

# CORIO®master

All-in-one creative versatile video experiences



The world's most advanced family of video processors providing the ultimate creative video experience. CORIOmaster systems offer anything in, anything out capability in glorious, eye-popping 4K quality.



# Powerful Performance and Features

CORIOmaster is a modular 4K video processor with high quality CORIO scaling across 4 video walls. Mixed input resolutions, pixel perfect window placement, source and screen orientations, bezel adjustment, edge-blending and customizable output resolutions all contribute to CORIOmaster being the most flexible video wall processor platform available. CORIOmaster manages four display canvases while simultaneously sharing sources across the canvases.

## Versatile— manage four simultaneous video walls



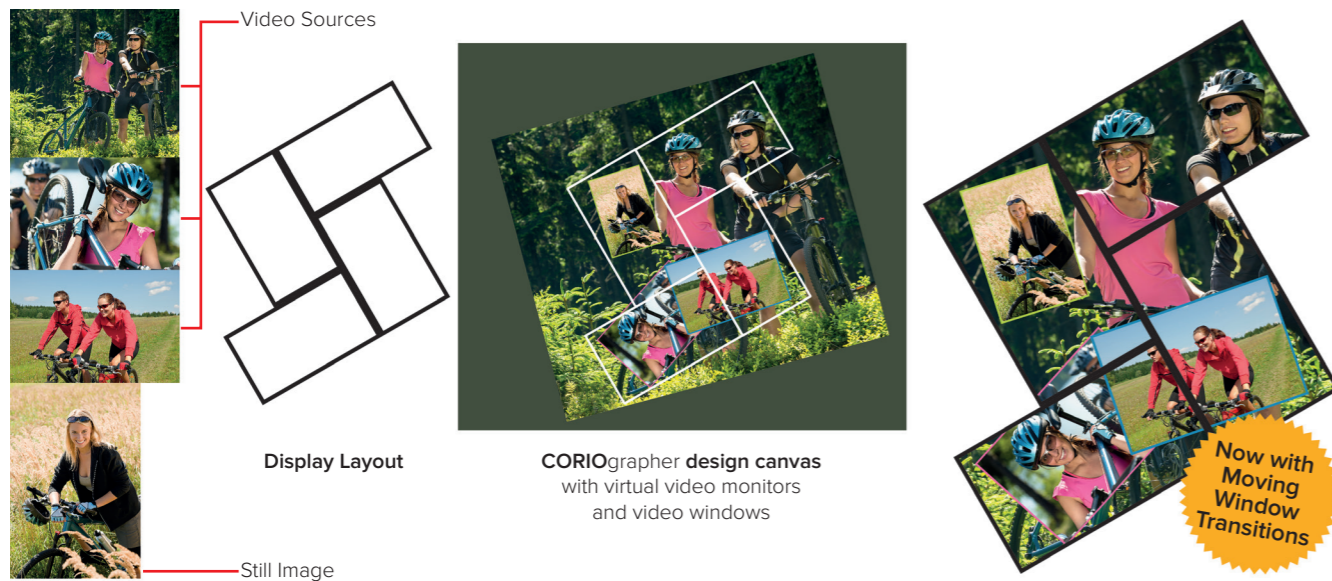
2x2 Video Wall

2x3 Video Wall

Rotation Video Wall

Edge-Blended Wall

## Source & Display Flexibility



Using edge-blending, bezel compensation and a user defined display library, our creative and powerful video experiences give you the WOW factor! Adding to creativity, CORIOmaster allows multiple video windows that can be positioned, resized and rotated in 1° increments. Transitions, including animations and fade through black, add further to creating eye catching experiences. CORIOmaster provides this high powered performance while low on power consumption and noise.

