

Gigabit Ethernet to ASI Network Interface Adapter

**FEATURES**

- Ethernet to ASI / ASI to Ethernet conversion.
- Ethernet port automatically set for 100 Base-T or 1000 Base-T operation.
- Automatic MDI/MDI-X port.
- Selectable ASI rates between 1 Mb/s and 213 Mb/s.

**GENERAL**

The MEM-4552 acts as a gateway between an Ethernet network and an ASI environment.

The MEM-4552 generates a compliant DVB ASI transport stream, with a settable Program Number identifier, at a fixed settable data rate. When Ethernet data is available to send it is encapsulated into ASI packets. When there is no Ethernet data available, NULL packets are used to stuff the ASI stream to the selected rate.

On the receive side packets containing Ethernet data are extracted from the ASI stream by reference to the assigned Program Number.

The Ethernet port is set up automatically to accommodate most network environments. The ASI output rate is SNMP selectable to operate at a payload data rate of between 1 Mb/s and 213 Mb/s.

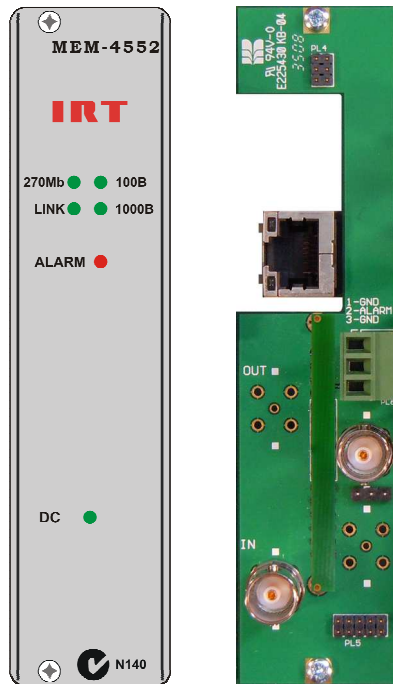
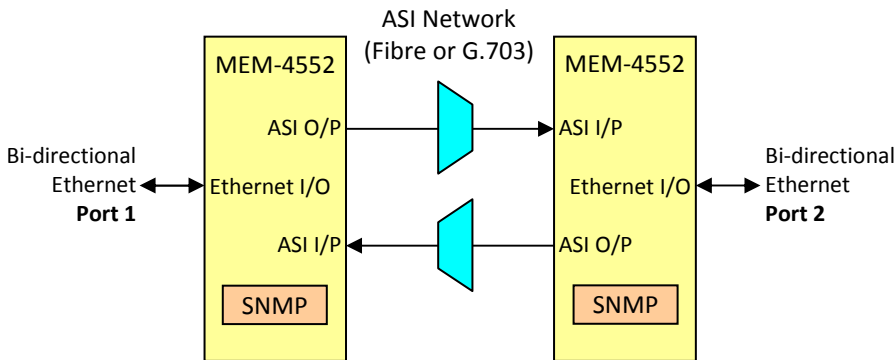
The Ethernet port has automatic MDI/MDI-X detection. This detects whether the Ethernet interconnect cable is a straight through or cross over type and automatically switches itself to accommodate.

The output ASI stream is suitable for transfer by any ASI type of signal path, such as IRT's ASI single and MUX fibre link cards. G.703 rates can be set on the output to cooperate with ASI-G.703 products. For full duplex action a return link is required. Note that the return ASI rate is independent of the outgoing ASI rate.

SNMP (Simple Network Management Protocol) is included for remote monitoring and control when used in conjunction with IRT's 4000 series frame fitted with SNMP capability.

The MEM-4552 is designed to fit IRT's standard 1RU and 4000 series 3RU Eurocard frames fitted with IRT's SNMP system.

**BLOCK DIAGRAM MEM-4552 SIGNAL PATH**



## TECHNICAL SPECIFICATIONS

### Ethernet:

Type	Standard IEEE 802.3
Data Rate	100/1000 Mb/s.
Connector	RJ-45.

### ASI Output:

Type	1 x ASI-C 75Ω, 800 mVp-p, BNC connector.
Payload Rate	User selectable between 1 and 213 Mb/s (set by SNMP control).
Program Number	User selectable (set by SNMP control. Default program number is 4550).
Signal level	800 mV ± 10%.
Impedance	75Ω.
Return loss	> 15 dB 5 MHz to 270 MHz.

### ASI Input:

Type	1 x ASI-C 75Ω, BNC connector.
Return Loss	> 15 dB 5 MHz to 270 MHz.
Equalisation	> 250 metres at 270 Mb/s for Belden 8281 or equivalent cable.

### Alarms:

Minor	Open circuit on loss of ASI or loss of power.
Major	Open circuit on loss of Ethernet link or loss of power.

### Front Panel Indicators:

<b>270Mb</b>	ASI input present – Green.
<b>LINK</b>	LAN Activity – Green.
<b>100B</b>	Rate – 100 Mb/s – Green.
<b>1000B</b>	Rate – 1000 Mb/s – Green.
<b>ALARM</b>	General Alarm present – Red.

### Power Requirements:

Voltage	28 Vac CT (14-0-14) or ±16 Vdc.
Power consumption	< 5 VA.

### Other:

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.
Finish	Grey background, black lettering & red IRT logo.
Dimensions	Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals. 6 HP x 3 U x 220 mm IRT Eurocard.