

SCORPION MIO Modules



Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform

Video

12G/6G/3G/HD/SD-SDI/ASI
Analog Video/Reference

Audio

AES/MADI/Analog/
Intercom/DANTE®

Ethernet

10/100/1000MbE
10GbE

Data

RS-232/422/485,
GPIO/USB/SCTE

HDMI

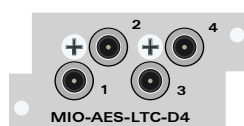
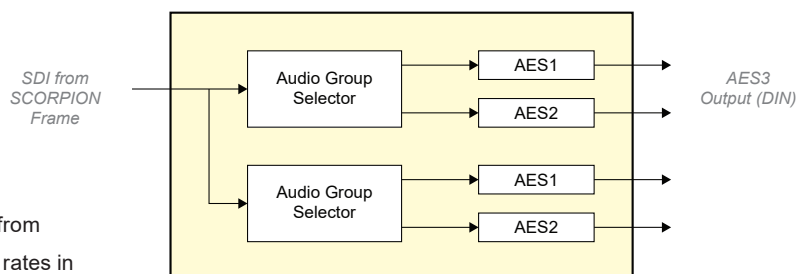
4K/UHD/3G/HD

SCORPION miniature input and output modules (MIOs) allow for ingest of video, audio, Ethernet and data into SCORPION media processing platforms. Supporting a wide range of different signal types, conversion and processing features, these MIOs — combined with SCORPION enclosures and software services — allow for a high degree of customization and flexibility for many applications and workflows.



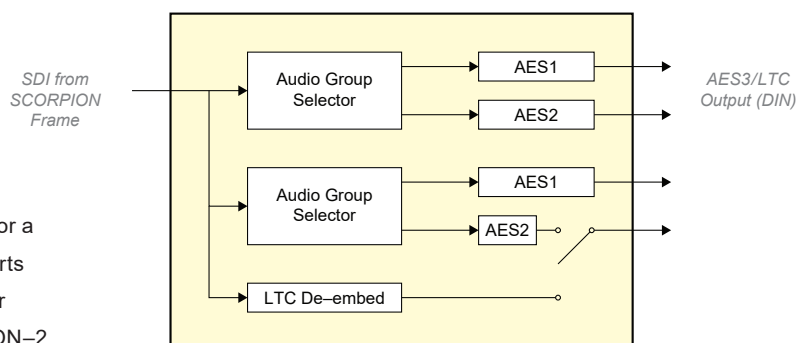
MIO-AES-D4

Single slot module to de-embed up to 4x AES from an SDI source. Supports up to 12G-SDI signal rates in SCORPION-4 or SCORPION-6, and up to 3G-SDI in SCORPION-2. Card edge IO include 4x unbalanced AES3 outputs on DIN connectors.



MIO-AES-LTC-D4

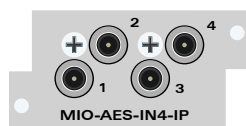
Single slot module to de-embed up to 4x AES or a single LTC channel from an SDI source. Supports up to 12G-SDI signal rates in SCORPION-4 or SCORPION-6, and up to 3G-SDI in SCORPION-2 and -X18 series frames. Card edge IO include 4x unbalanced AES3 outputs on DIN connectors.



SCORPION MIO Modules

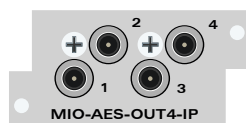
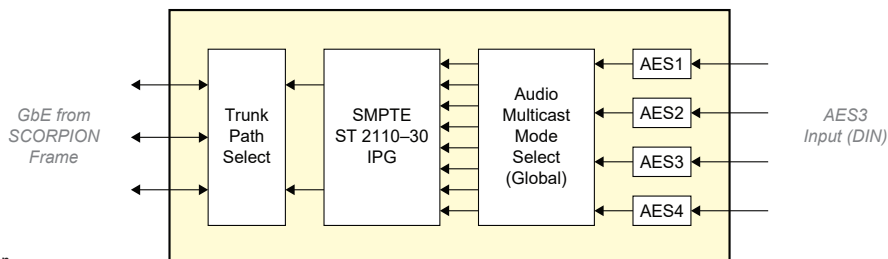


Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



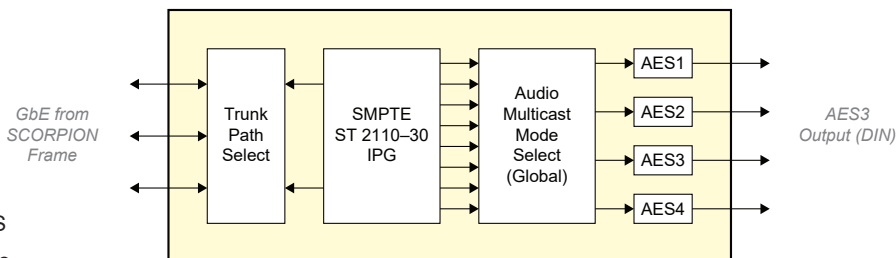
MIO-AES-IN4-IP

Single slot module to encapsulate 4x unbalanced AES to SMPTE ST 2110-30. Supports configuration in mono, pair, group or 8-channel SMPTE ST 2110-30 mode with configurable packet timing.



