

MIP-4806

48x6 3G/HD/SD-SDI Multi-image Processor System



Summer 2019 Datasheet

SAMIM MIP-4806 is a professional and modular 3G/HD/SD-SDI multi-image processor. It is an advanced equipment for monitoring and logging the 3G/HD/SD-SDI video signal and embedded audio in TV studios and monitoring centers. Inputs can be extended up to 48 in the form of eight SDI inputs per module. The MIP-4806 has been combined with a 48x48 router to enable it to display each input on each output. System is presented in 3RU standard 19" frame and has redundant power supply to increase reliability. Output of cards are easily connected to each other via back panel and cascading is done internally without cabling. There are 48 mosaic panel windows totally in all output modules which can be divided by eight. The MIP-4806 can analyze the input signals to detect the errors and alarms and show them on window panels. Also, it records them in internal memory and stores different configuration settings. Designing the graphical elements including the background, border, analog or digital clocks, tally, audio bargraph and UMD are done with SAMIM Monitoring Software CMS-620. Exploring the log and saving layouts are also performed by the CMS-620. Graphical signal of the designed layout is combined with the signal produced by the MIP modules. Depending on configuration, final output is available in HDMI and 3G/HD/SD-SDI formats.

Key Features

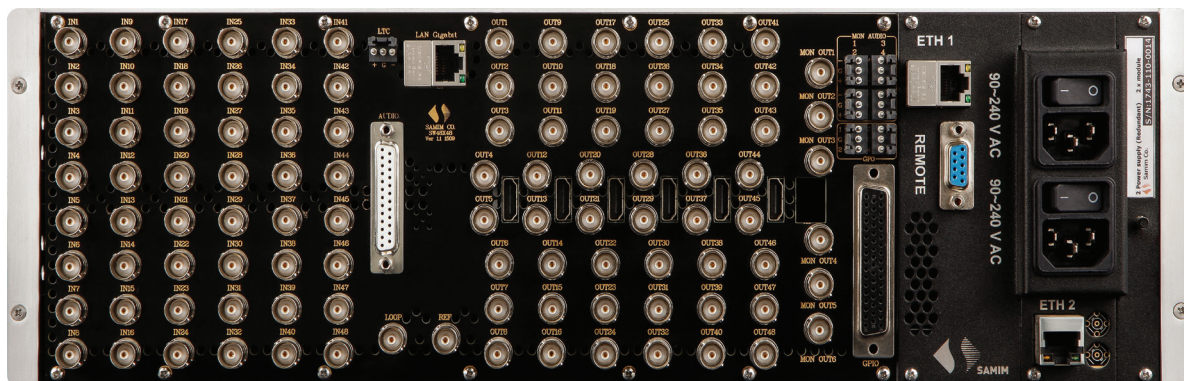
- Modularity and easy access to increase and decrease the input and output modules and minimizing the down time in the worst case
- Supports 3G/HD/SD-SDI input signals
- Input signals up to 48 in form of 8 per each module
- Outputs up to 6 HDMI and 3G/HD/SDI, one per each module
- 8x1 output multi-image modules
- Input equalization
- SNMP support
- Making reports of errors and alarms
- Input detection indication through front edge LEDs and Monitoring Software
- Shows signals with different frame rates
- Saves the last layout in output and controller card and loads settings of them with the priority of controller card
- Capability to assign any scale, size and x-y coordinates for every mosaic in software
- Audio bar graph for embedded signals with EBU.R68 standard
- Supports 16 channels of embedded audio and displays one group in the output
- Synchronization with external LTC signal and NTP service or manual for showing accurate time and assigning offset time to different and local clocks
- Control and configuration through LAN
- Tally display related to GPI inputs with open collector topology (40 GPIs for inputs)
- Color changing of tally related graphical elements (UMD, border and tally)
- Input loss detection with saving in internal memory and express alarm in related mosaic
 - Video signal
 - Loss of signal (unlock)

- Black
- Freeze
- EDH (AP, FF)
- CRC
- Embedded Audio
 - Loss of Audio
 - Silent
 - Overload
- Assigns text to UMDs with fonts selected from a specified set with user-defined color and size
- Supports Latin and Persian fonts
 - Arial
 - IR Homa
 - IR Nazanin
 - IR Sina
 - IR Traffic
 - IR Titr
 - IR Yagut
 - IR Zar
 - Tahoma
- Standard 3RU frame with redundant power supply
- Remote update

