

## E3/DS3 G.703 Data Distribution Amplifier

### FEATURES

- G.703 compliant.
- For either E3 or DS3 G.703 data rates.
- Adaptive cable input equalisation.
- Data regeneration.
- Front panel monitoring facility.
- Protection switching facility.
- External alarms and bypass.
- Redundant pair operation capability.
- Optional SNMP capability.

### GENERAL

The DDA-4301 is a data distribution amplifier that operates in accordance with the G.703 specification. Either E3 (34.368 Mb/s) or DS3 (44.736 Mb/s unframed or 44.210 Mb/s framed) data rates are possible by an on board switch selector.

The DDA-4301 incorporates a protection facility for switching to signals from a standby module when a fault is detected.

Three outputs are provided at the rear of the module with an additional output for monitoring purposes on the front panel. The primary output is controlled by relays to provide a bypass signal from the input during a power failure.

On board switch setting allows an Alarm Indication Signal (AIS) detected in the data stream to generate a changeover request for a companion unit.

On loss of the input, the output can be set to give either no signal or an AIS signal output.

Indicators are provided on the front panel for:

- DC power
- Data loss
- AIS detect
- Module in service
- Module in standby

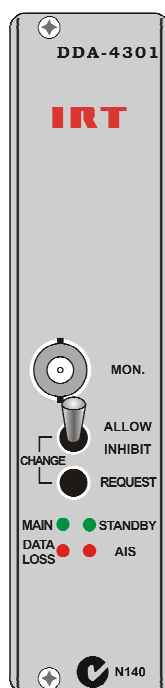
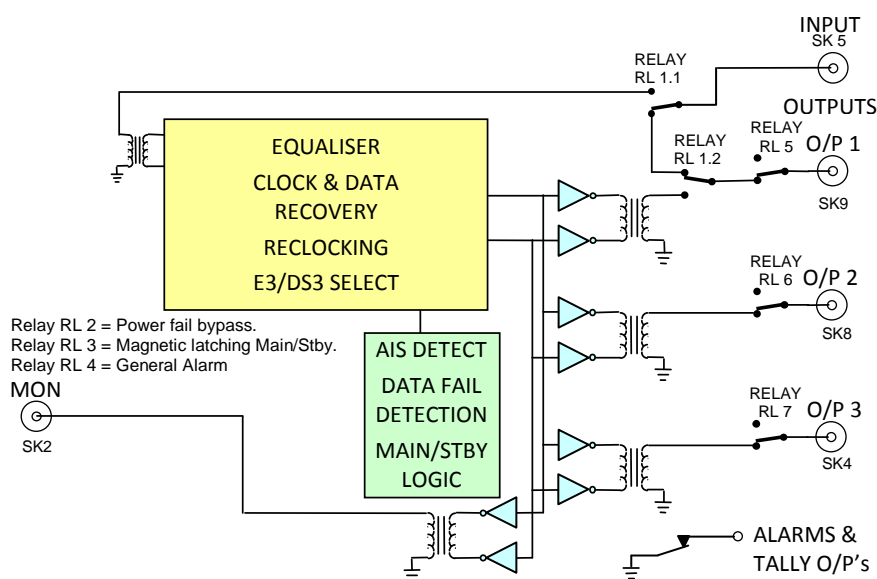
External alarm signals are also available on the rear of the module.

Changeover-inhibit and changeover-request switches are provided on the front panel for use where modules are linked in pairs for redundancy.

For this configuration, a special double width rear assembly (type ZDA-4300RH) is available to link the signal and logic sections of two modules.

Monitoring via a simple network management protocol (SNMP) is optionally possible when fitted with a plug-in SNMP board and run in an IRT 4000 series frame fitted with SNMP capability.

**BLOCK DIAGRAM DDA-4301 SIGNAL PATH**



## TECHNICAL SPECIFICATIONS

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### Data:

Generally in accord with CCITT G.703 specifications.

### Input:

**Type** Transformer coupled.  
**Impedance** 75  $\Omega$  terminated.  
**Equalisation** Automatic for up to 250 m of Belden 8281 equivalent.

### Outputs:

**Type** Transformer coupled.  
**Number** 3 switched, regenerated, reclocked outputs located on rear connection assembly and one located on front panel.  
**Impedance** 75  $\Omega$  source terminated.

### Electrical characteristics:

**Data rate** E3 (34.368 Mb/s) or  
 DS3 (44.736 Mb/s unframed, 44.210 Mb/s framed)  
 - Switch selectable.

**Other** See G.703 specification for selected data rate.

### Controls & alarms:

DC power.  
 Data loss.  
 AIS detect.  
 Module in service.  
 Module in standby.  
 Bypass.  
 General alarm.  
 Changeover request.

### Connectors:

**Data** BNC.  
**Alarm** Krone LSA plus.

### Other:

**Power requirements** 28 Vac CT (14-0-14) or  $\pm 16$  Vdc.  
**Temperature range** 0 - 50° C ambient.  
**Mechanical** Suitable for mounting in IRT 19" Eurocard rack chassis with input output connections on the rear panel.  
**Finish** **Front panel** Grey background, black lettering & red IRT logo.  
**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.  
**Standard accessories** DDA-4301 rear connector assembly.  
**Optional accessories** ZDA-4300RH double rear assembly, for handshake connection of two DDA-4301's.