

# LH1000

## Ethernet - HSSI or Multi-Standard Serial Converter



LH1000  
datasheet

- Low-cost LAN extension over satellite links
- 10 / 100BaseT auto-negotiating LAN port
- Filtering of local packets
- Efficient HDLC packet handling on WAN port
- HSSI interface at up to 100 Mbps
- Multi-standard serial interface supports RS-232, X.21, EIA-530, V.35, V.36 at up to 20 Mbps
- Mixed Tx and Rx interface operation e.g. HSSI Tx & EIA-530 Rx
- Asymmetric operation
- Integral auto-sensing PSU



LH1000 showing front & rear aspects

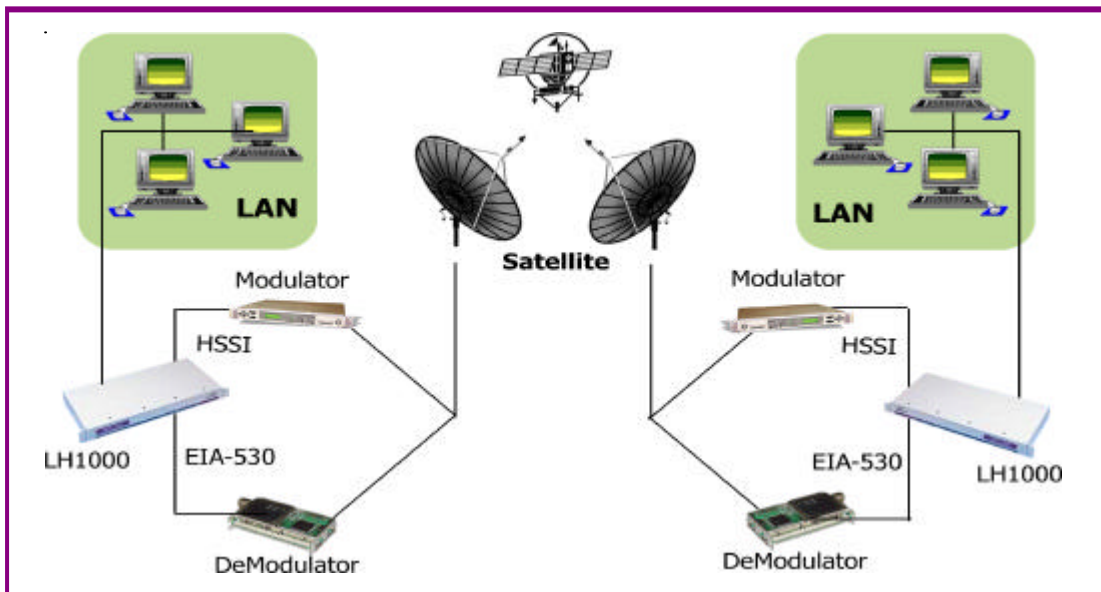
The Metrodata LH1000 is designed to enable the transmission of LAN frames across satellite links via serial modems. The LAN interface is auto-sensing and supports 10M, 100M, full or half duplex working. Manual selection of 100BaseT FD operation enables connection to fixed config router ports. It is presented as an RJ45 connector and offers automatic MDI/MDI-X interface selection to obviate the need for cross-over cables. The LAN interface utilises an efficient HDLC encapsulation with address learning and filtering at up to 148810 packets per second. Rate decoupling is supported by means of a 1000 packet SDRAM buffer store, and no packets are lost providing that the sustained data rate is below the DTE serial port speed.

Two DTE ports are provided. They can operate at asymmetric speeds since they are clocked using the DCE supplied Send & Receive Timing signals. The ports are:

- a high speed HSSI DTE port using a standard 50-way SCSI-2 connector at a DCE clock rate of up to 100Mbps
- a low speed multi-standard port using a 44-way D-type connector at clock rates up to 20Mbps

The low speed multi-standard port offers the options of RS-232, EIA-530, X.21, V.35, RS449/V.36 interfaces, depending upon the type of interface cable fitted to the port. The LH1000 can be specified for 100-250 VAC mains supply or -48 VDC supply.

Application Diagram



LH1000

Specifications

Subscriber Port		Power supply		
Presentation	10/100BaseTX, RJ45, Auto-MDI / MDIX	-48VDC Supply	-40 to -72 VDC, 165 - 95 mA	
LED support	Link / Activity & Speed	AC Mains	100-250 VAC, 50-60 Hz, 65 - 28 mA, IEC connector	
Operating mode	Auto-negotiate 10/100, Full or Half Duplex	Power Consumption	6.5 watts approx when operating	
Port filtering rate	148810 packets per sec	<b>Compliance &amp; Approvals</b>		
MAC address table	4096 entries	Safety	EN41003, EN 60950	
Packet size	64 bytes minimum 1522 bytes maximum	EMC	EN55022, EN50082	
WAN Ports (Satellite modem)	Multi- standard up to 20 Mbps	HSSI up to 100 Mbps	Environment	
Presentation	44 way D type	50 way AMP	Temp	
Frame mode	Unframed	Unframed	Humidity	
Timing	DCE supplied	DCE supplied	Pressure	
Encapsulation	HDLC	HDLC	<b>Packaging</b>	
Max packet rate	37900	143410	Type	Modem, 1U high without feet
LEDs	Tx / Rx packet	Tx / Rx packet	Dimensions	(W x Dx H mm)
			Rackmount	202 x 132 x 44 (without feet)
			Tabletop	202 x 132 x 48 (with feet)

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LH1000 Part Nos	100-250 VAC	80-05-544	-48 VDC	80-21-544	
Multi-standard Interface	EIA-530 DTE	X.21 DTE	V.35 DTE	V.36 DTE	RS-232 DTE
1.5 m cable	80-415-0002	80-415-0006	80-415-0008	80-415-0004	80-415-0010
3.0 m cable	80-43-0002	80-43-0006	80-43-0008	80-43-0004	80-43-0010

About Metrodata

Founded in 1989 and based near London's Heathrow airport, Metrodata is a leading designer and manufacturer of datacommunications hardware for Fixed line, Satellite, Enterprise and Carrier networks. Specialising in interoperability and interconnectivity, Metrodata offers a range of Standard, Niche and System Integrated type products. These include Media converters, Interface converters, Fibre converters, Ethernet extenders and ATM switching and Circuit emulation products. Other specialist products manage high data rates and clock sensitive applications to ensure higher network performance. Metrodata provides COTS products to the commercial, government and defence sectors, as well as developing turnkey products to specific customer requirements. For more information and data on Metrodata products, visit our web site at [www.metrodata.co.uk](http://www.metrodata.co.uk)

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