

The IQMDA00 is an HD/SD-SDI distribution amplifier and HD-SDI monitoring downconverter. This module takes HD-SDI streams and produces four re-clocked HD-SDI outputs. It also converts the input signal to same frame-rate SD-SDI outputs for monitoring. Output options include 4 x HD-SDI and 3 x SD-SDI. One group of audio can also be carried through from the HD inputs to the SD outputs. This module can also be used to distribute SD-SDI signals to SMPTE 259M-C, providing 7 outputs from one input.

IQMDA00

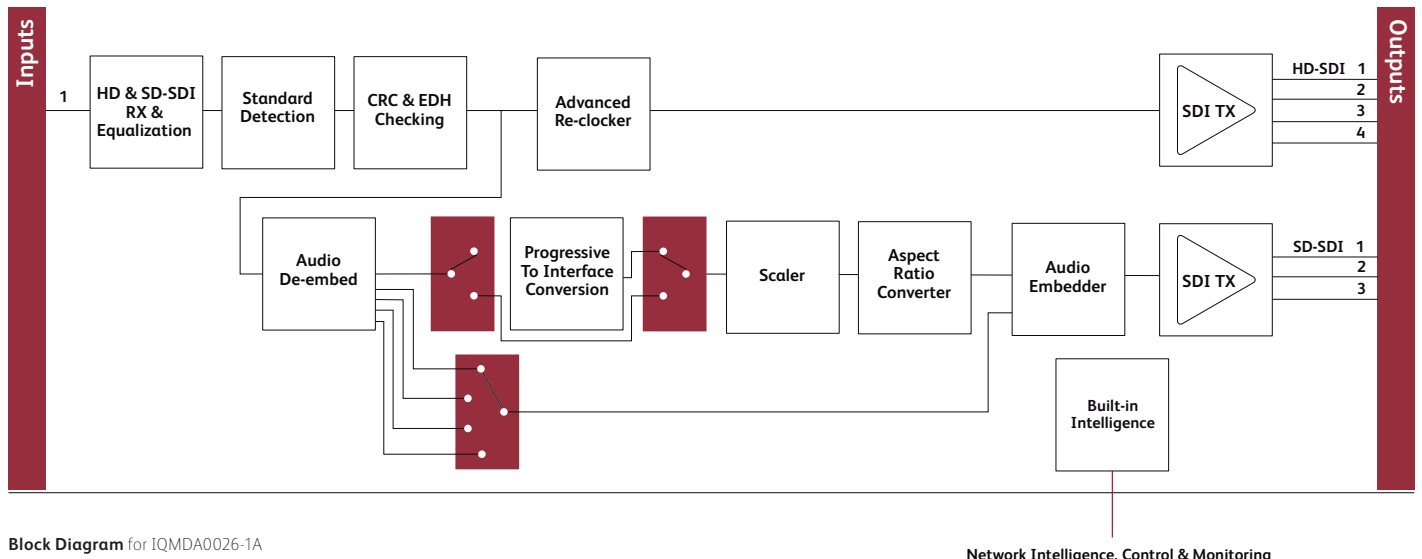
HD/SD-SDI Monitoring Distribution Amplifier

Does this module suit your application?

- An HD-SDI monitoring downconverter to allow compact low-cost, low-power monitoring solutions for HD environments
- Standards supported:
 - HD-SDI to SMPTE292M
 - SD-SDI to SMPTE259M-C
- A distribution amplifier for HD-SDI signals with SD-SDI monitoring capability
- A distribution amplifier for SD-SDI signals with 7 x SD-SDI outputs
- Audio capability means that a complete Audio/Video monitoring solution is possible
- Supports one output group of embedded audio channels with input audio group selection
- Monitoring output aspect ratio may be set to letterbox, anamorphic or center cut out picture modes
- Signal loss detection
- Maintains the input frame-rate for the output signal
- RollCall remote control and monitoring compatible

Why should you choose this module?

- Extremely compact solution for downconversion of HD picture sources for monitoring on SD equipment with embedded audio
- Allows low cost SD video monitors with SDI inputs to be used to monitor HD signals
- Allows HD sources to be recorded on SD recording equipment for monitoring or viewing at a future time
- Combined audio and video support means that SD monitoring systems can be used for HD feeds including their audio content
- SD/HD input flexibility allows distribution of SDDS signals or distribution and downconversion of HD-SDI signals without the need for separate hardware
- Will pass SD signals to allow monitoring of either HD or SD signals fed via a single connector

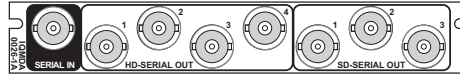


Order codes for IQH3A/1A enclosures

IQMDA0026-1A

HD/SD-SDI DA and HD-SDI Monitoring Downconverter. 4 HD-SDI and 3 SD-SDI outputs.

For more details on enclosure types please refer to datasheet IQH3A.



IQMDA0026-1A

Technical Specification

Inputs and Outputs

Signal Inputs

Electrical	1.5 Gbit/s HD-SDI, SMPTE 292M 270 Mbit/s SDI, SMPTE 259M-C
Connector / format	BNC/ 75 Ohm panel jack on standard Snell connector panel
Input cable length	Up to 140 m Belden 1694A @ 1.5 Gbit/s Up to 350 m Belden 1694A @ 270 Mbit/s
Return loss	>-15 dB

Distribution Outputs

Electrical	1.5 Gbit/s HD-SDI, SMPTE 292M 270 Mbit/s SDI, SMPTE 259M-C
Connector / format	BNC/ 75 Ohm panel jack on standard Snell connector panel
Outputs	4
Return loss	>-15 dB

Downconverter Outputs

Electrical	270 Mb/s SD-SDI SMPTE 259M-C including one group of embedded audio
Connector / format	BNC/ 75ohm panel jack on standard Snell connector panel
Outputs	3
Output return loss	>-15 dB

Card Edge and RollCall Controls

Indicators

Power	OK
CPU	OK
Status	OK (Green), Warning (Yellow), Error (Red)

Available Conversions

Input	Output
1125(1080)/29.97i or sF	525(483)/29.97i
1125(1080)/25i or sF	625(576)/25i
750(720)/59.94P	525(483)/29.97i
750(720)/50P	625(576)/25i
625(576)/25i	625(576)/25i
525(483)/29.97i	525(483)/29.97i

RollCall Control

Control	SD Output standard (including auto)
Aspect ratio for monitoring outputs	Letterbox, anamorphic, center cut out
User memories	16 x Save / Recall / Rename
Input audio group selection	Groups 1 to 4
Reporting	Input format(including unknown), input loss, CRC error
Logging	Input Status Input Standard Convert CRC/EDH CRC/EDH total
RollTrack controls	On/Off, Index, Source, Address, Command, Status, Sending
RollTrack outputs	Unused SD Output Video Delay Input Present Input Loss

Specifications

Input processing	10 bit
Under / over shoot	<10%
Linearity	±1 LSB
S/N	>65 dB
Color space	Transmission matrix conversion from SMPTE274 to ITUR-601
Y/C delay	<10 ns
SD output delay	1 output Frame 625(576)/25i = 40 ms 525(483)/29.97i = 33 ms No conversion = 0 ms With SD inputs = 1.2 µs
Horizontal response (anamorphic)	±0.2 dB to 5.4 MHz, > 45 dB stop band attenuation
Vertical response	>40 dB stop band attenuation

Power Consumption

Module power consumption	8.5 W Max
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