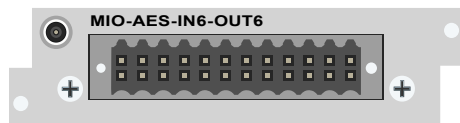
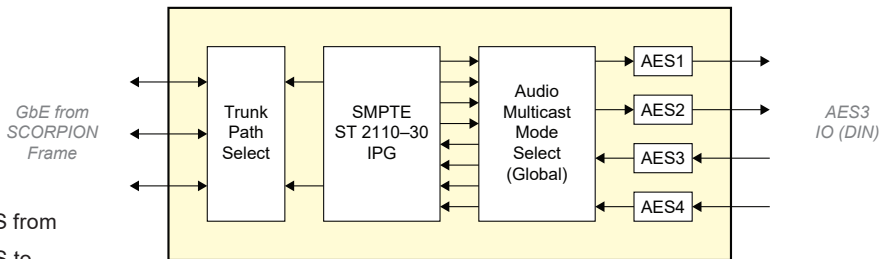
MIO-AES-OUT4-IP

Single slot module to de-encapsulate 4x unbalanced AES from SMPTE ST 2110-30. Supports configuration in mono, pair, group or 8-channel SMPTE ST 2110-30 mode with configurable packet timing.



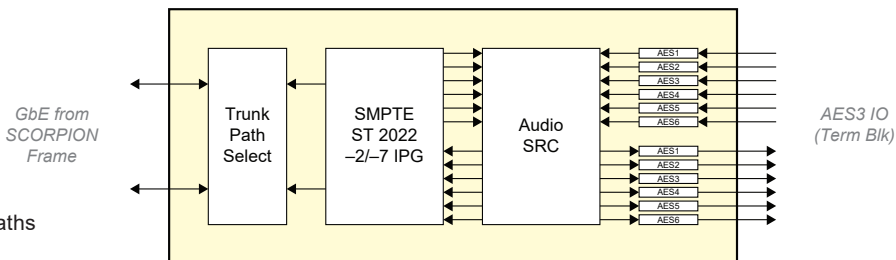
MIO-AES-IP

Single slot module to de-encapsulate 2x unbalanced AES from SMPTE ST 2110-30 and encapsulate 2x unbalanced AES to SMPTE ST 2110-30. Supports configuration in mono, pair, or group SMPTE ST 2110-30 mode with configurable packet timing.



MIO-AES-IN6-OUT6

Dual slot module supporting 6x bi-directional transport paths of balanced AES3 using SMPTE ST 2022-2/7. Uses a 2x12 terminal block connector.



SCORPION MIO Modules

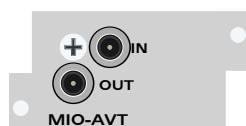
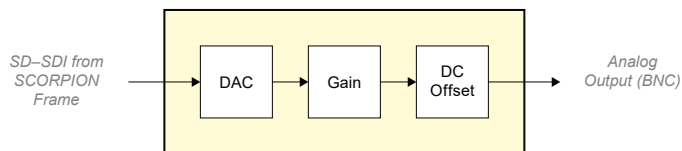


Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



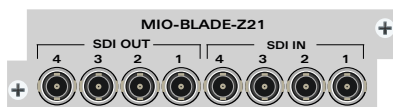
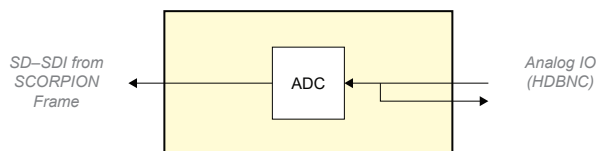
MIO-AVR

Single slot module analog video/reference receiver using fiber transport. In a SCORPION-4/6 the reference can be transported over an IP network when the chassis is configured for SMPTE ST 2022-6 mode. Can be used in point to point or fanout applications. Requires a paired MIO-AVT input module.



