Dual 1 In, 3 Out HD/SD Digital Reclocking Distribution Amplifier Type HDA-4521

BLOCK DIAGRAM HDA-4521 SIGNAL PATH
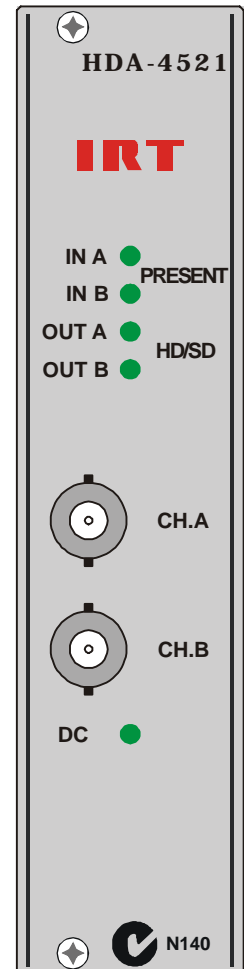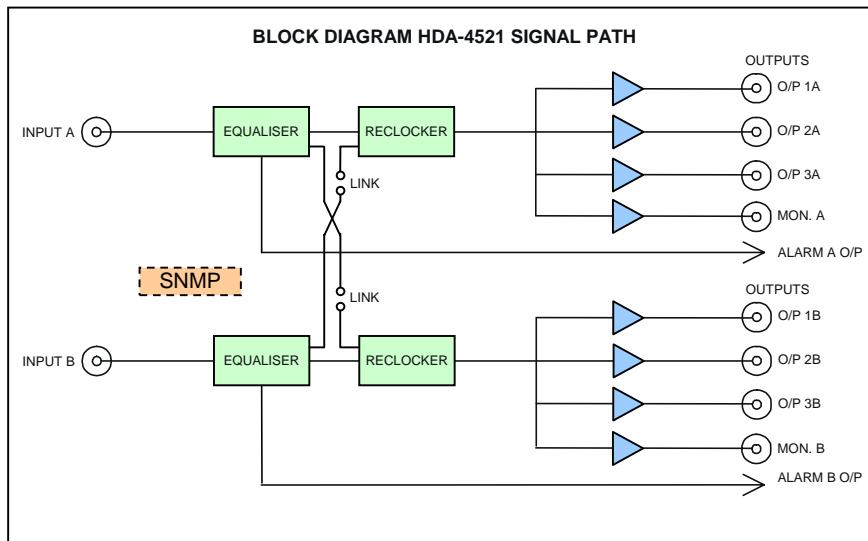
Features:

- **3 non inverting outputs on each amplifier.**
- **Link selectable for 1 in, 6 out single distribution amplifier operation.**
- **Automatic reclocking of High Definition or Standard Definition digital signals.**
- **Input equalisation > 100 m for HD, > 250 m for SD.**
- **Automatic output muting on no input.**
- **Front panel monitoring outputs, signal presence LEDs and external alarm contacts.**
- **Optional plug-in SNMP monitoring module.**

General:

The HDA-4521 HD/SD dual serial digital reclocking video distribution amplifier provides the user with a single standard module to cover a wide range of distribution and monitoring functions for High Definition (HD) and/or Standard Definition (SD) digital signals. Two triple output reclocking distribution amplifiers are provided on the one card.

As well as accepting HD or SD signals, the HDA-4521 will also accept ASI signals. To provide for the polarity sensitive nature of ASI signals, all outputs of the HDA-4521 are in phase with the inputs.

Serial digital signals suffer severe deterioration over relatively short cable distances. This is especially so with the HD high data rate. The HDA-4521 provides a means of extending the working distances that can be achieved by equalising and reclocking the data mid route.

The HDA-4521 will automatically reclock either 1.485 Gb/s HD signals or lower rate 270Mb/s SD signals. Both sides of the HDA-4521 can be run independently allowing a mixture of signal types to be used.

On board link settings allow either of the inputs to feed all outputs to create a one in, six out distribution amplifier.

Front panel LEDs indicate when an input signal is present and whether the output is an HD or SD type.

Separate alarm outputs switch to ground for indication of loss of input signal or loss of power.

An optional SNMP (Simple Network Management Protocol) plug in module is available for remote monitoring and control when used in conjunction with IRT's 4000 series frame fitted with SNMP capability. Extra features are available via SNMP such as automatic switching on loss of one input to the other input.

The HDA-4521 is designed to fit IRT's 4000 series 3RU frame for use with IRT's SNMP system as well as being suitable with IRT's 1000 series 1RU Eurocard frames and may be used alongside any other of IRT's Eurocards.

HDA-4521 Technical Specifications

Input:
Number   2.

Type   1.485 Gb/s HD, or 270 Mb/s SD.
(Non HD/SD rates possible with optional plug-in SNMP module installed and run in 'bypass' reclocker mode).

Impedance   75 Ohm.

Return loss   >15 dB 5 MHz to 1.485 GHz.

Equalisation   Automatic, >100 metres (typically 130m) at 1.485 Gb/s, > 250 metres (typically 300m) at 270 Mb/s for Belden 8281 or equivalent cable.
(reduces to approx. 70m at 1.485 Gb/s and 270 Mb/s when LK3 (I/P A), LK4 (I/P B) is closed).

Outputs:
Number   3 per input + Front Monitor.

Signal level   800 mV ± 10%

Impedance   75 Ohm.

Return loss   >15 dB 5 MHz to 1.485 GHz.

DC offset   Nil.

Alarms:
Signal Loss on either channel or power failure   Switch to ground via FET transistor.

Connectors: BNC.

Indicators:
Power   LED (green) for +5 Vdc.

Signal present   LED (green) when signal present for each input.

Signal type   HD   LED (green);

           SD   LED (orange).

Power requirement:
Voltage   28 Vac CT (14-0-14) or ±16 Vdc

Consumption   5 VA

General:
Temperature range   0 - 50° C ambient

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

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

Finish: Front panel   Grey background, with black lettering & red IRT logo

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

Supplied accessories   Rear connector assembly with matching connector for alarm outputs.
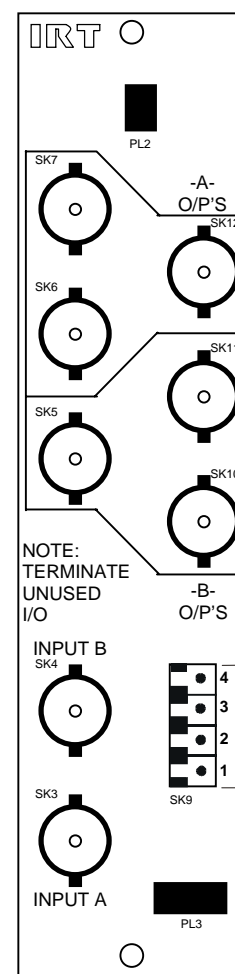
Due to our policy of continuing development, these specifications are subject to change without notice.

Detailed specifications available from:

Manufacturer:	Local Agent:	IRT can be found on the Internet at:
IRT Electronics Pty Ltd		**http://www.irtelectronics.com**

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