OVERVIEW

CORIO**master2** LITE (CM2-541) is a powerful video processor capable of simultaneous Inputs and Outputs at up to 4K60 resolution. Multiple video windows can be positioned on Direct View LED display based video walls and projector edge blends, displaying any of the sources connected to CORIO**master2** LITE. Windows can be visually "transitioned" into position, scaled and rotated to any proportion allowing designers to achieve striking visual effects. Each system can support a single 4.1 Gigapixel video canvas with up to sixty four windows of HQ quality, 32 EHQ, up to 16 4K60 or mixtures of these. Display devices can be freely positioned and set up on the canvas mimicking the real world installation and allowing windowed content to then be displayed wherever required. **CORIO**grapher, the control software for the CORIOmaster2 LITE, 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.

This product is not available in North America.

KEY FEATURES

- Patented CORIO® video processing technology
- Up to 64 windows per system (16 x 4K60 total)
- Manage a single huge 4.1 Gigapixel canvas
- 4RU frame size
- Modular (2x Video Input Slots, 1x Video Output Slot and 1x Audio Slot)
- Low power consumption when compared to PC based systems
- Uses **CORIO**grapher, an easy to use and powerful software interface
- **CORIO**grapher control dashboard to switch presets and window sources in real time
- Automatically discover device on the network using **CORIO**discover
- 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 1080p 60 or 4x 4K60 modules available)
- 4K HDBaseT inputs
- SDI inputs SD/HD-SDI/3G-SDI to 1080p 60
- Luminance Keying feature available on all outputs
- H.264/H.265 4K30 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 downloadable plug-in 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 (using Dual 4K Streaming & Media module)

OPTIONS

- Dual redundant power supply (load balanced)
- Universal DVI adapters
- Optional air inlet filter
- Optional audio module

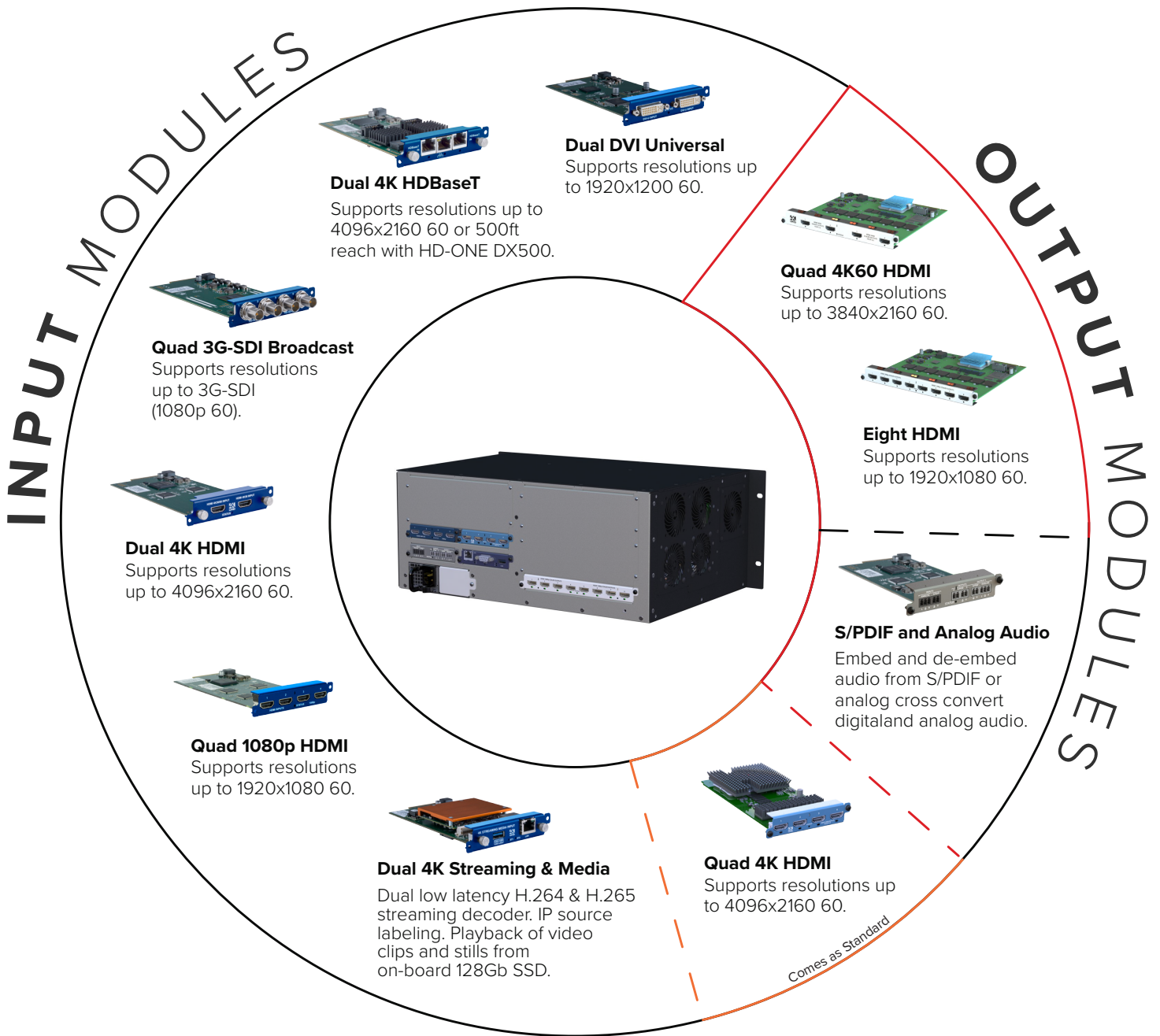| Requestable Items |
| --- |
| 4RU CM2-541 CORIO**master2** chassis |
| Quad 3G-SDI input |
| Dual 4K Streaming & Media Input 128GB SSD |
| DVIU input 2x (DVI, RGB/YUV, CV, YC via DVI-I) |
| HDMI 1080p input 4x |
| HDMI 4K30 input 2x (or single 4K60) |
| HDBT input 2x HD (up to 4K with one input) (and single ethernet) |
| Audio I/O module - analog (1xIN, 1xOUT), SPDIF (1xIN, 3xOUT) via terminal block |
| HDMI 4K60 output 4x |
| HDMI 1080p output 8x |
| Optional dual redundant, hot swappable power supply (400w load balanced) |