MIO-AVT

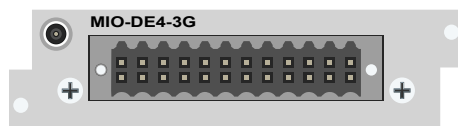
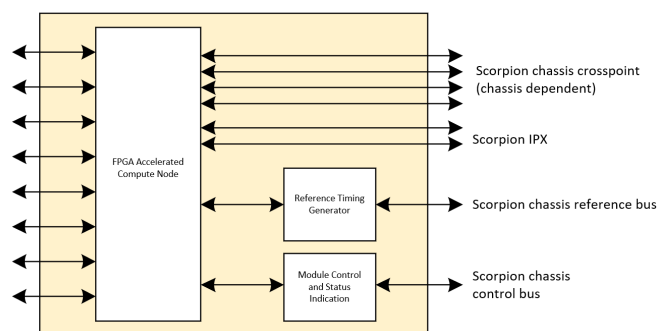
Single slot module analog video/reference transmitter using fiber transport. In a SCORPION-4/6 the reference can be transported over an IP network when the chassis is configured for SMPTE ST 2022-6 mode. Can be used in point to point or fanout applications. Requires a paired MIO-AVR input module.



MIO-BLADE-Z21

Dual slot microservice module. Device functionality is defined by the APP loaded on the module which include capabilities for AV processing and conversion, video compression, and uncompressed gateway. See the MIO-BLADE-Z21 webpage for more details.

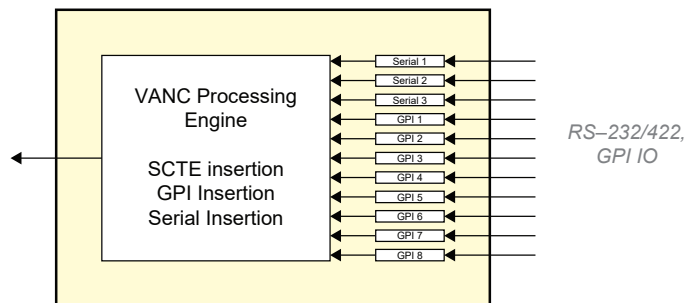
HD-BNC Connectors
(IO App dependent)



MIO-DE4-3G

Dual slot MIO module for inserting up to 8x GPIs in either timecode user bits or an encapsulated VANC packet, SCTE104 triggers, and up to 3x serial data in an encapsulated VANC packet. Support for 3G/HD-SDI only. SCTE triggers can be inserted using a GPI or a software control.

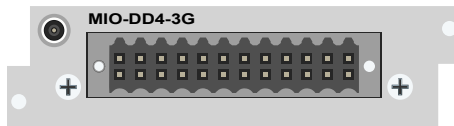
SDI from
SCORPION
Frame



SCORPION MIO Modules

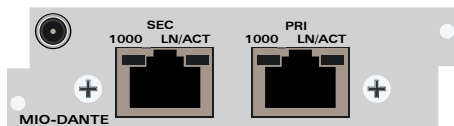
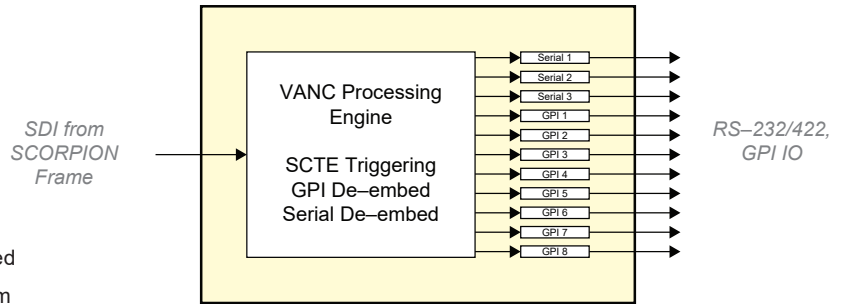


Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



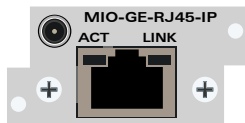
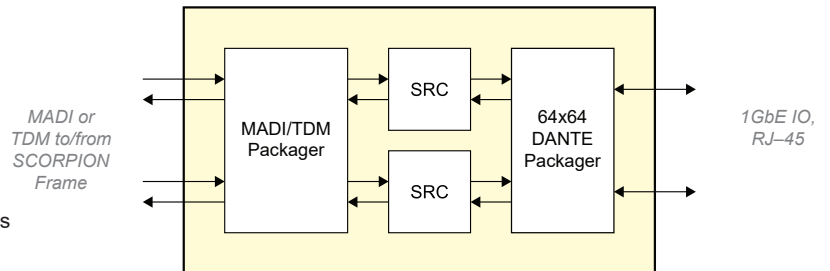
MIO-DD4-3G

Dual slot MIO module for triggering up to 8x GPOs (from timecode user bits, an encapsulated VANC packet, or embedded SCTE104 message) and de-embedding up to 3x serial data from an encapsulated VANC packet. Support for 3G/HD-SDI only.



