

3G/HD/SD-SDI, ASI, G.703, Video, Audio Relay Changeover Switch

FEATURES

- One video and two audio changeover switches in one package.
- Video path suitable for 3G/HD/SD-SDI, Analogue video, ASI, G703 signals @ 2, 8, 34, 45, 144, 155 Mb/s, and unbalanced AES.
- Audio path suitable for 2 balanced, or 4 unbalanced, audio or data signals, and balanced AES.
- Married or independent operation.
- Momentary Set/Reset control.
- No path change on power fail (or board removal – video only).
- Local or remote control.
- SNMP monitoring and control of module.

GENERAL

The AMS-4172 consists of one “video” and two “balanced audio” switches arranged as a changeover set with two inputs and two outputs. No terminations are provided on the board allowing the switcher to be used in a wide variety of applications and with signals of various types and impedances.

The “video” path uses enhanced performance relays to provide switching capabilities for high-speed data signals up to 2.97 Gb/s and may be used with analogue video, 3G/HD/SD/ASI or G.703 data signals.

The “audio” path may be used for balanced or unbalanced audio or control signals (RS232, RS422, RS485 etc).

The magnetic latching characteristic of the high performance relays allows momentary control and also provides for no change of path during power loss.

The AMS-4172 is ideally suited to applications where a simple choice between two inputs or outputs is required and may be easily driven by detector circuits for automatic path selection.

Local switching is possible using front panel push button switches. Remote switching is possible using external normally open or normally closed alarms.

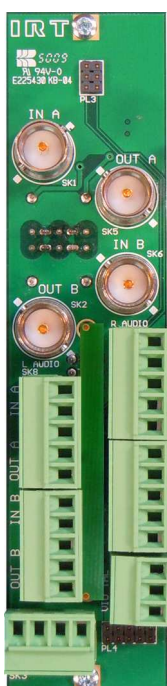
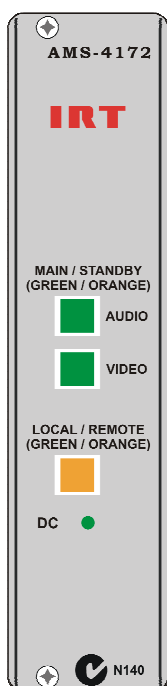
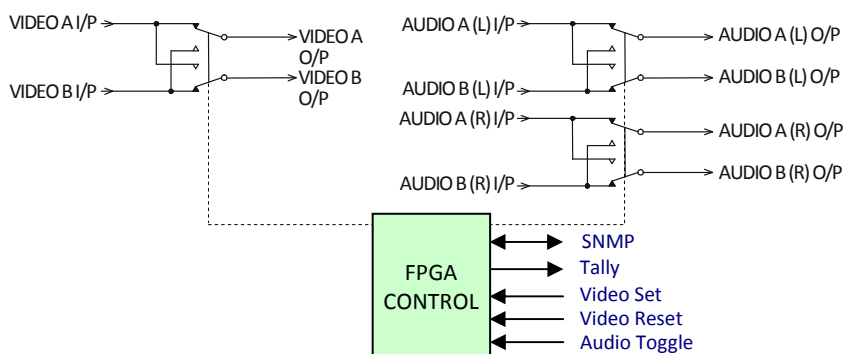
Front panel switches use a small delay to avoid accidental switching if bumped. After a period of a few minutes, the AMS-4172 automatically switches back into remote mode.

Remote indication of tally status is provided for integration into central alarm and monitoring systems.

SNMP (Simple Network Management Protocol) is available for monitoring and control when used in an IRT frame fitted with SNMP capability.

The AMS-4172 is designed to fit IRT’s 1RU and 4000 series 3RU Eurocard frames and may be used alongside any other of IRT’s analogue or digital Eurocards.

BLOCK DIAGRAM AMS-4172 SIGNAL PATH



TECHNICAL SPECIFICATIONS

Video Signal path:

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|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Signal types | 3G-SDI/HD-SDI/SD-SDI/ASI/G.703/Video/unbalanced AES. |
| Impedance | Non-terminating, designed for 75 Ω use. |
| Switching characteristic | Magnetic latching 4 port changeover relay. |
| Video crosstalk between channels | < -75 dB to 10 MHz (measured input terminated by 75 Ω); < -45 dB to 270 MHz; < -40 dB to 1.5 GHz; < -25 dB to 3.0 GHz. |
| Frequency response | +0/-1.5 dB 0 Hz to 3.0 GHz. |

Audio/Low speed Data:

| | |
|------------------------|-------------------------------------------------------|
| Audio Crosstalk | < -90 dB (20 Hz - 20 kHz, input terminated by 600 Ω). |
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Control:

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| Mode | Momentary ground or open circuit, switch selectable. |
| Gnd | Pin 1. |
| Audio Toggle | Pin 2 (Standby / Main). |
| Video Reset | Pin 3 (Main). |
| Video Set | Pin 4 (Standby). |

NOTE: Separate Audio & Video controls, or Audio follows Video, switch selectable.
Non-momentary contacts required in Toggle modes.

| | |
|-----------------------------|-----------------------------------------------------------------------------------------------|
| Front panel switches | Momentary illuminated push button. Automatic remote default setting after several minutes. |
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| | |
|--------------------|------------------------------------------------------------|
| Tally | Switch to Ground – Main; Switch to Open Circuit - Standby. |
| Gnd | Pin 1. |
| Video Tally | Pin 2. |
| Audio Tally | Pin 3. |

Connectors:

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|----------------|--------------------------------------|
| Video | BNC. |
| Audio | 5 pin Phoenix pluggable screw block. |
| Control | 4 pin Phoenix pluggable screw block. |
| Tally | 3 pin Phoenix pluggable screw block. |

Relay:

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| Contact rating | 30 Vdc – 0.5 A. |
|-----------------------|-----------------|

Power requirements:

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|--------------------------|----------------------------------|
| Volatge | 28 Vac CT (14-0-14) or ± 16 Vdc. |
| Power consumption | < 1.5 VA. |

Other:

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|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 (Note: Not compatible with pre-4000 series 3RU frames). |
| 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 with matching connectors for control input and tally outputs. |

NOTE: **Main:** IN A to OUT A, IN B to OUT B;
Standby: IN A to OUT B, IN B to OUT A.