OVERVIEW

CORIO**master2** (CM2-547) is a powerful, efficient approach to building large 4K/8K video display systems. Multiple video windows can be positioned on LED, display based videowalls or projector edge blends, displaying any of the sources connected to CORIO**master2**. Windows can be visually "transitioned" into position, resized or rotated to any proportion allowing designers to achieve striking visual effects. Each system can support up to three separate 4.1 Gigapixel video canvasses with up to sixty four windows per canvas depending upon the source resolution, frame rate and size of windows. **CORIO**grapher, the control software for the CORIO**master2** series of processors, is a simple, easy to use design interface that enables window and source positioning and transition effects. This dynamic feature is easily managed through presets in **CORIO**grapher or by simple commands executed by third party control systems. Fifty presets can be saved permanently in the system.

KEY FEATURES

- Patented CORIO® video processing technology
- 752Gbit system bandwidth (360Gbit output bandwidth)
- Up to 128 windows per system (40 x 4K60 total)
- Up to 64 windows per canvas
- Manage up to 3x 4.1 Gigapixel canvases (over 12 Gigapixels of design space)
- 4RU frame size
- Modular (8x Video Input Slots, 7x Video Output Slots and 1x Audio Slot
- Cascadable (future expansion – requires additional expansion module)
- Field upgradable (flash, upgradeable via download)
- Low power consumption when compared to PC based systems
- Uses **CORIO**grapher, an easy to use and powerful software interface
- **CORIO**grapher live dashboard to switch presets and window sources
- Automatically discover device on the network using **CORIO**discover
- Simultaneous output from 4 to 28x 4K60 outputs and 1 to 20x 4K60 Inputs
- Simultaneous output from 4 to 28x 4K30 outputs and 2 to 24x 4K30 inputs
- From 8 to 56x full HD outputs and 2 to 32x full HD inputs
- Windows and displays can be rotated in 1° increments
- Versatile DVI inputs: (HDMI/DVI/CV/YC/RGB/YPbPr)
- 4K60 input & output modules
- HDMI outputs: (8x 1080P60 or 4x 4K60 modules available)
- 4K HDBaseT inputs
- SDI inputs SD/HD-SDI/3G-SDI to 1080p60

- H.264/H.265 4K/30 Streaming Media & 4K Playback Input Module
- High resolution analog inputs
- HDMI inputs & outputs with HDCP handling
- Combination of different size and resolution of displays can be used
- Customizable bezel compensation
- Multi-edge blending of projectors
- Up-down-cross conversion
- EDID manager
- Secure command interface
- REST API
- Real-time status feedback through events
- Simple serial control protocol
- Command line interface – third party control
- Crestron modules available
- IP decoding low latency mode
- IP stream labelling
- Audio support (one stereo pair per canvas)
- Audio module to embed and de-embed
- Custom resolution editor
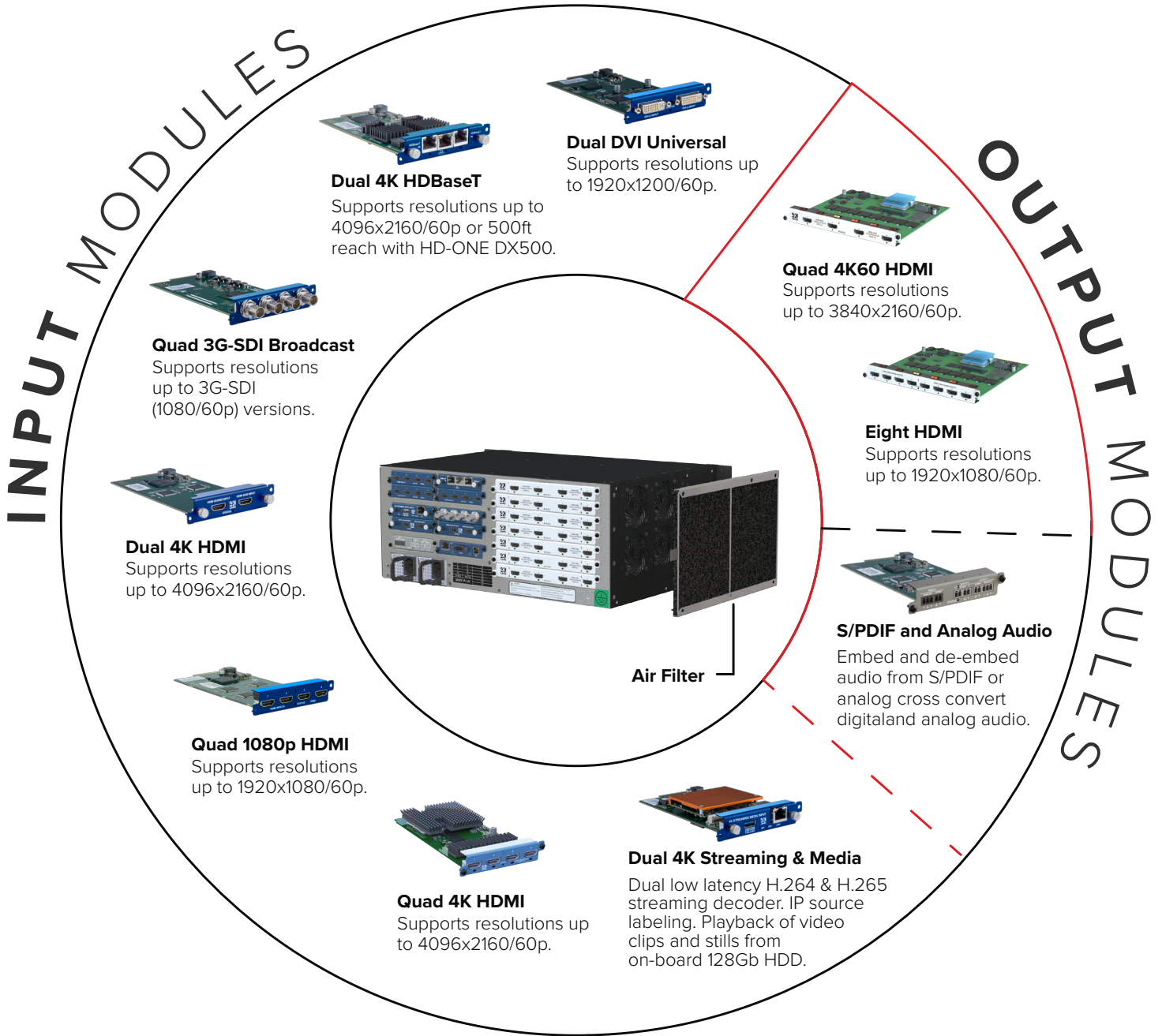- Framelock and synclock
- 8HD synchronized playback