## Design Simplicity

CORIOgrapher is the creative video wall software for CORIOmaster, CORIOmaster mini and CORIOmaster micro. Design walls offline or online and connect to multiple video walls. Define your displays and video windows precisely to your desired size (mm/ in) and save to your library for later use. Also, mix streaming video with 4K files and still images into a single playlist. For LED walls, switch to pixel mode to enable the exact mapping of your content. The software's real-time dashboard view allows for instant triggering of multi-window presets and transitions of which up to fifty can be stored and controlled.



## Input & Output Modules

CORIOmaster can easily be populated with input and output modules to match your source and display requirements

### Dual 3G-SDI broadcast input module

- Supports resolutions up to 1080p/60



### Streaming media and 4K Playback input module

- Dual network streaming, 4K local and USB playback of clips and stills



### Dual HD-SDI broadcast input module

- Supports resolutions up to 1080p/30



### Dual 3G-SDI output module

- Supports resolutions up to 1080p/60



### Dual 4K HDBaseT input module

- Supports resolutions up to 4096x2160
- 100BaseT input for control applications
- Pair with tvONE's Magenta HD-ONE HDBaseT transmitter for 150m reach - guaranteed over Cat6 cable!



### Dual DVI-I Scaled output module

- Supports resolutions up to 1920 x 1200/60p
- Supports HDMI, DVI-D and HD15/VGA using adaptors



### Dual 4K HDMI input module

- Allows resolutions up to 4096 x 2160



### Dual HDBaseT scaled output module

- Supports resolutions to 1920 x 1200/60p
- 100BaseT input for control applications
- Pair with tvONE's Magenta HD-ONE HDBaseT receiver for 150m reach - guaranteed over Cat6 cable!



### Dual DVI Universal input module

- Supports resolutions to 1920 x 1200/60p
- Supports HDMI, DVI-D, HD15/VGA, YC (S-video) & analog (RGBHV or YPbPr) using DVI-U adaptors



### 4K HDMI scaled output module

- Supports all resolutions to 3840 x 2160/30p



## DVI Adapters



## Support Services

The tvONE support team is available to support you from system design to installation and a full after care service.

### Support

- Our experienced support engineers are available to help.
- Get in touch by phone, email or request a site visit.
- Zero license fees or recurring costs of maintenance and software upgrades.
- Access to comprehensive knowledge database and a support ticketing system.

### Training

- Understand how to proficiently design and operate CORIOmaster.
- Available as hands on training, remote training or video clips.
- CTS accredited training academy is available at our UK & US offices.

### Commissioning

- A full commissioning service by tvONE engineers for the ultimate peace of mind.

### Repair

- Reliable system diagnosis by our knowledgeable engineers.
- Fast repair of any mainframes or modules.
- 5-year warranty period.

### Design

- Validation of your requirements to select the most suited CORIOmaster configuration.
- Offline design of your CORIOmaster using CORIOgrapher software.
- Get the very best from your installation. Save time & money.



# CORIOmaster Family

## CORIOmaster

CORIOmaster can easily be populated with input and output modules to match your source and display requirements

- 4RU, 16 Module capacity
- High quality low latency performance guaranteed
- Bandwidth can support 4 videowalls
- Dual redundant PSU option



## CORIOmaster micro

Even smaller form factor with the same power!

- Super compact size
- 3 Module capacity

## CORIOmaster mini

Smaller form factor, same amazing capabilities!