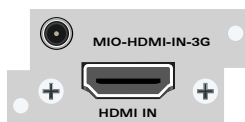
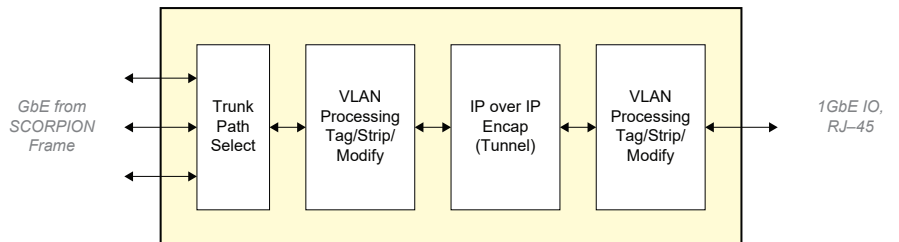
MIO-DANTE-64

Dual slot module for bi-directional conversion of 64x Dante® channels to either TDM or MADI. Requires genlock application to frames for synchronization of TDM signals. Main and redundant connections to connected DANTE network with redundant TDM/MADI connections. For use in SCORPION-4 or 9821EMR-AG-HUB chassis.



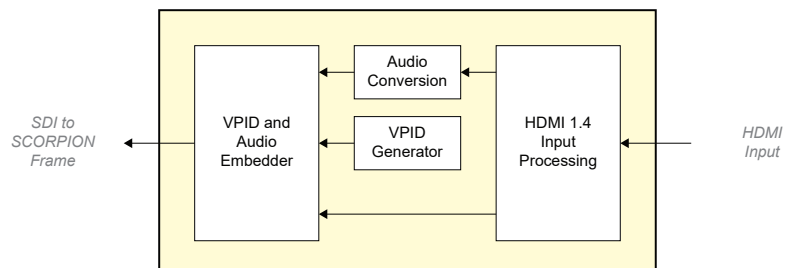
MIO-GE-RJ45-IP

Single slot module with RJ-45 GbE access port. Onboard capabilities allow for either passthrough, VLAN modification (tagging, stripping, modification) or an IP tunnel of input packets.



MIO-HDMI-IN-3G

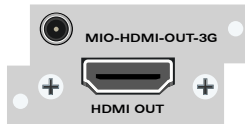
Single slot module for converting 3G/HD HDMI to SDI. Does not support HDR signaling or HDCP. Supports up to 8-channel PCM audio. HDMI converted sources are asynchronous (no input frame sync).



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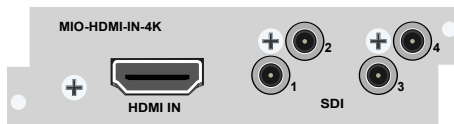
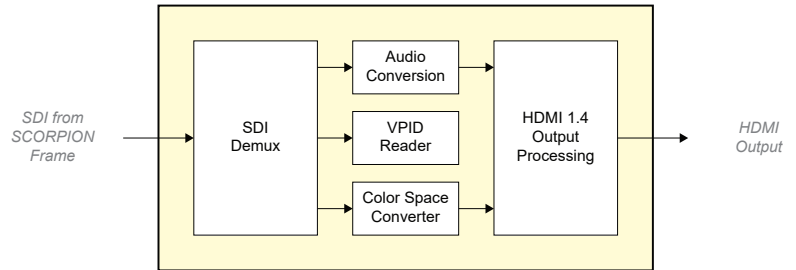


Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



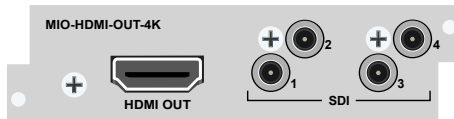
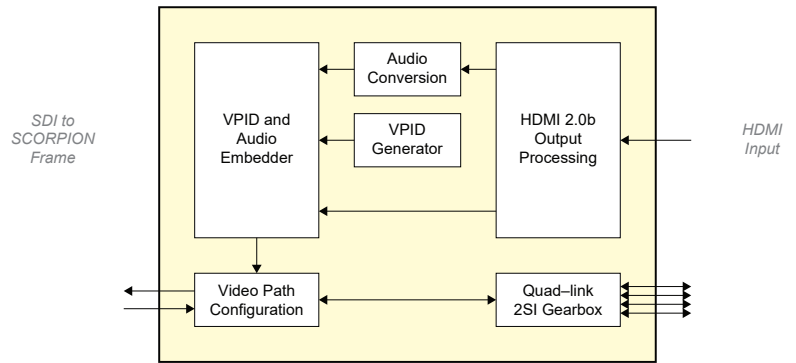
MIO-HDMI-OUT-3G

Single slot module for converting 3G/HD-SDI to HDMI. Does not support HDR signaling or HDCP. Supports up to 8-channel PCM audio.



