ARCHITECTURAL SPECIFICATIONS
CORIOmatrix Scaling Digital Media Switcher
CORIOmatrix and/or CORIOmatrix mini
(HDCP compliant - HDMI, DVI, VGA, Component, Composite, S-Video, SD-SDI, HD-SDI, 3G-SDI, HDBaseT. Audio, AES, RS232, RJ45 Control, Output Video Scaling Digital Media Switcher**)**

DESIGN

- Scaling Digital Media Switcher shall include a 5 year warranty with system support for 5 years after discontinuance of the product.
- Scaling Digital Media Switcher must support cross conversion of the following signals: DVI, HDMI, VGA, Component, Composite, YC, SD-HDI, HD-SDI, 3G-SDI. Scaling Digital Media Switchers that do not support cross conversion of DVI, HDMI, VGA, Component, Composite, YC, SD-HDI, HD-SDI, 3G-SDI, HDBaseT shall not be accepted.
- Scaling Digital Media Switcher must support up/down conversion of the following signals: DVI, HDMI, VGA, Component, Composite, YC, SD-HDI, HD-SDI, 3G-SDI, HDBaseT. Scaling Digital Media Switchers that do not support up/down conversion of DVI, HDMI, VGA, Component, Composite, YC, SD-HDI, HD-SDI, 3G-SDI, HDBaseT shall not be accepted.
- Scaling Digital Media Switcher must support control via RS-232. Scaling Digital Media Switchers that so not support Rs-232 shall not be accepted.
- Scaling Digital Media Switcher must support control via RJ45. Scaling Digital Media Switchers that do not support RJ45 control shall not be accepted.
- Scaling Digital Media Switcher must support scaling on all outputs. Scaling Digital Media Switchers that do not support scaling on all outputs shall not be accepted.
- Scaling Digital Media Switcher must allow less than 2 frames of delay. Scaling Digital Media Switchers that allow more than 2 frames of delay in Video shall not be accepted.
- Scaling Digital Media Switcher must be a modular based system allowing for multiple configurations of Video in and output cards. Scaling Digital Media Switchers that do not allow for modular configurations of I/O ports shall not be accepted.
- Scaling Digital Media Switcher must support Monitoring of all Inputs and outputs plus Audio meters, simultaneously, on 1 or 2 monitors. Scaling Digital Media Switchers that do not support all Input and output monitoring shall not be accepted.
- Scaling Digital Media Switcher must support Audio, embedding and de-embedding for all Inputs and Outputs. Scaling Digital Media Switchers that do not support Audio embedding and de-embedding on all I/O's shall not be supported.
- Scaling Digital Media Switcher must support AES Audio. Scaling Digital Media Switchers that do not support AES Audio shall not be accepted.
- Scaling Digital Media Switcher must support audio Break-away routing. Scaling Digital Media Switchers that do not support audio Break-away routing shall not be accepted.
- Scaling Digital Media Switcher must support Motion Compensation & 3:2 Pulldown. Scaling Digital Media Switchers that do not support Motion Compensation & 3:2 Pulldown shall not be accepted.
- Scaling Digital Media Switcher shall provide 16 slots (in 4RU) and 5 slots (in 1RU) for modular configuration where 12 slots can be an input or an output. Scaling Digital Media Switchers that do not allow for 16 slots in 4RU or 5 slots in 1RU of which 12 can be inputs or outputs shall not be accepted.
- Scaling Digital Media Switcher must be FPGA based, allowing for FW upgrades to new functionality and features. Scaling Digital Media Switchers that are not FPGA based shall not be accepted.
- Scaling Digital Media Switcher must support custom resolutions. Scaling Digital Media Switchers that do not support custom resolutions shall not be accepted.
- Scaling Digital Media Switcher must be HDCP compliant. Scaling Digital Media Switchers that are not HDCP compliant shall not be accepted.
- Scaling Digital Media Switcher must have built in true redundant power supplies. Scaling Digital Media Switchers that do not have built in true redundant power supplies shall not be accepted.

- Scaling Digital Media Switcher must support control via 3rd party controller. Scaling Digital Media Switchers that do not support 3rd party control shall not be accepted.

PROGRAMMING

- CORIOmatrix Chassis and Modules:

C3-340-1001	Chassis with 16 Slots available for Audio/Video Modules
C3-310-1001	Chassis with 5 Slots available for Audio/Video Modules plus 2 fixed Universal DVI inputs
CM-DVIU-X-2IN	Input Module - 2x DVI-U (DVI, HDMI, RGB/YPbPr, YC, CV) via DVI-I
CM-3GSDI-X-2IN	Input Module - 2x 3G/HD/SD-SDI via BNC
CM-HDSDI-X-4IN	Input Module - 4x HD/SD-SDI via BNC
CM-DVI-I-XSC-2OUT	Output Module with Scaling - 2x DVI-I via DVI-I Connectors
CM-3GSDI-XSC-2OUT	Output Module with Scaling - 2x 3G/HD/SD-SDI via BNC
CM-HDBT-XSC-2OUT-1ETH	Output Module with Scaling - 2x HDBaseT
CM-DVI-I-MON-2OUT	Monitoring Module - 2x DVI-I Connectors
CM-AUD-8IN-8OUT	Audio Interface Module - 8x Inputs and 8x Outputs via HD-44 Connector
A2-7312	Provides 8-In/8-Out AES3-id on BNCs from CM-AUD-8IN-8OUT
A2-7302	Provides 8-In/8-Out AES3 Stereo Channels on XLRs from CM-AUD-8IN-8OUT
A2-7342	Provides 4-In/4-Out Analog Stereo Channels on XLRs from CM-AUD-8IN-8OUT
CM-4RPS	Redundant PSU for 4RU Series Units - User Installable