- 1RU, 6 Module capacity
- Fixed dual DVI-U inputs

## Specifications

Video Processing Power	
Parallel Processing Architecture	Yes
CORIO3 Video Processing	Yes
Real Time Video Quality	Yes
Up/Down/Cross Conversion	Yes
Number of Video walls	C3-503 x 2, C3-510 x 4, C3-540 x 4
Display Size Compensation	Yes, different sizes in video walls
Output Rotation	Yes for any outputs and windows
Projector Edge Blending	Yes
HDCP Key Handling	Yes
Computer Input	
Digital DVI via Universal DVI *	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
Analog via Universal DVI	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
Analog Format	RGBHV, RGBS, RGsB, YPbPr
Analog Sync	TTL Level, 10KΩ, Pos or Neg
RGB Level Range	0.5-2.0 Vp-p
Scan Rate Detection	Automatic
Analog Signals	PC to 1920x1080, HD to 1080p60
DVI Signals	PC to 1920x1200, HD to 1080p60
Max Horiz Scan Rate	150kHz
Computer Outputs	
DVI-H Signals via DVI-I *	C3-503 up to 10, C3-510 up to 10, C3-540 up to 28
Analog via DVI-I	C3-503 up to 10, C3-510 up to 10, C3-540 up to 28
Analog format	RGBHV, RGBS, RGsB, YPbPr
R-G-B Level	0.7 Vp-p
DVI Signals	PC to 1920x1200, HD to 1080p60 w/EDID
Analog Signals	PC to 1920x1080, HD to 1080p60
Size and Position	User Adjustable
Settings Memory	Non-Volatile
Conversion Technology	Proprietary – CORIO®3
Color	RGB 24-bit 4:4:4, YPbPr 20-bit 4:2:2, SDI 20 bit 4:2:0
Max. Sampling Rate	162MHz
Firmware Memory	Upgradeable via download.
Video Comb Filter	Adaptive
Video Adjustments	Contrast, Brightness, RGB Gamma
HD Video Resolutions supported (DVI, YPbPr, SDI and HDBaseT)	
720p (1280x720) †	23.98, 24, 25, 29.97, 30, 50, 59.94, 60Hz
1035i (1920x1035)	59.94, 60Hz
1080i (1920x1080)	50, 59.94, 60Hz
1080p (1920x1080)	23.98, 24, 25, 29.97, 30Hz
1080p (1920x1080)	50, 59.94, 60Hz
4K Video Input Resolutions supported (via HDMI and HDBaseT)	
3840x2160 4:4:4	23.98/24/25/29.97/30Hz 8-bit
3840x2160 4:2:0	50/59.94/60Hz 8-bit
4096x2160: 4:2:0	50/59.94/60Hz 8-bit
4K Video Output Resolutions supported (via HDMI)	
3840x2160	4:4:4 23.98/24/25/29.97/30Hz 8-bit
Video Inputs	
Television Standards	NTSC, PAL
Composite Video via DVI	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
YC (S-Video) via DVI	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
YUV /YPbPr via DVI	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
SD-SDI/HD-SDI via BNC	C3-503 up to 8, C3-510 up to 16, C3-540 up to 56
SD-SDI/HD-SDI/3G-SDI via BNC	C3-503 up to 4, C3-510 up to 8, C3-540 up to 28
4K/30 via HDMI & HDBaseT ‡	C3-503 up to 4, C3-510 up to 8, C3-540 up to 28
4K60 via HDMI & HDBaseT ‡	C3-503 up to 2, C3-510 up to 4, C3-540 up to 14
HDBaseT via RJ45	C3-503 TBD, C3-510 TBD, C3-540 TBD
AV over IP	
Module cards supported	C3-503 up to 2, C3-510 up to 2, C3-540 up to 4
Interface 1 GbE Ethernet Port	C3-503 up to 2, C3-510 up to 2, C3-540 up to 4
IP Video Decoding	H.264 (CBP, Main, High), H.265/HEVC1 (Main)
IP Bit Rates up to 25Mbps per stream	C3-503 up to 4 streams, C3-510 up to 4 streams, C3-540 up to 8 streams
Colour Depth	4:2:0, 4:2:2
Supported IP Resolutions	Configurable to 1920x1080p60
Unicast Streams	RTSP, RTMP, HTTP, MPEG-TS
Multicast Streams	RTSP, MPEG-TS