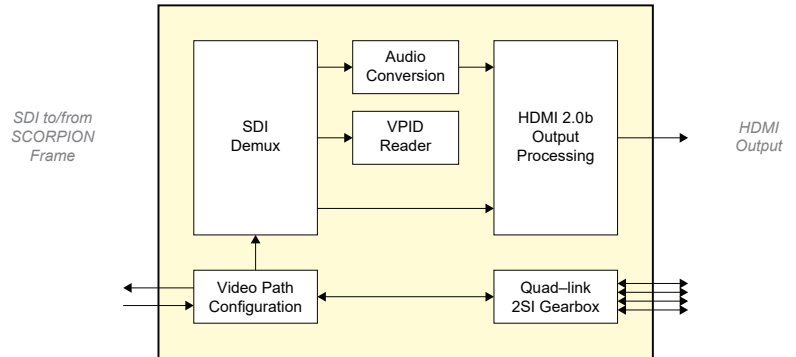
MIO-HDMI-IN-4K

Dual slot module for converting 4K/3G/HD HDMI to SDI. Supports HDR signaling and up to 8-channel of PCM audio. Does not support HDCP. Supports ability to gearbox a 4K output to quad-link 2SI externally. With configuration, both the HDMI and SDI paths can be unique.



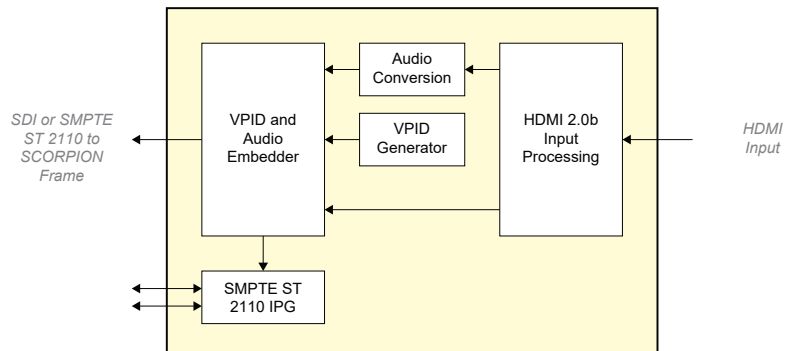
MIO-HDMI-OUT-4K

Dual slot module for converting up to 12G-SDI to 4K HDMI. Supports HDR signaling and up to 8-channel PCM audio. Does not support HDCP. Supports ability to gearbox an external quad-link 2SI to 4K HDMI. With configuration, both the HDMI and SDI paths can be unique.



MIO-HDMI-IN1-4K-IP

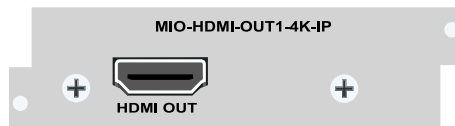
Dual slot module for converting HDMI up to 4K to either single-link SDI or SMPTE ST 2110. Supports HDR signaling, input frame sync, and up to 8 channels of PCM audio. Does not support HDCP.



SCORPION MIO Modules

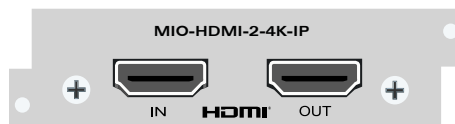
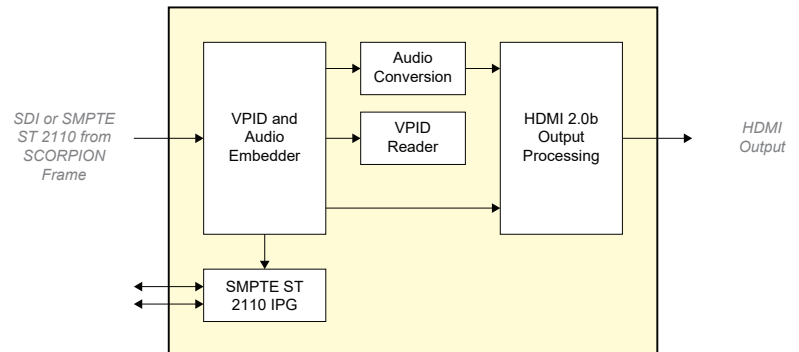


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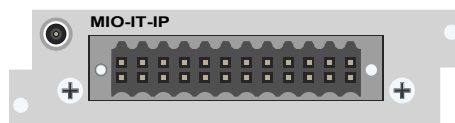
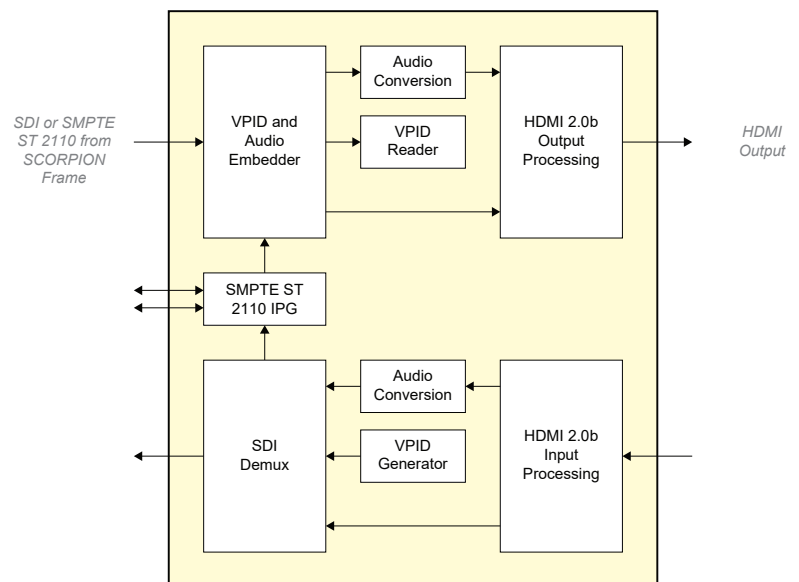
MIO-HDMI-OUT1-4K-IP