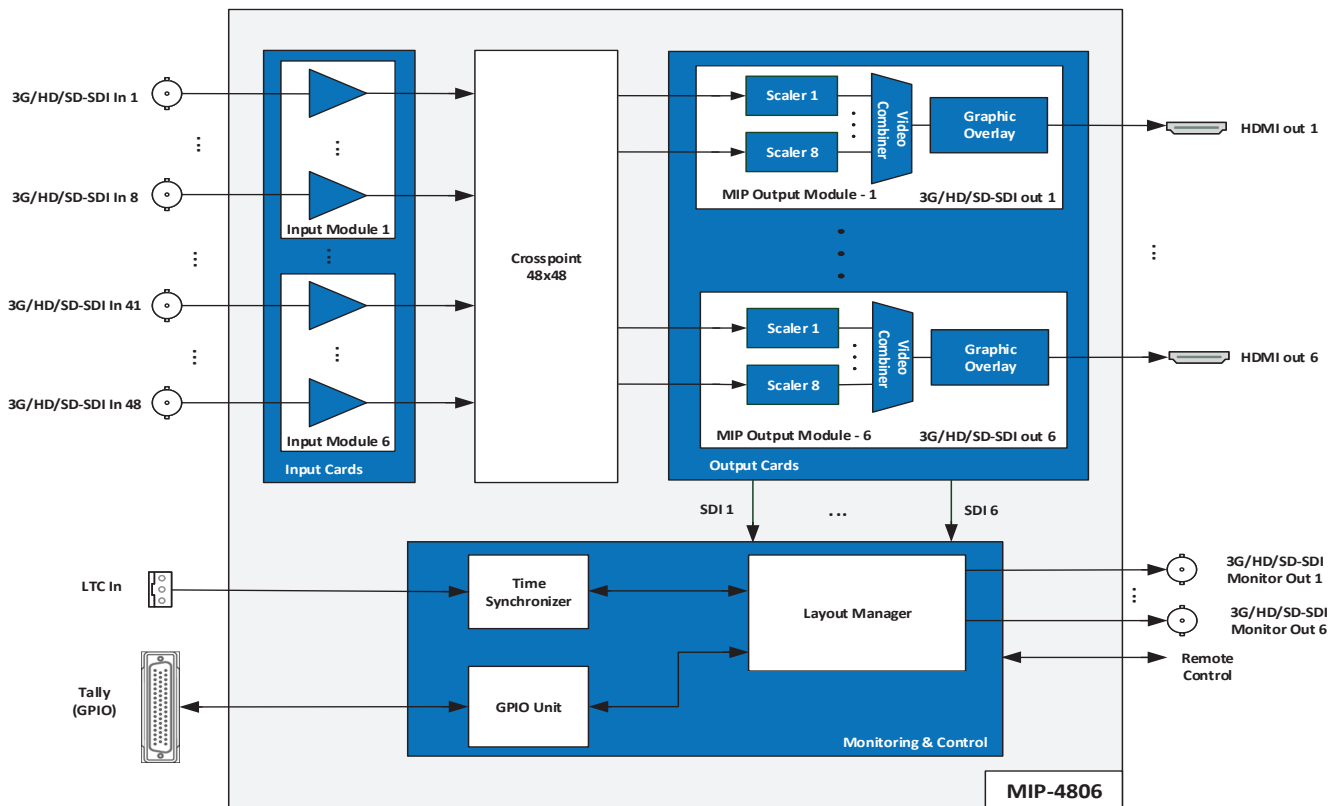
Applications

- Monitoring centers for audio/video signal evaluation
- Studios and video walls for monitoring
- OB vans
- Master control rooms

Back Panel



Block Diagram



Specifications

Digital Video Input		Jitter	<0.2 UI (SD, HD) <0.3 UI (3G)
Signal type	3G/HD/SD-SDI	Return loss	>15 dB to 270 Mb/s >12 dB to 1.5 Gb/s >10 dB to 3 Gb/s
Standard	SMPTE 292M, SMPTE 259M, SMPTE 272M, SMPTE 299M	Rise and fall time	0.4 to 1.5 ns (SD) <270 ps (HD) <135 ps (3G)
Number of inputs	48	Overshoot	<10% Amplitude
Impedance	75Ω	DC offset	0 V ± 0.5 V
Cable length	Automatic compensation 3G/HD/SD: 60/110/250 m (Belden 1694)	Tally Input/Output, GPIO	
Digital Video Output		Number of GPIOs	40
Signal type	3G/HD/SD-SDI	Number of GPOs	8
Standards	SMPTE 292M	Circuit topology	Open collector
Number of Outputs	6	Connector	50 Pin D-sub
Connector	BNC	VCC	5V DC
Impedance	75Ω		
Voltage level	800 mV ± 10%		

HDMI Output		Electrical	
Resolution	1080i50	Voltage	100-240V AC \pm 10%
Connector	HDMI R/A 19POS 2.6MM	Power	<110W
Quantity	One per each Module	Mechanical	
Number of modules	Up to 6	Dimensions	For 19", 3RU standard frame, depth 250 mm
Standard version	1.4	Environmental	
LTC Input		Temperature	\pm 5 C to 50 $^{\circ}$ C
Number of inputs	1	Humidity	0% to 90%
Connector	3 pin		
Control			
Connector	Ethernet 100/10, RJ 45		

System Requirements

Type	Item	Product	Description
Frame	1	SRM-0655	3RU Frame with Two 150/225W Power Supplies and Fan Door with LED Display
Configuration & Monitoring Software	1	CMS-0620	Configuration and Monitoring Software

Ordering Information

Product	Description
MIP-4806	48x6 3G/HD/SD-SDI Multi-image Processor System
MIP-4806-81	8 Channel 3G/HD/SD-SDI Input Module
MIP-4806-82	8 Channel 3G/HD/SD-SDI Output 3RU Module

With the mighty R&D approach in the market, we are an innovation company, perpetually breaking ground with game changing technology advancements. Consequently, we enable our customers to create and broadcast higher quality media, with less complexity and cost.

Our products provide high flexibility over conventional broadcast channels and Video-on-Demand to TV stations and smart devices. Our cutting-edge IP solutions are based on open standards to help enhance broadcasting companies' trade nimbleness and their capability to broadcast mighty stories with astonishing pictures. Either HD or 4K, HDR, SDI or IP, SAMIM group provides solutions that make our customers more successful with the great flexibility to create, manage and connect the media reliably.

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