Media/Images	
Interfaces	USB3.0, Internal Storage <sup>1</sup> , Network <sup>1</sup>
Video Codecs	H.264 (CBP, Main, High), H.265/HEVC1 (Main)
Video Formats	mp4, .mov, .mkv, .m4v, .ts, .mts, .m2ts, .m2
Playback Bit Rates	Single stream to 100Mbps (per module), Dual Streams to 400Mbps (per module)
File Playback Resolutions Supported	
Up to 3480x2160@30fps	C3-503 up to 2, C3-510 up to 2, C3-540 up to 4
Up to 1080p60@60fps	C3-503 up to 2, C3-510 up to 2, C3-540 up to 4
Up to 7680 x 4320	Still Images <sup>2</sup>
Media Handling	
External USB 3.0 Interface	C3-503 up to 2, C3-510 up to 2, C3-540 up to 4
Supported devices	Flash file systems FAT, FAT32, ext3, ext4, NTFS
Internal	High speed storage up to 128GB <sup>3</sup> per module
External	File transfer supported <sup>3</sup>
Video Outputs	
YUV /YPbPr via DVI-I	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
SD-SDI/HD-SDI/3G-SDI via BNC	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
HDBaseT via RJ45	C3-503 up to 4, C3-510 up to 10, C3-540 up to 28
4K via HDMI	C3-503 up to 2, C3-510 up to 5, C3-540 up to 14
3G/HD/SD-SDI	
SMPT259M-C (SD-SDI Video)	270Mbps < 0.1UI jitter
SMPT292M (HD-SDI Video)	525/625Line
SMPT424M (3G-SDI Video)	1.485/1.4835Gbps < 0.2 UI jitter
SMPT424M (3G-SDI Video)	720p, 1035i, 1080i, 1080p
SMPT424M (3G-SDI Video)	2.97/2.967Gbps < 0.3 UI jitter
SMPT424M (3G-SDI Video)	1080p60/59.94
Still Image Support	
Up to 7680x4320	Rendered to 4K
Still Image file	
	JPEG, PNG, BMP
Control Methods	
RS-232	via D9 Female Connector
IP Interface	RJ45 Connector
Warranty	
Limited Warranty	5 Years Parts and Labor
Regulatory Compliance	
Main unit	FCC, CE, RoHS, UL
Mechanical C3-540	
Size (H x W x D)	7.0" x 19.0" x 13.1" (178 x 482 x 334mm)
Weight (Net)	Approx. 15Kg (33 lbs) (with redundant PSU option)
Mechanical C-3-510	
Size (H x W x D)	1.73" x 8.54" x 9.61" ( 44 x 217 x 244mm )
Weight (Net)	5Kg (11.03 lbs) (with redundant PSU option)
Mechanical C3-503	
Size (H x W x D)	1.73" x 19.0" x 13.1" (178 x 482 x 334mm)
Weight (Net)	TBD
Environmental	
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	10% to 85%, Non-condensing
Storage Temperature	-10° to +70° C (+14° to +158° F)
Storage Humidity	10% to 85%, Non-condensing
MTBF	Approximately 50,000 hours
Power Requirement	
Internal Power Supply	110v to 240v auto-detecting
Redundancy	Optional Internal Hot Swap PSU (C3-540 only)
Power Consumption	
C3-540	300 watts maximum (fully populated chassis)
C3-510	125 watts maximum (fully populated chassis)
C3-503	60 watts maximum (fully populated chassis)
BTU	
C3-540	1024 BTU/hr
C3-510	427 BTU/hr
C3-503	205 BTU/hr
Accessories Included	
1x Operations Manual	
1x Power cable	US, UK, Euro or AU
Control Software	USB Flash Drive & Downloadable from Website

\*HDMI & HDCP compatible

†DVI input module only supports 720p frame rates 50, 59.94 & 60Hz

‡HDBaseT input capacity is not yet determined

<sup>1</sup>Planned update via Firmware, <sup>2</sup> Images will be rendered to 4K, <sup>3</sup> Future Release Specifications are subject to change without notice.



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