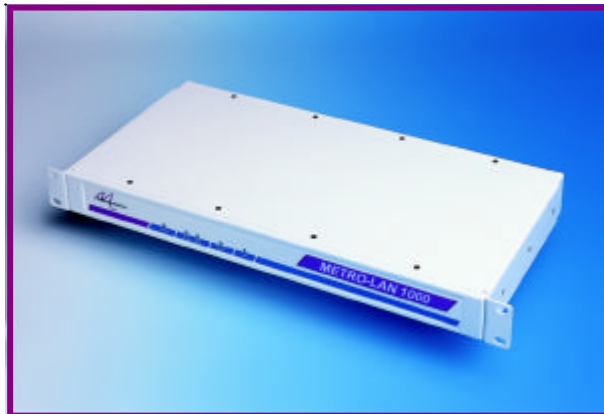

MetroLAN

10/100 BaseT over SDH



- Connects up to 8 remote LAN destinations
- Downlinks: 8 x 10/100BaseT
- Virtual concatenation down to VC-12
- 8 x E1/T1 ports mapped into VC-12
- Uplink: 1 x STM-1
- GFP framing with LCAS support
- SNMP remote management
- Optional 3 x E3/DS-3 port mapper module



datasheet MetroLAN

Product features

The Metrodata MetroLAN offers the capability of extending multiple LAN segments across an SDH network. Initially two model variants are offered. These are MetroLAN-1000 offering LAN + E1/T1 transport; and MetroLAN-2000 with additional E3/DS-3 transport.

The MetroLAN presents LAN ports as fully auto-sensing 10/100BaseT interfaces with manual override, thereby supporting any LAN network infrastructure. The MetroLAN offers 8 independent LAN interfaces, each of which may be transported to a remote location via the SDH infrastructure.

Generic Framing Procedure (GFP) encapsulation along with virtual concatenation with VC-4/VC-3 or VC-12 granularity and LCAS support offers maximum benefit to both service providers and users in terms of flexibility and bandwidth optimisation. The MetroLAN supports 8 independent GFP sessions, each of which may be directed to separate remote destinations.

The MetroLAN supports IEEE 802.3x flow control on all 10/100 ports to prevent traffic loss when reduced bandwidth is available. Full wire speed forwarding on any GFP session requires 50 VC-12 tributaries. The remaining bandwidth is available to other GFP sessions enabling the full 155Mbps to be utilised.

The MetroLAN supports large frames of up to 4096 bytes and is protocol and payload transparent. The MetroLAN will pass VLAN tagged frames, including "Q in Q" double tagged frames and CISCO ISL, transparently end to end. To further optimise network utilisation the MetroLAN offers 8 E1/T1 G.703 clear channel ports. Each E1/T1 may be mapped into an individual VC-12 for mapping into the remaining SDH payload.



MetroLAN



The management of the MetroLAN is either local via the console port or remote via the Ethernet management port using SNMP or Telnet. Both console and Telnet access methods are password protected. Performance statistics are available for all ports. Access via the overhead data link is offered for integration into standard network management schemes. SNMP Version 1 is supported, including MIB-2 and traps. SNMP traps will be generated based on alarms for any of the network or user ports. TFTP download of software and configuration data is supported as a means of future-proofing the products.

A pair of changeover relays indicate alarm conditions arising on the MetroLAN. The Major alarm relay is energised for normal operation to ensure that a fault is signalled in the event of power failure. The MetroLAN-1000 is a compact unit requiring 1U in a 19" rack. The MetroLAN-2000 is a 1.5U unit. The integral PSU is fully auto-sensing from 100 to 250 VAC, and -48VDC powered versions are available.

The MetroLAN-2000 variant includes an additional E3/DS-3 mapping module which enhances the basic MetroLAN product by means of its ability to map up to 3 E3/DS-3 interfaces into the SDH payload. It offers clear channel transport of E3 or DS-3 over SDH.