TECHNICAL SPECIFICATIONS

ITEM	DESCRIPTION	
Computer Input	Digital DVI Analog Analog Format Analog Sync RGB Level Range Scan Rate Detection Analog Signals DVI Signals Computer Compatibility	Up to 30 via Universal DVI (HDMI & HDCP compliant) Up to 30 via Universal DVI RGBHV, RGsB, YPbPr TTL Level, 10KΩ, Pos or Neg 0.5-2.0 Vp-p Automatic PC to 1920x1080, HD to 1080p60 PC to 1920x1200, HD to 1080p60 PC, Workstations
Computer Outputs	DVI/HDMI Signals Digital HDMI Analog Analog format R-G-B Level DVI Signals Analog Signals Size and Position Settings Memory Conversion Technology Color Max. Sampling Rate Firmware Memory De-Interlacing (NTSC, PAL, 1080i) Video Comb Filter Film (NTSC, 1080i) Video Adjustments	Up to 24 via Universal DVI (HDCP compliant) Up to 24 via HDBaseT (HDCP compliant) Up to 24 via Universal DVI RGBHV, RGBS, RGsB, YPbPr 0.7 Vp-p PC to 1920x1200, HD to 1080p60 w/EDID PC to 1920x1080, HD to 1080p60 User Adjustable Non-Volatile Proprietary – CORIO®2 RGBDVI/HDMI/ YPbPr 24-bit 4:4:4, SDI 20-bit 4:2:2 162MHz Flash, Upgradable via download Pixel-level Motion Adaptive, Diagonal Interpolation. Adaptive 3:2 Pull-down Contrast, Brightness
Audio Support	Digital/Analog De-embed/embed	48kHz PCM SDI & HDMI I/O via Universal DVI – optional Audio Module with AES break-out. HDBaseT output
HD Video Resolutions supported (DVI, YPbPr, SDI)	720p (1280x720) 1035i (1920x1035) 1080i (1920x1080) 1080p (1920x1080) 1080p (1920x1080)	(23.98, 24, 25 SDI only), 29.97, 30, 50, 59.94, 60Hz 59.94, 60Hz 50, 59.94, 60Hz 23.98, 24, 25, 29.97, 30Hz 50, 59.94, 60Hz (not 4x HD-SDI input module)
Video Inputs	Television Standards Composite Video YC (S-Video) YUV /YPbPr SD/HD-SDI 3G-SDI	NTSC, PAL, PAL-M/N Up to 30 via Universal DVI Up to 30 via Universal DVI Up to 30 via Universal DVI Up to 60 via BNC Up to 30 via BNC
Video Outputs	Television Standards Composite Video YC (S-Video) YUV /YPbPr SD/HD/3G-SDI	NTSC, PAL, PAL-M/N Up to 24 via Universal DVI Up to 24 via Universal DVI Up to 24 via Universal DVI Up to 24 via BNC

	HDBaseT	Up to 24 via RJ45
3G/HD/SD-SDI	SMPTE259M-C (SD-SDI Video) SMPTE292M (HD-SDI Video) SMPTE424M (3G-SDI Video) SMPTE272M-2004 SMPTE299M-2004	270Mbps < 0.1UI jitter 525/625Line 1.485/1.4835Gbps < 0.2 UI jitter 720p, 1035i, 1080i, 1080p 2.97/2.967Gbps < 0.3 UI jitter 1080p 60/59.94 4 Stereo 24bit Audio Channels (SD-SDI Audio) 4 Stereo 24bit Audio Channels (3G/HD-SDI Audio)
Control Methods	RS-232 IP Interface Web UI	via D9 Female Connector RJ45 Connector Browser
Warranty	Limited Warranty	5 Years Parts and Labor
Regulatory Compliance	Main unit	FCC, CE, RoHS
Mechanical 4U	Size (H x W x D) Weight (Net)	7.0" x 19.0" x 13.1" 178 x 482 x 334mm Approx. 15Kg (33 lbs.) (with redundant PSU option)
Mechanical 1U	Size (H x W x D) Weight (Net)	1.75" x 19.0" x 13.25" 45 x 482 x 336mm Approx. 5Kg (11.03 lbs)
Environmental	Operating Temperature) Operating Humidity Storage Temperature) Storage Humidity MTBF 4U MTBF 1U	0º to +40º C (+32º to +104º F) 10% to 85%, Non-condensing -10º to +70º C (+14º to +158º F) 10% to 85%, Non-condensing Approximately 35,000 hours Approximately 50,000 hours
Power Requirement	Internal Power Supply Redundancy	110v to 240v auto-detecting Optional Internal Hot Swap PSU
Power Consumption	C3-340 C3-310	300 watts maximum (fully populated chassis) 125 watts maximum (fully populated chassis)
BTU	C3-340 C3-310	1024 BTU/hr 427 BTU/hr
Accessories Included	1x Operations Manual 1x Power cable Control Software	 US, UK, Euro or AU WebUI, no software required to install