

CORIO®master C3-540 Series



Key Features

- Patented CORIO®3 Videowall processing technology
- Manage up to 4 videowalls
- Uses CORIOgrapher v2; simple powerful software interface
- Live dashboard to switch presets and window sources
- **NEW** 4K Input & Output modules
- **NEW** Custom Resolution Editor with resolutions auto detected on inputs & selectable on the outputs
- CORIOdiscover application to create custom resolutions, auto discover devices on the network, firmware updates and communication settings for each system
- Outputs rotated in 1° increments
- Combination of different size and resolution of displays can be used
- Adjustable bezel compensation
- Edge blending of projectors
- Universal DVI Inputs: (HDMI/DVI/CV/YC/RGB/YPbPr)
- DVI-I Outputs: (HDMI/DVI/RGB/YPbPr)
- HDBaseT Outputs
- SDI Inputs and Outputs: SD/HD-SDI/3G-SDI to 1080p60
- High Resolution Inputs/Outputs: Analog: PC to 1920x1080, HDTV to 1080p/60
- DVI: PC to 1920x1200, HDTV to 1080p/60 w/EDID
- HDMI-Compliant input & output with HDCP handling
- Video signal parameter adjustments
- Horizontal alignment on analog PC inputs
- Up-Down-Cross Conversion
- Control: RS-232, IP
- Command Line Interface – Third party control
- AMX & Crestron modules available
- 4RU Frame size
- Modularity Provides Flexible I/O

Options

- Redundant Hot-swappable power supplies
- Rear rackmount supports
- Universal DVI adapters

C3-540 CORIOmaster offers a new, more efficient approach to building Videowall systems. Using tvONE's latest CORIO®3 technology, it gives the user access to new levels of video processing power to achieve new heights of creative and dynamic videowall displays. All this is possible in one 4RU chassis

Multiple windows can be used on a video wall to display the physical inputs into CORIOmaster. Windows can be sized to fit the wall or multiple windows added, resized and rotated 360 degrees on the video wall independent of the output rotation. Each system can support up to 4 separate videowalls and each video wall can have up to 14 windows depending on the source resolution, frame rate and size of windows.

New 4K Input & Output Modules

The addition of 4K support consists of two new modules; HDMI 2.0 4K60 input module and the HDMI 1.4 4K30 scaling output module, both allowing resolutions up to 3840x2160.

New Transition Effects

CORIOgrapher v2, the control software for the CORIOmaster and CORIOmaster mini videowall processors now has included simple easy to use window and source transition effects. This new animation feature is controlled by presets in the system. Transition effects occur not only by selecting presets in CORIOgrapher but also by third part control systems.

Building of presets in the system now save one or any combination of the following window transition effects as part of a single preset:

- Preset Duration – 0 to 60.0 seconds

Individual windows on the videowall can transition to different sources by:

- Fade through Black – Source change occurs in black
- Horizontal Shrink and Expand – Image shrinks horizontally with source change in the middle and then expands back to previous window size
- Vertical Shrink and Expand – image shrinks vertically with source change in the middle and then expands back to previous window size
- Spin – Both left and right rotation up to 7 times in either direction with source change in the middle of the duration.

The following effects can be applied to up to 14 windows on the video wall simultaneously in addition to each source transition.

- Size – Windows can be sized accordingly and saved in the preset
- Rotation – Windows can be rotated independent of Source Spin in 359°/+359°.
- Movement – place a window in the desired location on the videowall.

When a preset is recalled the transition parameters will automatically occur and be smoothly applied over the duration set in each preset from the current state of the windows. Presets can be created and selected sequentially for precise control of desired effects.

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DVI Modules

tvONE Universal DVI modules allow for direct connections to most common analog or digital sources and destinations.

Custom DVI-I adapters provide connections for: Composite, S-Video, component, VGA, RGBHV and HDMI (DVI-D connects directly).

A DVI module provides 2 connections per AV Slot.

- Universal DVI Input Module
- DVI Scaling Output Module, Same as Universal DVI minus the CV and S-video capability.

HDBaseT Module

- HDBaseT Scaling Output Module - 2 HDBaseT Outputs w/Ethernet

SDI Modules

- 3G/HD/SD-SDI Input Module - 2 Inputs
- HD/SD-SDI Input Module - 4 Inputs
- 3G/HD/SD-SDI Scaling Output Module - 2 Outputs
The scaling 3G/HD/SD-SDI output module allows any source to be converted to SD-SDI, HD-SDI or 3G-SDI for output.**

4K Modules

- 4K30/60 Input module – 2 inputs
- 4K30 Scaling Output module – 1 output

Additional HDMI resolutions support on both the input and output

Future Modules

Additional types and formats of modules will be added.

Main Chassis

C3-540-1001 Main Chassis w/Blank Front Panel
16 Slots available for Video Modules
Up to 32 I/O for DVI, HDMI, 3G-SDI, RGB/YPbPr
Single Power Supply
Interfaces for RS-232 & IP

Input Modules

CM-DVIU-2IN	2x via DVI-I Connectors
CM-3GSDI-2IN	2x (3G/HD/SD-SDI) via BNC
CM-HSDI-4IN	4x (HD/SD-SDI) via BNC
CM-HDMI-4K-2IN	2x HDMI

Scaling Output Modules

CM-DVI-I-SC-2OUT	2x via DVI-I (minus CV & S-Video)
CM-3GSDI-SC-2OUT	2x via BNC (3G/HD/SD-SDI)
CM-HDBT-SC-2OUT-1ETH	2x via HDBaseT with 1x Ethernet
CM-HDMI-4K-SC-1OUT	1x via HDMI

Note: Full A-to-D or D-to-A, Format and Framerate Conversion is provided with Scaling Output Modules.