Dual slot module for converting single-link SDI or SMPTE ST 2110 up to 12G rates to HDMI. Supports HDR signaling and up to 8 channels of PCM audio. Does not support HDCP.



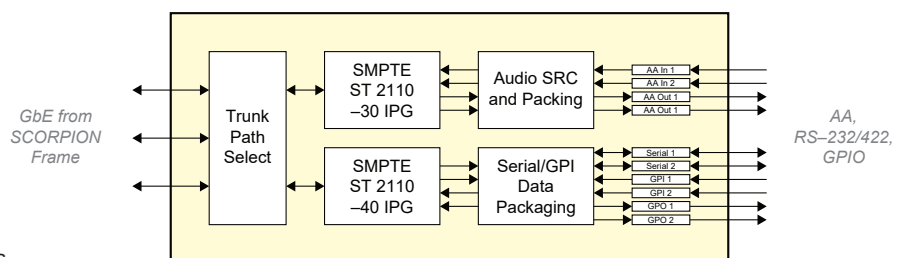
MIO-HDMI-2-4K-IP

Dual slot module for bi-directional conversion of single-link SDI or SMPTE ST 2110 up to 12G rates to/from HDMI. Supports HDR signaling and up to 8 channels of PCM audio. Does not support HDCP. Supports tunneled Dolby® Vision transport over SMPTE ST 2110.



MIO-IT-IP

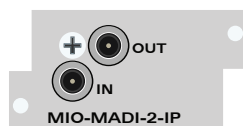
Dual slot module for two 4 wire intercom channels using SMPTE ST 2110-30 and ST 2110-40 transport. Supports unbalanced line level analog audio, RS-232/422 serial and GPIO.



SCORPION MIO Modules

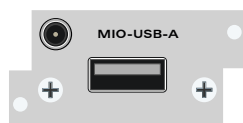
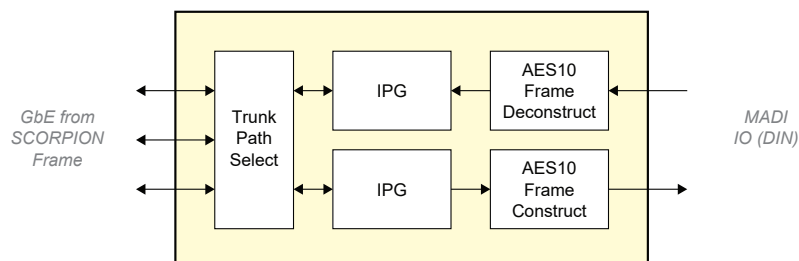


Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



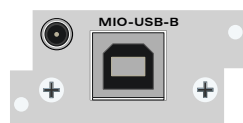
MIO-MADI-2-IP

Single slot module for one bi-directional 56/64 channel coaxial MADI signal over IP (unprotected).

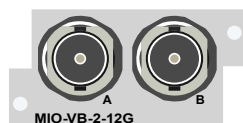
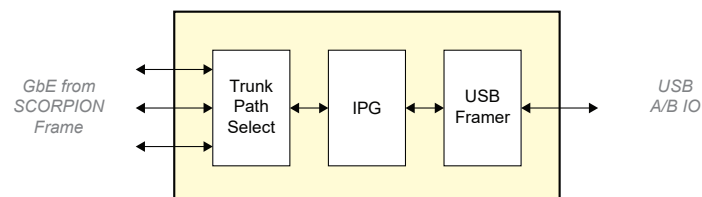


MIO-USB-A

Single slot module for USB-A/B HID device extension over IP networks. Does not support touch/data transfer, HID only.

