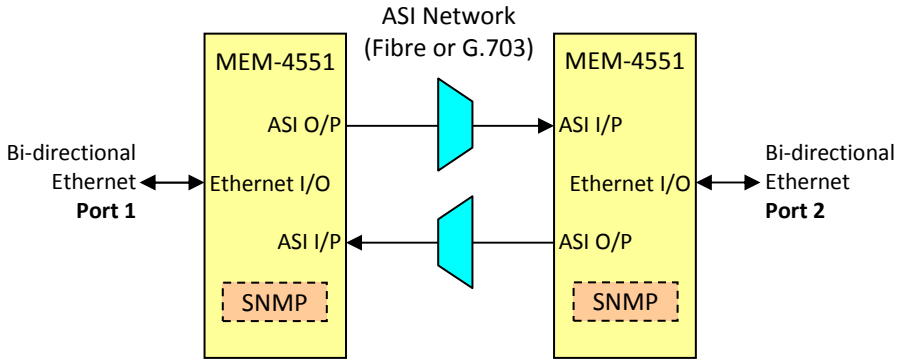
MEM-4551

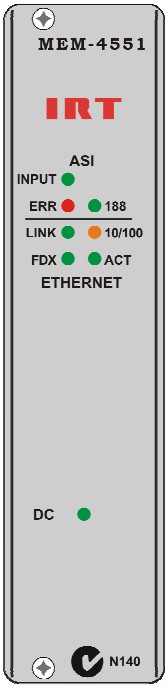
Ethernet to ASI Network Interface Adapter

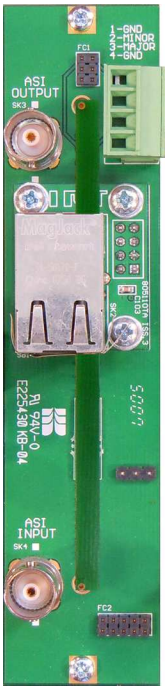
FEATURES

- **Ethernet to ASI / ASI to Ethernet conversion.**
- **Ethernet port automatically set for 10/100/Half/Full operation.**
- **Automatic MDI/MDI-X port.**
- **32 ASI rates between 1 Mb/s and 108 Mb/s.**
- **Optional plug-in SNMP monitoring and control module.**

BLOCK DIAGRAM MEM-4551 SIGNAL PATH







GENERAL

The MEM-4551 acts as a gateway between an Ethernet network and an ASI environment.

The MEM-4551 generates an ETR-290 compliant 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 MEM-4551 acts as an Ethernet bridge. A dynamic MAC address table is formed over time, which allows filtering of the Ethernet packets being forwarded through the ASI link.

The Ethernet port is set up automatically to accommodate most network environments. The ASI output rate is switch selectable to operate at a payload data rate of between 1 Mb/s and 108 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. Also G.703 rates are available on the output to cooperate with ASI-G.703 products. For full duplex action a return link is required.

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.

The MEM-4551 is designed to fit IRT's standard Eurocard frames as well as IRT's 4000 series frame for use with IRT's SNMP system and may be used alongside any other of IRT's analogue or digital Eurocards.

MEM-4551

TECHNICAL SPECIFICATIONS

Ethernet:

Type	Standard IEEE 802.3
Data Rate	10/100 Mb/s.
Connector	RJ-45.

ASI Output:

Type		1 x ASI-C 75Ω, 800 mVp-p, BNC connector.
Payload Rate	**32 settings**	1 to 25 (in 1Mb steps), 30, 34.368, 36, 44.736, 54, 72, or 108 Mb/s (set by on board switch settings).
Program Number		4550, 4551, 4552 or 4553 (set by on board switch settings).
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.
Major	Open circuit on loss of Ethernet link.

Front Panel Indicators:

Ethernet:	**LINK**	Ethernet link connected – Green.
	10/100	Rate - 10 Mb/s Orange, 100 Mb/s Green.
	FDX	Full Duplex Mode – Green.
	ACT	LAN Activity – Green.
ASI:	**INPUT**	ASI Carrier detected – Green.
	ERR	Error in ASI input – Red.
	188	Input ASI 188 byte – Green.

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	**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.
Optional accessories		SMU-4000 plug in SNMP Management Information Base (MIB) module.