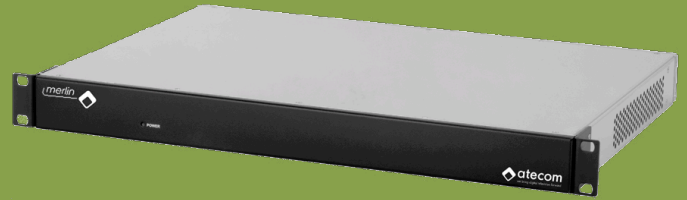# MERLIN
PDH / SDH / ATM Network Adapter

The MERLIN is a compact and cost-effective network adapter for transmission of MPEG-TS over PDH, SDH, ATM or dark fiber networks, ideal suited for installations with single, non-redundant network access.

Transparent MPEG stream handling supports operation in SFN applications.

Applications

- **DVB-T/DVB-H Transmitter Sites**
- **Broadcast Studios**
- **Event Locations**
- **OB-VANs**

Key Features

- **Transport of MPEG-TS and IP over PDH, SDH-, ATM and dark fiber**
    - up to 3 DVB-ASI Inputs/Outputs
    - SPTS or MPTS, MPEG-2, MPEG-4, H.264
    - CBR TS-Rates from 600kbps to 132Mbps
    - Transparent stream handling supporting SFN
    - Ethernet Bridging and IPoA
- **E3/DS3 and STM-1 Network Interfaces**
    - Bi-directional operation
    - ITU-T compliant
- **Management**
    - RS232 (SUB-D9), Command Line Interface
    - User-configurable alarm relais
    - Out-of-band over 10/100BaseT (RJ45)
    - In-band over IPoA or Ethernet Bridging
    - SNMPv2c and SNMPv3
    - Integrated Web-Server

The MERLIN AM-1U is perfectly suited for small studios, transmitter sites, and OB-VANs with a non-redundant network access.

Its compact design overcomes limitations in available rack space.

Up to 3 MPEG transport streams can be carried over a single network link using AAL1 or AAL5 encapsulation. Powerful AAL1 FEC allows for recovery for network errors.

The transport of Ethernet (MPoA) and IP (IPoA) enables in-band management as well as LAN-LAN interconnects, i.e. for video or audio stream applications.

The wide choice of physical network interface modules enable the operation of the systems on various types of networks. According to your bandwidth requirements you can freely choose the appropriate network technology without affecting the system performance in regard to quality and flexibility.

Full support of SNMPv2c and SNMPv3 enables the smooth integration into existing network management systems. The integrated Web-Server provides a user-friendly user-interface accessible through any Web-Browser.

Strictly developed according to ITU-T, DVB, ETSI and all other relevant standards, the MERLIN AM-1U provides the highest level of interoperability with compression as well as network technologies.

MERLIN AM-1U
PDH / SDH /ATM Network Adapter

Power Supply	AC-PSU	DC-PSU
Input Voltage	100V~to 240V~, 50Hz to 60Hz	36V= to 60V=
Power Consumption	60VA max.	60W max.

System Controller	
CPU	PPC 8245
Memory	64MB Flash, 256MB SDRAM, 128kB NVRAM
Serial Ports	1 * RS232 on SUB-D9
Ethernet Ports	2, 10/100BaseT (RJ45)
Alarm Relais	5 on SUB-D15, user-configurable
Digital Inputs	4 on SUB-D9, +12V Reference

Services	DVB-ASI Input	DVB-ASI Output
No. of Modules	3	3
Ports	1 * Input, 1 * Monitor, BNC, 75Ohm, EN500083-9	2 * Output, BNC, 75Ohm, EN500083-9
DVB-ASI Framing	Byte and Packet Mode, auto-detect	Byte and Packet Mode, configurable
TS Packet Size	188 and 204 Byte, auto-detect	188 and 204 Byte, configurable
TS Rate	CBR, 600kbps to 132Mbps	
ATM Encapsulation	AAL1 to ITU-T I.361.1	
Forward Error Correction	ITU-T I.363.1, RS 124/128, Byte Interleaving 128/47	
Clock Recovery	-	Adaptive, Offset < 0.2ppm, Drift < 0.0028 ppm/s

Network Interfaces *		
Physical Interfaces	AM-LT-E3	G.703 E3
	AM-LT-DS3	G.703 DS3
	AM-LT-STM1-ELE	STM-1/OC3c electrical
	AM-LT-STM1-MM	STM-1/OC3c Multimode M1.1
	AM-LT-STM1-SM	STM-1/OC3c single mode short haul S1.1, also available as CWDM
	AM-LT-STM1-SMLR1	STM-1/OC3c single mode long haul L1.1, also available as CWDM
	AM-LT-STM1-SMLR2	STM-1/OC3c single mode long haul L1.2

Control and Management	
Local Management	RS232 (SUB-D9), Command Line Interface
Remote Management	Out-of-band 10/100BaseT, 2 Ports In-band via IPoA or Ethernet Bridging (requires optional SAR-Module AF-CW-CLIP)
Protocols	SNMPv2c, SNMPv3, HTTP
Alarm Relais	5 on SUB-D15, user-configurable

Dimensions	
Type	1RU, 19" rack-mountable, rack-mounting kit included
Required Rack Space	1RU
Physical Dimensions	434 * 377 * 44,45 mm (W * D * H)
Cooling	Internal forced cooling, left to right

Environmental Conditions	
Operating Temperature	0°C to +40°C (+32°F to +104°F)
Storage Temperature	-20°C to +70°C (-4°F to +158°F)
Relative Humidity	5% to 95% at 40°C, non condensing

Compliance	
Safety	UL-UL60950-1 C-UL to CAN/CSA 22.2 No. 60950-1 TÜV to EN 60950-1 Safety of Information Technology Equipment EN 60825-1, CB-IEC 60950-1
EMC	FCC 47 CFR Ch.1 Part 15 Class A EN 55022 Class A, EN 55024, EN-61000-3-2, EN-61000-3-2, EN-61000-4-2, EN-61000-4-3, EN-61000-4-4, EN-61000-4-5, EN-61000-4-6, EN-61000-4-11
Environmental	Reduction of Hazardous Substances (ROHS) 5 Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC

* For detailed specifications please refer to the line interface datasheet.