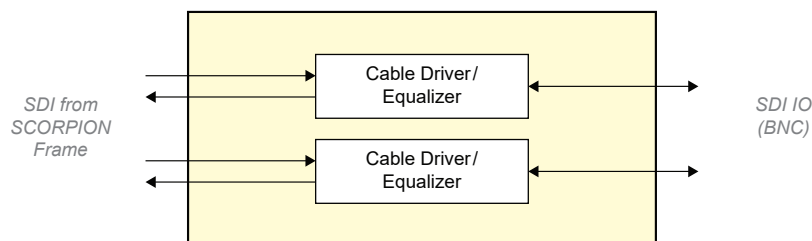


MIO-USB-B



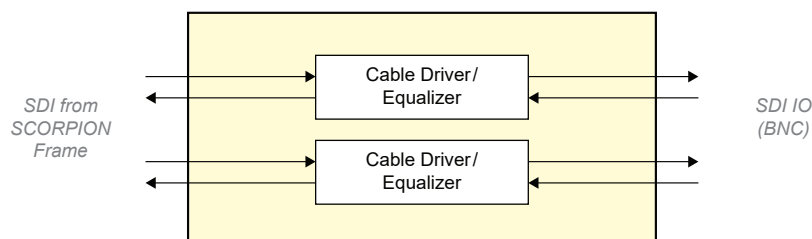
MIO-VB-2-12G

Single slot module for 2x coaxial 12G/6G/3G/HD/SD/ASI/MADI signals. In SCORPION-2/4/6 paths can be configurable as input or output. In SCORPION-18 series frames device is 1 input and 1 output.



MIO-VTR-2-12G

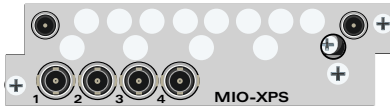
Single slot module for 2x bi-directional coaxial 12G/6G/3G/HD/SD/ASI/MADI signals. For use in SCORPION-2/4/6 enclosures.



SCORPION MIO Modules

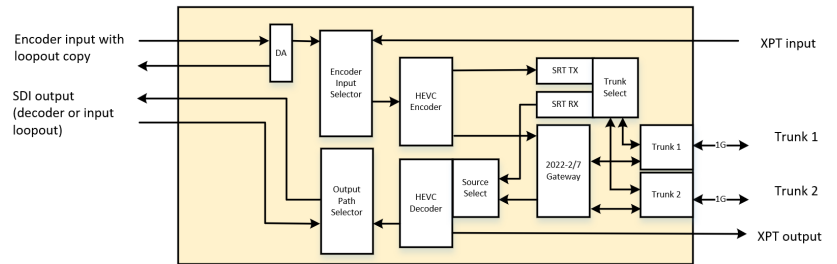


Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



MIO-XPS

Dual slot module for low latency HEVC compression. Supports 1 encode and 1 decode of 3G/HD-SDI using HEVC 10b422 and transport using ST2022-2/7 or SRT. For use in any SCORPION chassis types. See MIO-XPS webpage for more details.



SCORPION MIO Modules



Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform

Features & Benefits

- SCORPION 18 Series supports up to 18x single- or 8x dual-slot modules
- SCORPION-6 supports up to 6x single- or 3x dual-slot modules
- SCORPION-4 supports up to 4x single- or 2x dual-slot modules
- SCORPION-2 supports up to 2x single- or 1x dual-slot modules