OPTIONS

- Dual redundant power supply (load balanced)
- Universal DVI adapters
- Optional air inlet filter
- Onsite system commissioning (US Only)

Requestable Items
4RU CORIO**master2** chassis
Quad 3G-SDI input
Dual 4K Streaming Media Input 128GB SSD
DVI-U input 2x (DVI, RGB/YUV, CV, YC via DVI-I)
HDMI 1080P input 4x
HDMI 4K input 2x
HDMI 4K input 4x
HDBT 4K input 2x (and single ethernet)
Audio I/O module - analog (1xIN, 1xOUT), SPDIF (1xIN, 3xOUT) via terminal block
HDMI 4K output 4x
HDMI 1080P output 8x
Optional dual redundant, hot swappable power supply (400w or 700w load balanced)
Onsite system commissioning (US Only)

Modular Flexibility

CORIO**master2** can accommodate numerous I/O configurations in the eight input and seven output video slots available; when inserted, the modules are automatically recognized & configured. This flexibility allows end user configurations to be based on their own needs.

INPUT MODULES

OUTPUT MODULES

Dual 4K HDBaseT
Supports resolutions up to 4096x2160/60p or 500ft reach with HD-ONE DX500.

Dual DVI Universal
Supports resolutions up to 1920x1200/60p.

Quad 3G-SDI Broadcast
Supports resolutions up to 3G-SDI (1080/60p) versions.

Quad 4K60 HDMI
Supports resolutions up to 3840x2160/60p.

Dual 4K HDMI
Supports resolutions up to 4096x2160/60p.

Eight HDMI
Supports resolutions up to 1920x1080/60p.

Quad 1080p HDMI
Supports resolutions up to 1920x1080/60p.

Air Filter

S/PDIF and Analog Audio
Embed and de-embed audio from S/PDIF or analog cross convert digitaland analog audio.

Quad 4K HDMI
Supports resolutions up to 4096x2160/60p.

Dual 4K Streaming & Media
Dual low latency H.264 & H.265 streaming decoder. IP source labeling. Playback of video clips and stills from on-board 128Gb HDD.

ADAPTORS

For use with legacy AV formats

| HDMI | CV | Analog PC | YC (S-Video) | Analog RGBHV | YPbPr/YUV |

SPECIFICATIONS

Video Processing Power

Parallel Processing Architecture	Yes
CORIO Video Processing	Yes
Up/Down/Cross Conversion	Yes
Number of Canvasses	3
Display Size Compensation	Yes, different sizes in video walls*1
Output Rotation	Yes for any outputs and windows
Projector Edge Blending	Yes
HDCP Key Handling	Yes

Video Inputs

Analog	Up to 16x via Universal DVI, Format RGBHV, RGBS, RGsB, YPbPr Composite Video - Up to 16x via DVI-U YC (S-Video) - Up to 16x via DVI-U YUV /YPbPr - Up to 16x via DVI-U Television Standards - NTSC, PAL
Digital DVI	Up to 16x via Universal DVI (HDMI & HDCP compatible)
HDMI	Up to 32x (HDCP compatible)
4K HDMI	up to 24x 4K30 or 20x 4K60
HDBaseT + Ethernet	Up to 8x 4K30 plus 8x 1080p/30 plus 8x ethernet via RJ45
3GSDi	Up to 32x 1080P/60 via BNC
IP	Up to 16x 1080P/30 or 8x 4K30 plus 8x 1080p/30 (IP Stream)