Specifications

OC-3/STM-1 Network Port (Uplink)		8 X E1/T1 User ports (Downlink)	
Presentation	Duplex SC Fibre Transceiver	Presentation	8 x RJ45, (NT)
Fibre Options	Multi-mode (11dB) , Single-mode Short Haul (15dB), Single-mode Long Haul (29dB)	Mode	Clear channel
Framing	SDH STM-1	Timing	Internal, Loop, Through, Network
		Mapping	To VC-12
		Alarms	LOS, AIS
10/100BaseT User ports (Downlink)		3 x E3/DS-3 User port (Downlink)	
Presentation	8 x RJ45, automatic MDI/MDIX cross-over switching	Presentation	3 x BNC, 75 ohm
Mode	10/100BaseT, auto-negotiate, manual	Mode	Clear Channel
Support	10Mbps, 100Mbps, Half or Full Duplex	Timing	Internal, Loop, Through, Network
Flow Control	Full duplex IEEE 802.3x Pause Frame	Mapping	To VC-3
Max frame size	4096 bytes	Alarms	LOS, AIS
Mapping	GFP with LCAS & VCAT to VC-4/VC-3 or VC-12	Configuration & Management	
LED Support	Link, Activity	Type	Menu driven user interface
Environment		Access	Local console, Telnet, SNMP
Temp	0 - 50 deg C	Interface	V.24 terminal, User port, Network port
Humidity	0 - 95% RH, non-condensing	Security	Access by two level password
Pressure	86-106 KPa	System	Non-volatile configuration
Power supply		Compliance & Approvals	
AC Mains	100-250 VAC, 50-400 Hz, 400 to 200mA	Safety	EN60950
DC Supply	-40 to -72 VDC, 1000 to 500 mA	EMC	EN55022, EN50082
Power Consumption	Less than 40 watts	Management	RFC-1213 MIB-2, RFC-1215 Traps
Packaging		Conformance	
MetroLAN-1000	1U, 19 inch rackmount		ITU G.707 VCAT,
Dimensions	435 x 213 x 44 mm (W x D x H)		ITU G.7041 GFP
MetroLAN-2000	1.5U, 19 inch rackmount		ITU G.7042 LCAS
Dimensions	435 x 213 x 66 mm (W x D x H)		

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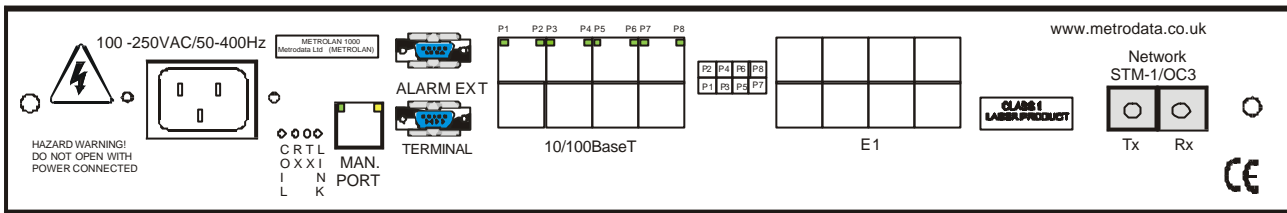
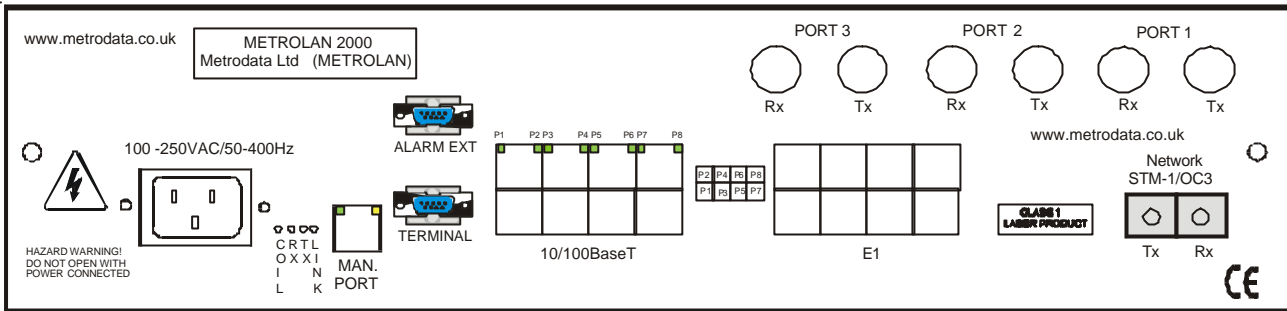
For more data on Metrodata products, visit our website at www.metrodata.co.uk
Metrodata reserves the right to change specifications without notice.
Please check when ordering.



