Datasheet

BroaMan
Broadcast Manufactur

BroaMan Mux22-FrameSYNC8

3G-SDI video I/O unit with built-in CWDM module, FrameSYNC8

Video, Sync, Data interface

Product Features

- **3G-SDI capacity**
  - 8 3G-SDI ports
- **3G-SDI modules**
  - Dual Input with adaptive EQ
  - Dual Output
  - Reclocker for each input or output
  - All modules with or without redundancy
- **FrameSYNC8**
  - 8 BNC Sync Output
  - Independent Audio/Video SYNC switch
  - Phase Shift independent from VSYNC
- **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 VSYNC with Word Clock**
- **Redundant power supplies**
- **Full control with Optocore control software**

BroaMan (Broadcast Manufactur), 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.

The Mux22-FrameSYNC8 can be used as a video and data (Ethernet, RS485/422 or GPIO) device with 8 3G-SDI video ports configured with the required number of inputs and outputs in group of two and FrameSYNC8 module with 8 sync outputs.

VSync I/O, which appears inside every Mux22-FrameSYNC8, is independent from the FrameSYNC8 board. VSync can perform the black burst-to-audio clock synchronization, while the FrameSync8 outputs can produce indepenently phase shifted video syncs of any style, both black burst and tri-level, of numerous resolutions, in all PAL/NTSC/SECAM SD and HD versions. Additionally, each of the eight Sync outputs in FrameSync8 can be individually set to either Video Sync or Audio Word Clock Sync, making the device a perfect video and/or audio sync distribution device.

The Mux22-FrameSYNC8 seamlessly integrates into the OPTOCORE OPTICAL DIGITAL NETWORK SYSTEM. The software enables the monitoring of video signals displaying the status of each SFP built into the device and allowing of the control for the multiple configuration options of a FrameSYNC8.

The Mux22-FrameSYNC8 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-FrameSYNC8 is populated with SDI I/O and multiplexers at the time of manufacturing, according to customer's specifications.

Mux22-FrameSYNC8 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-FrameSYNC8 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 topology or with BroaMan Route66 units, as a part of large routing solution.

Revision 1.0 / September 2018

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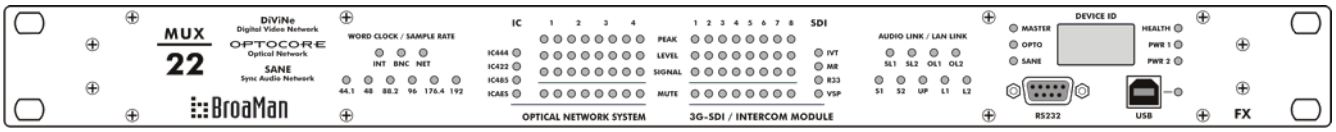
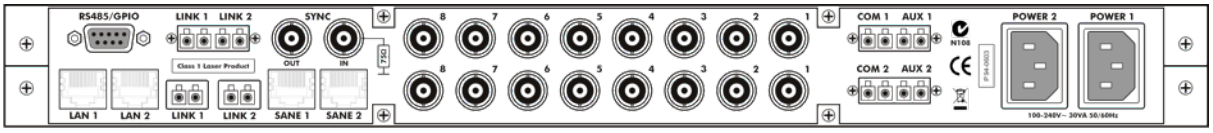
Line Drawings

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	
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
VSYNC	Hardware standard BNC - 75 Ω	
Input Standards	Word Clock, Black Burst (bilevel), Tri-Level PAL/SECAM, NTSC, 720p59.94, 720p50, 1080i29.97, 1080i25	
Output Standards	Word Clock, Black Burst (bilevel), Tri-Level PAL/SECAM, NTSC, 720p59.94, 720p50, 1080i29.97, 1080i25	
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}
FrameSYNC8	Hardware standard BNC - 75 Ω	
Output Standards	Word Clock, Black Burst (bilevel), Tri-Level PAL/SECAM, NTSC, 720p59.94, 720p50, 1080i29.97, 1080i25	
Impedance	Output	Output ≤ 5 Ω
Drive level	Output	≥ 1 V_{pp}
Zero level	Referring to GND	+ 1.7 V
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	

BroaMan – Broadcast Manufactur GmbH
Alte Allee 28, 81245 Munich, Germany
Phone +49 (0)89-89 99 64 – 60, Fax +49 (0)89-89 99 64 - 79
inquiry@broaman.com, www.broaman.com

Revision 1.0 / September 2018