Supported Input Resolutions (depends on modules fitted)

(640x480P) 60/72/75/85Hz
(720x487i) 59.94Hz
(720x480i) 59.94Hz
(720x480P) 59.94Hz
(720x576i) 50Hz
(800x600P) 56, 60, 72, 75, 85Hz
(980x980P) 75Hz
(1024x768P) 60, 70, 75, 85Hz
(1152x864P) 70, 75Hz
(1280x720P) 23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz*2
(1280x768P) 60, 75, 85Hz (1280x800p) 60, 75, 85Hz
(1280x960P) 60, 85Hz
(1280x1024P) 50, 60, 75, 85Hz
(1360x768P) 60Hz
(1366x768P) 60Hz
(1400x900P) 60Hz
(1400x1050P) 50, 60, 75Hz
(1440x900P) 60, 75, 85Hz
(1600x900P) 60Hz
(1600x1200P) 60Hz
(1680x1050P) 60Hz
(1920x720P) 50, 59.94, 60Hz
(1920x1080i) 47.96, 48, 50, 59.94, 60Hz
(1920x1080P) 23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz
(1920x1200P) 50, 60Hz
(3840x2160P) 23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz
(4096x2160P) 23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz

Video Outputs

HDMI	Up to 56x 1080P/60 HDCP 2.2 compatible
4K HDMI	Up to 28x 4K60, HDCP 2.2 compatible
Size and Position	User Adjustable
Conversion Technology	Proprietary CORIO®
Color	HDMI 24-bit 4:4:4

Supported Output Resolutions (depends on modules fitted)

(1280x720P) 50, 60Hz
(1920x1080i) 50, 60Hz
(1920x1080P) 23.98, 24, 25, 29.97, 30, 50, 60, 119.88, 120Hz
(3840x2160P) 23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz

AV over IP (up to 8x module cards)

Interface	1 x GbE Ethernet Port
IP Video Decoding	H.264 (Main, High), MPEG4, H.265/HEVC (Main) 8-bit
IP Bit Rates	Up to 16x streams up to 50Mbit H264, 25Mbps H265 per stream (dual stream)
Color Depth	4:2:0, 4:2:2
Supported IP Resolutions	Configurable to 3840x2160/30
Unicast Streams	RTSP, RTMP, HTTP, MPEG-TS
Multicast Streams	RTSP, MPEG-TS

Media/Images

Still Image	JPEG, PNG, BMP
Interfaces	Up to 8x USB3.0, Internal Storage, Network
Video Codecs	H.264 (CBP, Main, High), H.265/HEVC (Main)
Video Formats	mp4, mov, mkv, m4v, ts, mts, m2ts, mt2, mpeg2
Playback Bit Rates (Streaming and Media Playback)	H264 total data handling 100Mbs, single channel up to 50Mbps @4K30 (2nd render HD). H265 total data handling 50Mbps, single channel up to 25Mbps @4K30 (2nd render HD)

File Playback Resolutions Supported

Up to 3840x2160@30fps	Up to 8x (1x per module with 2nd render HD)
Up to 1080p60@60fps	Up to 16x (2x per module)
Up to 8x 7680 x 4320	Still images *(scaled to 4K)

Media Handling

External	Up to 8x USB 3.0 interface
Supported devices	Flash file systems FAT, FAT32, ext3, ext4, NTFS
Internal	High-speed storage up 128GB per module
Remote	File transfer supported

Control Methods

RS-232 via D9 Female Connector
IP Interface RJ45 Connector for both HTTP(s)

CPU Module

Settings Memory	Non-Volatile

Warranty

Limited Warranty 5 Years Parts and Labor

Regulatory Compliance

Main unit FCC, CE, RoHS, ULc

Mechanical

Size (H x W x D)	7.0" x 17" x 12.09", (178mm x 432mm x 307mm), (D) including PSU Handle 12.99" (330mm), (W) including rack ears 19" (483mm)
Weight (Net)	Approx. 22 lbs (10Kg) Chassis Without Modules but included 1x Power Supply

Environmental

Operating Temperature	32° to 104°F (0° to +40°C)
Operating Humidity	10% to 85%, Non-condensing
Storage Temperature	14° to +158°F (-10° to +70°C)
Storage Humidity	10% to 85%, Non-condensing
BTU	1365 BTU (400W), 2390 BTU (700w)
Fan Noise	32 to 64 db

Power

Internal Power Supply	110v to 240v auto-detecting
Redundancy	Optional Internal Hot Swap PSU with load balancing.
Consumption	400W or 700W depending upon version

Specifications subject to change

*1 using different sized monitors in the same wall can degrade picture quality
*2 DVI input module only supports 720p frame rates 50, 59.94 & 60Hz