

# Mini-HDMI SFP

## Electrical I/O Module



### Build a totally optimized system by mixing electrical SDI, NTSC/PAL, HDMI/DVI, and optical video SFP

The Thinklogical CSA-000004-R is an electrical emSFP transmitter module that converts SDI signals to an HDMI/DVI output without scaling artifacts. A copy of the reclocked SD/HD/3G-SDI source is loopbacked to the host. Up to 8 channels of audio are supported and embedded in the HDMI signal.

This emSFP provides module identification, configuration, and diagnostic monitoring through a two wire serial interface. It is also a hot-pluggable solution for field system upgrades and maintenance.

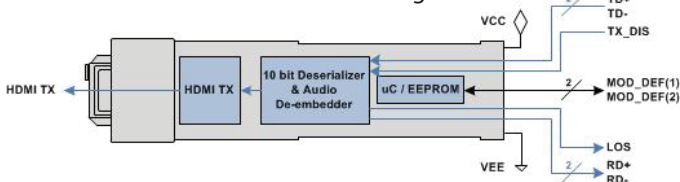
The CSA-000004-R is interchangeable with other MSA optical video SFPs or MSA coaxial emSFPs.

- SMPTE 424M, SMPTE 292M, and SMPTE 259M compliant
- SDI reclocked loopback to host connector
- Supported formats:
  - 525/625
  - 720p/1080i (50/59.94/60Hz)
  - 1080p (23.98/24/15/29.97/30/50/59.94/60Hz)
- HDMI/DVI output:
  - 24 bit (3x8 bits)
  - RGB 4:4:4, YCbCr 4:2:2, YCbCr 4:4:4
  - BW = 150 Mhz
  - RGB range (full/SMPTE)
  - Up to 8 channel audio embedding (PCM)
  - HDMI 1.4 type D connector
  - HDMI type D plug with retention (EB00CB04 & EB00CB05 series)
- Control via serial interface including:
  - Voltage and temperature monitoring
  - HDMI/DVI interface configuration
  - EDID reading, audio mapping
  - Module information
- Hot-pluggable, swap without affecting system behavior
- Compatible with Thinklogical's VX routers, HDX routers, and SDIXtreme 3G transmitters

SDI to HDMI/DVI Converter  
D-type Connector



Functional SFP Diagram



### Technical Specifications

Power requirements: single supply +3.3V  
 Physical dimensions: 64.1 mm x 13.4 mm x 8.6 mm SFP package  
 Operating temperature range: -20°C to 80°C  
 Operating relative humidity: 5–95%

### Ordering Information

Part Number	Description
CSA-000004-R	SFP, SDI to HDMI/DVI, TYPE D HDMI, MSA

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