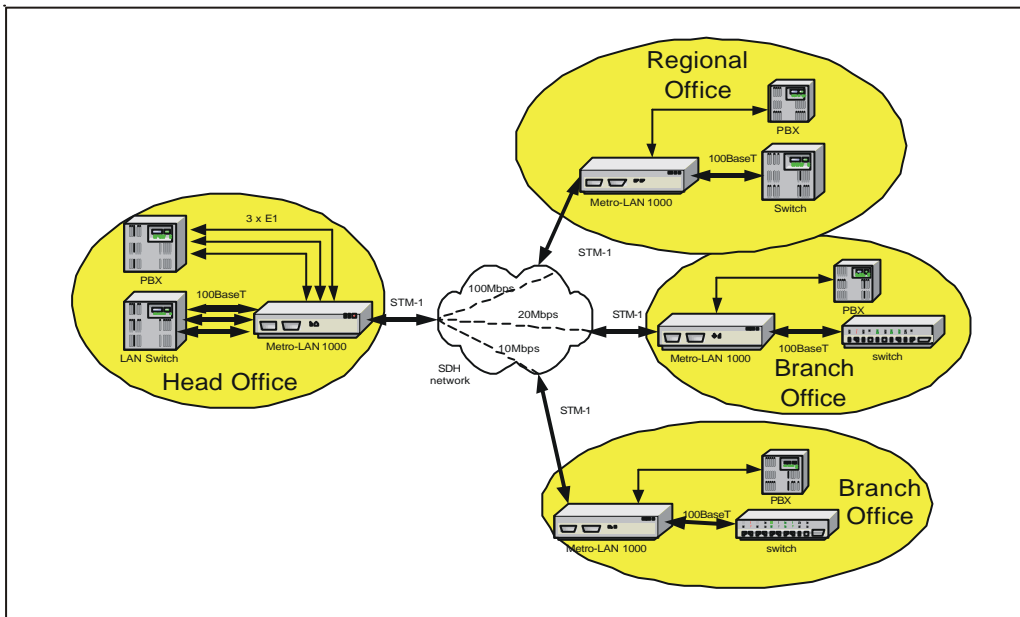
MetroLAN



MetroLAN rear panels



MetroLAN Applications



The Application shown links three remote offices with a head office. Each site is equipped with a MetroLAN-1000 switch that is connected via an STM-1 link to the Carrier's SDH network. The head office requires a full STM-1 connection, whilst the remote office sites require only fractional STM-1 connections. Since the bandwidth requirements between the head and regional office are high, a GFP session is configured to use 100Mbps by concatenating 48 VC-12 tributaries. A further 10 VC-12's are directed to the larger branch office giving 20Mbps bandwidth, whilst 5 VC-12's are directed to the smaller office giving a 10Mbps connection.

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Ordering Information

Part Numbers	Fibre Option	AC Mains: 100-250VAC	DC Power: -48 VDC
MetroLAN-1000	Multi-mode	80-12-300	80-24-300
	Single-mode Short Haul	80-12-301	80-24-301
	Single-mode Long Haul	80-12-302	80-24-302
MetroLAN-2000	Multi-mode	80-12-310	80-24-310
	Single-mode Short Haul	80-12-311	80-24-311
	Single-mode Long Haul	80-12-312	80-24-312

MetroLAN

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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

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