Variants	
CM2-541-3A1	1 x 4K2IN + 1 x 4K4IN + 1 x 4K4OUT
CM2-541-4A1	1 x 2K4IN + 1 x 4K4IN + 1 x 4K4OUT
CM2-541-5A1	1 x HDBT2IN + 1 x 4K4IN + 4K4OUT
CM2-541-6A1	1 x DVIU2IN + 1 x 4K4IN + 1 x 4K4OUT
CM2-541-7A1	1 x AVIP2IN + 1 x 4K4IN + 1 x 4K4OUT
CM2-541-8A1	1 x 3GSDI4IN + 1 x 4K4IN + 1 x 4K4OUT
CM2-541-3A2	1 x 4K2IN + 1 x 4K4IN + 1 x 8HDOUT
CM2-541-4A2	1 x 2K4IN + 1 x 4K4IN + 1 x 8HDOUT
CM2-541-5A2	1 x HDBT2IN + 1 x 4K4IN + 1 x 8HDOUT
CM2-541-6A2	1 x DVIU2IN + 1 x 4K4IN + 1 x 8HDOUT
CM2-541-7A2	1 x AVIP2IN + 1 x 4K4IN + 1 x 8HDOUT
CM2-541-8A2	1 x 3GSDI4IN + 1 x 4K4IN + 1 x 8HDOUT

Modular Flexibility

CORIO**master2** LITE can accommodate numerous I/O configurations in the one configurable input and one configurable output video slots available; when inserted, the modules are automatically recognized & configured. A quad 4K60 input module comes pre-configured as standard. 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 60 or 500ft reach with HD-ONE DX500.

Dual DVI Universal
Supports resolutions up to 1920x1200 60.

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

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

Eight HDMI
Supports resolutions up to 1920x1080 60.

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

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

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

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 SSD.

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

Comes as Standard

ADAPTORS

For use with legacy AV formats

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

tvONE®

CM2-541
Specification Sheet Version 1.0
www.tvone.com

Video Processing Power

Parallel Processing Architecture	Yes
CORIO Video Processing	Yes
Up/Down/Cross Conversion	Yes
Number of Canvasses	1
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 2x via Universal DVI, Format RGBHV, RGBS, RGsB, YPbPr Composite Video - Up to 4x via DVI-U YC (S-Video) - Up to 4x via DVI-U YUV /YPbPr - Up to 4x via DVI-U Television Standards - NTSC, PAL
Digital DVI	Up to 2x via Universal DVI (HDMI & HDCP compatible)
HDMI	Up to 8x (HDCP compatible)
4K HDMI	up to 6x 4K30 or 5x 4K60
HDBaseT + Ethernet	Up to 1x 4K30 plus 1x 1080p 30 plus 1x ethernet via RJ45
3GSDI	Up to 4x 1080p 60 via BNC
IP	Up to 2x 1080p 30 or 1x 4K30 plus 1x 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, 60, 120Hz
(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 8x 1080p 60 HDCP 2.2 compatible
4K HDMI	Up to 4x 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 1x 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 2x streams up to 50Mbit H.264, 25Mbps H.265 per stream (dual stream)
Color Depth	4:2:0, 4:2:2
Supported IP Resolutions	Configurable to 3840x2160p 30
Unicast Streams	RTSP, RTMP, HTTP, MPEG-TS
Multicast Streams	RTSP, MPEG-TS

Media/Images

Still Image	JPEG, PNG, BMP
Interfaces	USB 3.0, 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)	H.264 total data handling 100Mbs, single channel up to 50Mbps @4K30 (2nd render HD). H.265 total data handling 50Mbps, single channel up to 25Mbps @4K30 (2nd render HD)

File Playback Resolutions Supported

Up to 3840x2160p 30	1x per module with 2nd render HD(2x 4K30 outputs in synchronized mode)
Up to 1080p 60	Up to 2x per module
7680 x 4320	Still images *(scaled to 4K)

Media Handling

External	USB 3.0 interface
Supported devices	Flash file systems FAT, FAT32, ext3, ext4, NTFS
Internal	High-speed storage 128GB
Remote	File transfer supported (FTP)

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)

Power

Internal Power Supply	100v to 240v auto-detecting
Redundancy	Optional Internal Hot Swap PSU with load balancing.
Consumption	400W

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