CORIO®master
C3-540 Series

Key Features

- Universal DVI Inputs/Outputs: (HDMI/CV/YC/RGB/YPbPr)
- SDI Inputs/Outputs: (SD/HD/3G-SDI)
- High Resolution Inputs/Outputs: Analog: PC to 2048x2048, HDTV to 1080p/60
- DVI: PC to 1920x1200, HDTV to 1080p/60 w/EDID
- SDI: SD, HDTV to 1080p/60
- HDMI-Compatible Input & Output with HDCP
- Automatic Incoming Resolution Detection
- 4:4:4 Full Bandwidth Sampling
- Video Signal Parameter Adjustments
- Horizontal alignment on Analog PC Inputs
- Up-Down-Cross Conversion
- Control and upgrade: RS-232, USB, IP
- Command Line Interface - Third Party Control
- 4RU Frame Size
- Modularity Provides Flexible I/O

Options
- Redundant Hot-Swappable Power Supplies
- Rear Rackmount Supports
- Universal DVI Adapters (DVI to other connectors)

C3-540 CORIOmaster offers a new, more efficient approach to building video systems. Using TV One'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 video displays. All this is possible in one 4RU chassis.

CORIO®3 video processing technology allows the use of layouts which define where each output is used. Outputs can be grouped together or individually and can be independently rotated through 360° in real-time, without adding additional delay, for use in creative video wall applications. Multiple layouts can be used at the same time or one layout can be designed to tie multiple projectors or monitors together as one large image. Up to 4 layouts can be used simultaneously.

Edge blending, monitor walls and multiple projectors can show any combination of inputs by setting up video canvases to design each layout. Multiple canvases can be used at the same time to define multiple layouts to aid in choreographing a video design. To further assist functionality, multiple windows can be used to design a canvas with the capability to resize and rotate 360° each window on the canvas which is then sent to the predefined layout. Canvases can be duplicated on a number of layouts to permit display in more than one area or used for status display on one monitor of the entire canvas.

The user of the CORIOmaster can dedicate one layout as a multi-viewer to monitor the inputs to aid in previewing the sources during live events or used as a status monitor in various types of installations.

Control of the CORIOmaster is provided by a multiplatform software package that provides an intuitive way of setting up layouts and defining the video canvas to be used for each layout. Presets can be saved and recalled. Changes can be made to the canvas and then transferred to the layout.

The flexibility to use various input formats and the ability to up, down, and cross covert those signals on the outputs of the CORIOmaster to various displays and projectors of any format allow for easy installation without the use of multiple pieces of equipment to accomplish the same task all accomplished in a 4RU chassis.

The CORIOmaster is high power in its capabilities, but low in its power consumption. It typically requires only 150 watts, fully loaded. A traditional video system that performs the same task can consume up to ten times as much energy. Over its life, that is a lot of savings.

Advanced Features

The CORIOmaster includes high 4:4:4 full bandwidth sampling rate ensuring crisp, clear images, while full bandwidth chroma sampling ensures faithfully reproduced, high resolution colors.

CORIO®master
C3-540 Series

Universal 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
- Universal DVI Scaling Output Module, supporting virtually any PC or HDTV resolution.

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 input to be converted to SD-SDI, HD-SDI or 3G-SDI for output.

Future Modules

Additional types and formats of Video, Audio and Data Modules will be added in the future.

Main Chassis

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

Input Modules

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

Scaling Output Modules

• CM-DVIU-SC-2Out	2x via DVI-I
• CM-3GSDI-SC-2Out	2x (3G/HD/SD-SDI) via BNC

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

Additional Modules

• CM-4RPS	Redundant Hot-Swappable Power Supply

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
• 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

CORIO®master
C3-540 Series

Specifications

Computer Input
Digital DVI	Up to 28 via Universal DVI (HDMI & HDCP compatible)
Analog	Up to 28 via Universal DVI
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 2048x2048, HD to 1080p60
DVI Signals	PC to 1920x1200, HD to 1080p60
Max Horiz Scan Rate	150kHz
Computer Compatibility	PC, Workstations

Computer Outputs
DVI Signals	Up to 28 via Universal DVI (HDMI & HDCP compatible)
Analog	Up to 28 via Universal DVI
Analog format	RGBHV, RGBS, RGsB, YPbPr
R-G-B Level	0.7 Vp-p
DVI Signals	PC to 1920x1200, HD to 1080p60
Analog Signals	PC to 1920x1080, HD to 1080p60
Vertical Refresh Rate	Any to 250Hz
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
Max. Sampling Rate	162MHz
Firmware Memory	Flash, Upgradeable via micro-SD
De-Interlacing (NTSC, PAL, 1080i)	Pixel-level Motion Adaptive, Diagonal Interpolation, Noise Reduction.
Video Comb Filter	Adaptive
Film (NTSC, 1080i)	3:2 Pull-down
Video Adjustments	Contrast, Brightness, RGB Gamma

Audio Support
De-embed/embed	SDI & HDMI-I/O via DVI with optional audio interface module

HD Video Resolutions supported (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

Video Inputs
Television Standards	NTSC, PAL, PAL-M/N, SECAM
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

Video Outputs
Television Standards	NTSC, PAL, PAL-M/N, SECAM
Composite Video	Up to 28 via DVI
YC (S-Video)	Up to 28 via DVI
YUV /YPbPr	Up to 28 via DVI
SD/HD/3G-SDI	Up to 28 via BNC

3G/HD/SD-SDI
SMPTE259M-C (SD-SDI Video)	270Mbps < 0.1UI jitter 525/625Line
SMPTE292M (HD-SDI Video)	1.485/1.4835Gbps < 0.2 UI jitter 720p, 1035i, 1080i, 1080p
SMPTE424M (3G-SDI Video)	2.97/2.967Gbps < 0.3 UI jitter 1080p 60/59.94

Control Methods
RS-232	via D9 Female Connector
IP Interface	RJ45 Connector
USB	via Rear Type B Connector

Warranty
Limited Warranty	5 Years Parts and Labor

Regulatory Compliance
Main unit	FCC, CE, RoHS

Mechanical
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)

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 35,000 hours

Power Requirement
Internal Power Supply	110v to 240v auto-detecting
Redundancy	Optional Internal Hot Swap PSU

Accessories Included
1x Operations Manual	
1x Power cable	US, UK, Euro or AU
Control Software	Downloadable from Website

Optional Accessories
See list above and check website for latest list

Specifications subject to change

CORIO®master
C3-540 Series

Panel Drawing

Standard Unit with 16 DVI-U Inputs and 16 DVI-U Outputs

32 HD-SDI input, 32 non-scaling HD-SDI output Configuration