Options

CM-4RPS	Redundant Hot-Swappable Power Supply
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Optional DVI-U Adapters

ZDH2050	Composite Video Adapter DVI-I Male to BNC Female
ZDB2048	YC (S-Video) Adapter DVI-I Male to 2-BNC Female
ZDS2046	YC (S-Video) Adapter DVI-I Male to 4-Pin Mini-Din Female

Optional DVI-I Output Adapters & DVI-U Input Adapters

ZDH2040	Analog PC Adapter DVI-I Male to HD-15 Female
ZDB2038	Analog RGBHV Adapter Cable DVI-I Male to 5-BNC Female – 1.5' (0.5m)
ZDB2044	YPbPr/YUV Adapter Cable DVI-I Male to 3-BNC Female – 1.5' (0.5m)
ZDB2042	YPbPr/YUV Adapter DVI-I Male to 3-RCA Female
CMD1939	HDMI Adapter DVI-I Male to HDMI Female

Specifications

Video Processing Power		Video Outputs	
Parallel Processing Architecture	Yes	YUV /YPbPr	Up to 28 via DVI
CORIO3 Video Processing	Yes	SD/HD/3G-SDI	Up to 28 via BNC
Real Time Video Quality	Yes	HDBaseT	Up to 28 via RJ45
Up/Down/Cross Conversion	Yes	4K	Up to 14 via HDMI
Number of Video walls	4	3G/HD/SD-SDI	
Display Size Compensation	Yes, different sizes in video walls	SMPTE259M-C (SD-SDI Video)	270Mbps < 0.1UI jitter 525/625Line
Output Rotation	Yes for any outputs and windows	SMPTE292M (HD-SDI Video)	1.485/1.4835Gbps < 0.2 UI jitter 720p, 1035i, 1080i, 1080p
Projector Edge Blending	Yes	SMPTE424M (3G-SDI Video)	2.97/2.967Gbps < 0.3 UI jitter 1080p 60/59.94
HDCP Key Handling	Yes	Control Methods	
Computer Input		RS-232	via D9 Female Connector
Digital DVI	Up to 28 via Universal DVI (HDMI & HDCP compliant)	IP Interface	RJ45 Connector
Analog	Up to 28 via Universal DVI	Warranty	
Analog Format	RGBHV, RGBS, RGsB, YPbPr	Limited Warranty	5 Years Parts and Labor
Analog Sync	TTL Level, 10KΩ, Pos or Neg	Regulatory Compliance	
RGB Level Range	0.5-2.0 Vp-p	Main unit	FCC, CE, RoHS, UL
Scan Rate Detection	Automatic	Mechanical	
Analog Signals	PC to 1920x1080, HD to 1080p60	Size (H x W x D)	7.0" x 19.0" x 13.1" 178 x 482 x 334mm
DVI Signals	PC to 1920x1200, HD to 1080p60	Weight (Net)	Approx. 15Kg (33 lbs) (with redundant PSU option)
Max Horizontal Scan Rate	150kHz	Environmental	
Computer Outputs		Operating Temperature	0° to +40°C (+32° to +104°F)
DVI Signals	Up to 28 via DVI-I (HDMI & HDCP compliant)	Operating Humidity	10% to 85%, Non-condensing
Analog	Up to 28 via DVI-I	Storage Temperature	-10° to +70° C (+14° to +158° F)
Analog format	RGBHV, RGBS, RGsB, YPbPr	Storage Humidity	10% to 85%, Non-condensing
R-G-B Level	0.7 Vp-p	MTBF	Approximately 50,000 hours
DVI Signals	PC to 1920x1200, HD to 1080p60 w/EDID	BTU	1024 BTU/hr
Analog Signals	PC to 1920x1080, HD to 1080p60	Power	
Vertical Refresh Rate	Any to 250Hz	Internal Power Supply	110v to 240v auto-detecting
Size and Position	User Adjustable	Redundancy	Optional Internal Hot Swap PSU
Settings Memory	Non-Volatile	Consumption	300 watts maximum (fully populated)
Conversion Technology	Proprietary – CORIO®3	Accessories Included	
Color	RGB/DVI/HDMI/YPbPr 24-bit 4:4:4, SDI 20-bit 4:2:2	1x Operations Manual	
Max. Sampling Rate	162MHz	1x Power cable	US, UK, Euro or AU
Firmware Memory	Flash, Upgradeable via download	Control Software	USB drive and downloadable from tvONE.com
Video Comb Filter	Adaptive	Optional Accessories	
Video Adjustments	Contrast, Brightness, RGB Gamma	See list above and check website for latest list	
HD Video Resolutions supported (HDMI, DVI, YPbPr, SDI)			
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)			
3840x2160: 4:4:4	23.98/24/25/29.97/30Hz 8-bit		
3840x2160: 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	Up to 28 via DVI		
YC (S-Video)	Up to 28 via DVI		
YUV /YPbPr	Up to 28 via DVI		
SD/HD-SDI	Up to 56 via BNC		
SD/HD/3G-SDI	Up to 28 via BNC		
4K/30	Up to 28 via HDMI		
4K/60	Up to 14 via HDMI		

Specifications subject to change

**HDCP protected sources are not allowed to be converted in this way.

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Panel Drawing

16 Universal DVI Inputs, 16 Standard DVI-I Outputs



8 Universal DVI Inputs, 8 3G-SDI/HD-SDI/SD-SDI Inputs, 16 Standard DVI-I Outputs

