate at any one of these rates. Both sides of the IRT-6010-DDA can be run independently allowing a mixture of signal types to be used.

The IRT-6010-DDA is also configurable for automatic changeover from one input to the other on loss of input signal allowing for an input Main/Standby scenario.

Due to the nature of ASI signals being phase sensitive, signal inversion is also possible for situations where an inverted ASI signal needs to be corrected.

Front edge LEDs indicate when input signals are present and whether the outputs are locked to the inputs.

An optional relay bypass rear assembly is available to switch one of the Inputs to one Output in the event of a power failure.

The IRT-6010-DDA 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.

The DashBoard™ control software is available as a free download.

IRT-6010-DDA

TECHNICAL SPECIFICATIONS

Inputs:

Number		2.
Impedance		75 Ω, BNC.
Type		3G-SDI, HD-SDI, SD-SDI or ASI (to SMPTE 424M, 292M and 259M-C standards; and DVB-ASI standard).
Return loss		15dB 5 MHz to 1.485 GHz, 10dB from 1.485 GHz to 2.97 GHz[1].
Equalisation	**Automatic**	80 m at 3G-SDI rate with Belden 1694A[2]; 110 m at HD-SDI rate with Belden 1694[2,3], 80 m with Belden 8281[2,3]; 400 m at SD-SDI/ASI rate with Belden 1694[3], 300 m with Belden 8281[3,4].

Outputs:

Number	8 (1 in, 8 out; or (2x) 2 in, 4 out).
Type	Reclocked or non-reclocked, switch selectable.
Level	800 mV ± 10%.
Impedance	75 Ω, BNC.
Return loss	15dB 5 MHz to 1.485 GHz, 10dB from 1.485 GHz to 2.97 GHz[1].

Performance:

Reclocking		Automatic or selectable for 3G-SDI, HD-SDI or SD-SDI / ASI operation.
Rise Time	**3G/HD**	< 135 ps at 2.97 Gb/s and 1.485 Gb/s;
	SD	> 0.4 ns and < 1.5 ns at 270 Mb/s.
Intrinsic Jitter		< 0.3 UI at 2.97 Gb/s reclocked; < 0.2 UI at 1.485 Gb/s reclocked; < 0.1 UI at 270 Mb/s reclocked.

Power Requirements:

Voltage	+ 12 Vdc.
Power consumption	< 6VA.

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 x 325 mm.
Supplied accessories	Rear connector assembly.
Optional accessories	IRT-6010RL-ZDA relay bypass rear connector assembly.

Ordering	**IRT-6010-DDA**	IRT-6010-DDA, programmed with DashBoard™ control;
	IRT-6010RL-ZDA	Optional relay bypass rear assembly suitable for 3G-SDI[1], HD-SDI and SD-SDI/ASI signals.

	NOTE 1	Return loss reduced by a couple of dB at 3G rate with optional bypass relay.
	2	Reduces to ~ 50m with optional bypass relay rear assembly.
	3	If two inputs are being inputted, cable equalisation is limited to that of the higher rate.
	4	Reduces to ~ 70m when SW1-4 (I/P A), SW2-4 (I/P B) is ON.