Ordering Information

MIO-AES-D4	Single slot module to de-embed up to 4 AES from SDI. Supports up to 12G-SDI signal rates in SCORPION-4/6, 6G-SDI in SCORPION-2. For use in fanless SCORPION chassis types.
MIO-AES-LTC-D4	Single slot module to de-embed up to 4 AES or 1 LTC from SDI. Supports up to 12G-SDI signal rates in SCORPION-4/6, 6G-SDI in SCORPION-2. For use in fanless SCORPION chassis types.
MIO-AES-IN4-IP	Single slot module to encapsulate 4 unbalanced AES to ST2110-30. For use in fanless SCORPION chassis types.
MIO-AES-OUT4-IP	Single slot module to de-encapsulate 4 unbalanced AES from ST2110-30. For use in fanless SCORPION chassis types.
MIO-AES-IP	Single slot module for 2 bi-directional unbalanced AES conversions between ST2110-30. For use in fanless SCORPION chassis types.
MIO-AES-IN6-OUT6	Dual slot module supporting 6 bi-directional transport paths of either or AES3 (balanced) over ST2022-2/7. Uses a 2x12 terminal block connector. For use in any SCORPION chassis types.
MIO-AVR	Single slot module for analog video/reference output using fiber transport (or using ST2022-6 with SCORPION-4/6). For use in fanless SCORPION chassis types.
MIO-AVT	Single slot module for analog video/reference input for fiber transport (or using ST2022-6 with SCORPION-4/6). For use in fanless SCORPION chassis types.
MIO-BLADE-Z21	Dual slot module capable of running FPGA applications to define functionality. Requires a MIO-APP to define the module function, and channel keys to enable paths. For use in any SCORPION chassis types. <i>For more information on MIO-APPs and applicable software services, click to view the MIO-BLADE-Z21 data sheet online.</i>
MIO-CCM-3G	Dual slot MIO module for use in any Scorpion chassis. Includes Closed Caption Monitoring software to translate, decode and analyze CEA-608 to CEA-708 Closed Caption. <i>For more information on product options and applications, click to view the MIO-CCM-3G data sheet online.</i>
MIO-DANTE-64	Dual slot module for bi-directional conversion of 64 DANTE channels to either TDM or MADI. For use in SCORPION-4 chassis types.
MIO-DD4-3G	Dual slot module for de-embedding up to 8 GPO or SCTE104 triggers and up to 3 serial data streams from 3G/HD-SDI ancillary space. For use in fanless SCORPION chassis types.
MIO-DE4-3G	Dual slot module for embedding up to 8 GPI or SCTE104 triggers and up to 3 serial data streams and VITC into 3G/HD-SDI ancillary space. For use in fanless SCORPION chassis types.
MIO-GE-RJ45-IP	Single slot module for GbE. Supports pass through, VLAN tagging, or tunneling. For use in fanless SCORPION chassis types.
MIO-HDMI-IN-3G	Single slot module for converting 3G/HD HDMI to SDI. Does not support HDR signaling or HDCP. For use in fanless SCORPION chassis types.
MIO-HDMI-OUT-3G	Single slot module for converting 3G/HD-SDI to HDMI. Does not support HDR signaling or HDCP. For use in fanless SCORPION chassis types.
MIO-HDMI-IN-4K	Dual slot module for converting 4K/3G/HD HDMI to SDI. Supports HDR signaling and no HDCP. For use in fanless SCORPION chassis types.
MIO-HDMI-OUT-4K	Dual slot module for converting 4K/3G/HD-SDI to HDMI. Supports HDR signaling and no HDCP. For use in fanless SCORPION chassis types.
MIO-HDMI-IN1-4K-IP	Single 4K/3G/HD HDMI Input Module with IP Capability, dual slot. MIO-HDMI-IN1-4K-IP is only suitable for use in the SCORPION-2 Chassis.
MIO-HDMI-OUT1-4K-IP	Dual slot module for conversion of 12G/6G/3G/HD SDI or ST2110 to HDMI. Supports a subset of HDMI 2.0b without HDCP. For use in any SCORPION chassis types.

SCORPION MIO Modules

Miniature input and output modules for video, HDMI, audio, data and Ethernet signals in the SCORPION platform



Ordering Information (continued)

MIO-HDMI-2-4K-IP	Dual slot MIO module with one 4K-HDMI input and one 4K-HDMI output for use in any SCORPION chassis.
MIO-IT-IP	Dual slot module for two 4 wire intercom channels using ST2110-30 and ST2110-40. Supports unbalanced line level analog audio, RS232/422 serial, and GPIO. For use in fanless SCORPION chassis types.
MIO-MADI-2-IP	Single slot module for one bi-directional 56/64 channel MADI signal over ST2110-30 (conformance level C). For use in fanless SCORPION chassis types.
MIO-USB-A	Single slot module for USB-A HID device extension. For use in fanless SCORPION chassis types.
MIO-USB-B	Single slot module for USB-B HID device extension. For use in fanless SCORPION chassis types.
MIO-VB-2-12G	Single slot module for coaxial 12G/6G/3G/HD/SD/ASI/MADI signals. 2 paths per card (direction flexibility is chassis dependent). For use in any SCORPION chassis types.
MIO-VTR-2-12G	Single slot module for coaxial 12G/6G/3G/HD/SD/ASI/MADI signals. 2 inputs and 2 outputs per card. For use in any SCORPION chassis types (limited to 1 in 1 out in SCORPION-18 chassis types).
MIO-XPS	Dual slot module for low latency HEVC compression. Supports 1 encode and 1 decode of 3G/HD-SDI using HEVC 10b422 and transport using ST2022-2/7 or SRT. For use in any SCORPION chassis types. <i>For more information on licensing options and applicable software services, click to view the MIO-XPS data sheet online.</i>
MIO Module Suffix:	
-SA	MIO module suffix used when product ordered in SCORPION-2/4/6 chassis (exception of -IP HDMI modules)
-X18	MIO module suffix used when product ordered in SCORPION 18 series chassis (exception of -IP HDMI modules)
Enclosures:	
SCORPION-2	Silent miniature SCORPION chassis. Supports up to 2 single, or one dual slot module and up to 4 FP slots.
SCORPION-4	Silent standalone SCORPION chassis. Supports up to 4 single, or two dual slot modules and up to 4 SFP slots. Integrated crosspoint routing and gateway support for either ST2022-2/6/7 or ST2110.
SCORPION-6	Silent standalone SCORPION chassis. Supports up to 6 single, or 3 dual slot modules and up to 2 SFP slots. Integrated crosspoint routing and gateway support for either ST2022-1/2/6/7 or ST2110.
SCORPION-X18	1RU SCORPION chassis. Supports up to 18 single, or 8 dual slot modules and 18x SFP slots. Includes integrated 12G crosspoint, power module, and power brick. Frame controllers not included.