

BroaMan Mux22-IVT/IC422

3G/HD/SD-SDI video I/O unit with built-in CWDM module, intercom I/O and data

Video, Audio,
Data interface



Product Features

- **3G/HD/SD-SDI capacity**
 - 8 3G/HD/SD-SDI ports
- **3G/HD/SD-SDI modules**
 - Dual Input with adaptive EQ
 - Dual Output
 - Reclocker for each input or output
 - All modules with or without redundancy
- **Intercom module**
 - 4 four wire ports for Clear-Com intercom(IC422)
- **Built-In CWDM module**
- **Fiber 1310nm auxiliary port for 3rd party devices and protocols**
- **Full integration into SANE and Optocore network**
- **Optocore module with 2 LAN ports and 2 SANE/LAN ports**
- **4x RS485 or GPIO or optional 4x Dual RS422 ports**
- **Tri/Bi-Level sync with Word Clock**
- **Redundant power supplies**
- **Full control with Optocore control software**

BroaMan (Broadcast Manufacturer), the German-based broadcast network specialist provides scalable, protocol independent, routing, repeating, transport and distribution of multiple professional video signals, such as 3G/HD/SD-SDI, over optical fiber.

Complete BroaMan systems are built from a collection of modules that include coaxial and optical I/O, routers, repeaters, and optical multiplexers. Using the modular BroaMan building blocks, any system configuration can be realised.

BroaMan systems are built around three main product series – Repeat48, Mux22 and Route66. Repeat48 series offers basic E-O-E conversion as well as fiber multiplexing. The Mux22 series is a flexible and small-sized redundant video, audio, data transport and basic routing platform. Route66 enables customisable routing solutions as well as E-O-E conversion and multiplexing.

The Mux22 can be used as a video and data (Ethernet, RS485/422 or GPIO) device with 8 3G/HD/SD video ports configured with the required number of inputs and outputs in group of two and an intercom (analogue audio and control data) for Clear-Com.

The Tri/Bi-level video clock input and output module installed in the device enables to sync from external video reference sources and distribute it through out the network.

The Mux22 seamlessly integrates into the OPTOCORE OPTICAL DIGITAL NETWORK SYSTEM. 4-wire intercom signals for Clear-Com are sent transparently through the optical network together with video, Ethernet and serial data. Each audio and data channel can be routed to and from every device on the network using the OPTOCORE CONTROL software. The software also enables the monitoring of video signals displaying the status of each SFP built into the device.

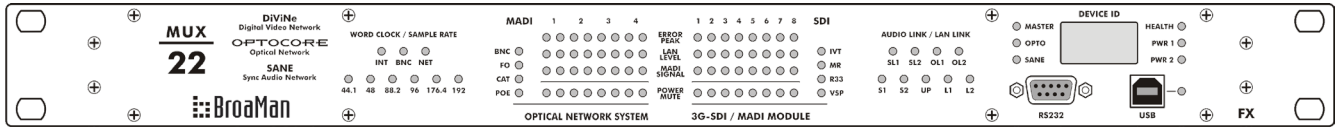
The Mux22 is equipped with a CWDM module with auxiliary fiber ports to allow for connection of external fiber systems, such as Optocore, to the CWDM module. All video, audio and data channels can be multiplexed onto a single duplex fiber. Mux22 is populated with SDI I/O and multiplexers at the time of manufacturing, according to customer's specifications.

Mux22 is equipped with a built-in redundant power supply with an automatic switchover. All fiber links can be delivered as redundant with an automatic switchover in case of fiber failure.

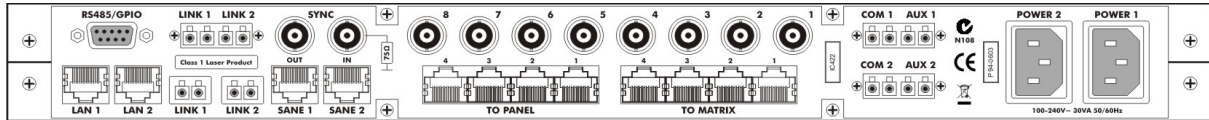
Mux22 units can be used in multiple different applications, starting from a very simple point-to-point links between OB truck and remote location. Mux22 can also be used in a redundant ring topology or with BroaMan Route66 units, as a part of large routing solution.

Line Drawings

Front panel



Back panel



Technical Specifications

Video			
Standards	SD, ED, HD, Dual Link, 3G		
Complies with SMPTE	259M, 292M, 344M, 372M, 424M		
Interface	SDI – Serial Digital Interface		
INTERCOM ports	Hardware standard: IC422	FCC-RJ45	4 x inputs, 4 x outputs
Analog Line Input	Impedance	10 k Ω	
	Maximum input level	+18 dBu	
	SNR	115 dB (A-weighted)	
	THD+N @ -1dBFS	≥ 100 dB	
Analog Line Output	Impedance	45 Ω	
	Maximum input level	+18 dBu	
	SNR	115 dB (A-weighted)	
	THD+N @ -1dBFS	≥ 98 dB	
Serial I/O	EIA / TIA – 422		
Optical Connection	Complies with 21 CFR 1040.10 and 1040.11		
Connection	LC		
Data rate	Dependent on the Video data rate – no bandwidth restriction		
Fiber cable lengths	Standard singlemode transceiver	≤ 10 km	
	Special singlemode transceiver	≤ 80 km (on request)	
SANE, LAN ports	Convention		
Audio	TIA - 568A/B, Optocore	200 Mbit/s	
LAN	TIA - 568A/B, IEEE - 802.3	10/100 Mbit/s	
Auxiliary Ports	Convention EIA / TIA-485		
Data channels	Digital control data	4	
Data rate	Up to 10 Mbps		
Impedance	Termination	330 Ω	
	Source	≤ 10 Ω	
Word Clock	Hardware standard BNC - 75 Ω		
Data rate	Dependent on sample rate	Up to 192 kHz	
Impedance	Output	Output ≤ 5 Ω	
	Input	Input 75 Ω	
Drive level	Output	≥ 1 V _{pp}	
Zero level	Referring to GND		
		+ 1.7 V	
Sense level	Input	≥ 400 mV _{pp}	
Remote Control			
RS232	EIA / TIA – 232	57 600 Baud	
USB	USB 2.0 – Device		
		12 Mbit/s	
LAN	IEEE – 802.3		
		10/100 Mbit/s	
Power Supply			
Type	Switch-mode, universal input		
Mains voltage	100... 240 V	50 60 Hz	
Frequency	50 60 Hz		
Cooling	Passive, via surface and ventilation openings on both sides of the device		
Dimensions	1 RU / 19"		
W x H x D	19.0 x 1.73 x 7.87 inch		
Weight	Dependent on configuration		