MIO−CCM−4K/3G

**SMPTE ST 2110 and/or 4K/3G/HD/SD Closed Caption
CEA−608 and CEA−708 Monitor**

evertz

The MIO−CCM−4K/3G is a CEA−608 and CEA−708 closed caption monitor, decoder and analyzer that extends the signal monitoring capabilities of the Evertz monitoring product line by focusing on closed captions.

The MIO−CCM−4K/3G has the capability to decode CEA−608 and CEA−708 closed captions, providing a flexible and cost−effective solution for both caption domains. The auto−detecting program input supports 4K, 3G, HD and SD video formats.

The MIO−CCM−4K/3G also provides a detailed and comprehensive status display to the current state of the closed caption data. This status display can inform operators quickly if an error was detected.

This dual−slot MIO module can be flexibly housed in either: a SCORPION−2 frame capable of holding a single MIO−CCM−4K/3G module; a SCORPION−4/6 frame capable of holding up to two MIO−CCM−4K/3G modules; or a SCORPION−X18 frame capable of holding up to eight MIO modules.

MIO−CCM−4K/3G is WebEasy, MAGNUM and VistaLINK® PRO−capable for remote monitoring, control and configuration capabilities via SNMP.

Features & Benefits

- Auto−detecting SMPTE ST 259M, ST 292M, ST 424M and ST 2082 program video input
- Monitoring output decodes and displays CEA−608 or CEA−708 closed captions
- Decodes XDS packets containing TSID, CGMS−A, Program ID, Time in Show, Program Name, Program Type, V−Chip Rating, Program Description, Network Name, Station ID, Time of Day and Time of Zone
- Closed caption line shift (up and/or down) via GPI trigger to avoid on screen crawl messages such as EAS
- User−configurable presets
- Optional IP media streaming (+MS) compatible with Evertz' Caption Conductor system to provide this capability to caption encoders (7825CCE−3G, HD9084) that don't have it

AV SOLUTIONS
CONTRIBUTION & DISTRIBUTION
CONTROL, MONITORING
ENCODING, TRANSCODING, & MULTIPLEXING
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INFRASTRUCTURE & CONVERSION
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LIVE MEDIA PRODUCTION
MEDIA ASSET MANAGEMENT & PLAYOUT
MULTIVIEWERS
RF SOLUTIONS
ROUTERS
WAN TRANSPORT

Specifications

Electrical Inputs:

Reclocked Standards:	SMPTE ST 2081 (12G–SDI), SMPTE ST 424M (3G), SMPTE ST 292M (1.5G), SMPTE ST 259M (270Mb) DVB–ASI
Connector:	HD–BNC
Impedance:	75Ω (nominal)
Equalization:	Automatic to 80m @ 3G, 100m @ 1.5G, 250m @ 270Mb (with Belden 1694A or equivalent)
Return Loss:	> 15dB up to 1.5GHz, > 10dB up to 3GHz, > 7dB up to 6GHz, > 4dB up to 12GHz

Electrical Outputs:

Connector:	HD–BNC
Impedance:	75Ω (nominal)
Signal Level:	800mV (nominal)
DC Offset:	0V ±0.5V
Rise and Fall Time:	Reclocked SFPs only
12G:	<45ps
3G/HD:	<135ps
SD:	<900ps
Overshoot:	<10% of amplitude (reclocked SFPs only)
Alignment Jitter:	Reclocked SFPs only; <0.2UI to 1.485GB/s, <0.3UI to 2.97GB/s, <0.3UI to 12GB/s

Physical:

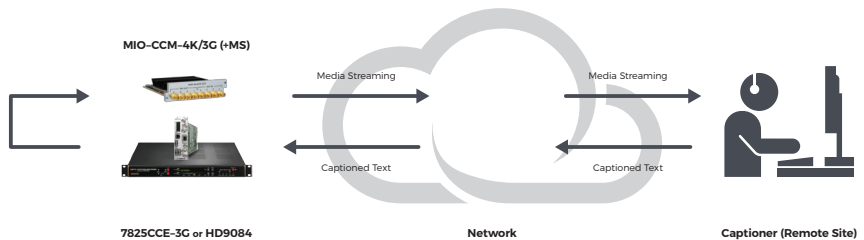|	
Power Consumption:	20W
Requires:	Dual–slot MIO
Operating Temp.:	0–70°C

Ordering Information

MIO–CCM–4K	SMPTE ST 2110/4K/3G/HD/SD–SDI dual–slot MIO module for use in any SCORPION chassis; includes closed caption monitoring software to monitor, decode and analyze CEA–608 and CEA–708 closed captions
MIO–CCM–3G	SMPTE ST 2110/3G/HD/SD–SDI dual–slot MIO module for use in any SCORPION chassis; includes closed caption monitoring software to monitor, decode and analyze CEA–608 and CEA–708 closed captions
MIO–CCE–4K	SMPTE ST 2110/4K/3G/HD/SD–SDI dual–slot MIO module for use in any SCORPION chassis; includes closed captioning encoder software with non–media streaming; requires additional MIO modules for modem and serial, requires +MS license to add media streaming
MIO–CCE–3G	SMPTE ST 2110/3G/HD/SD–SDI dual–slot MIO module for use in any SCORPION chassis; includes closed captioning encoder software with non–media streaming; requires additional MIO modules for modem and serial, requires +MS license to add media streaming.

Ordering Options:

+MS	Media streaming license enabling media (audio/video) over IP streaming
MIO–CCE–AUX–IO	Dual–slot MIO module adding support for up to 8x GPIO and 3x serial RS–232/RS–422 data I/O

Enclosures:

SCORPION–2	SCORPION miniature frame, holds 2x single– or 1x dual–slot modules
SCORPION–4	SCORPION standalone frame, holds 4x single– or 2x dual–slot modules
SCORPION–6	SCORPION standalone frame, holds 6x single– or 2x dual–slot modules
SCORPION–X18	SCORPION multiframe, holds 18x single– or 8x dual–slot modules

MIO–CCM–4K/3G (+MS)

Media Streaming

Media Streaming

Captioned Text

Captioned Text

7825CCE–3G or HD9084

Network

Captioner (Remote Site)

Sample Application: Captioning, Monitoring and Streaming Media Over IP