CORIOmaster®

All-in-one multi-window video processor

standout from the crowd

Captivate your audience. Create the ultimate video experience for your small, medium and large video walls and LED installations without compromise.

LED Ceiling
Fen Court, London

CORIO**master.** Flexible, Simple, Secure.

We've been engineering the very best video scaling technology for over 30 years. Delivering totally flexible, high quality and low latency performance is part of our DNA. We've continually developed our patented, CORIO® scaling engine to keep you ahead of all your AV challenges. By developing our own architecture, it is simple to upgrade any device to the latest format types and connections as they become available.

360°

Add visual appeal with 360° rotation for video windows and displays.

CORIOgrapher

Intuitive and versatile design software for powerful and creative control.

Keep your information safe using our secure HTTPS SSL connectivity.

Lowest latency in the industry for video and IP streams from source to display.

Be source and display agnostic. Mix and match your inputs and outputs including IP streams.

Effortless multi-user control using our app or real-time RESTful API.

Simplify AV installations with crystal clear audio from your display or to your external audio system.

You can manage up to four independent video wall canvases from a single unit.

Streamline your workflows and monitor system health & security using our advanced feedback logic.

Lexus Lounge, Bridgestone Area, USA

Dallas Cowboys, USA

ENDLESS POSSIBILITIES

Three Chassis

- 4RU, 16 module capacity
- Dual redundant PSU option
- Additional slot for audio module

- 1RU, 5 module capacity
- 1 fixed module with dual DVI inputs

- 1/2RU, 3 module capacity
- S/PDIF audio control

Twelve Modules

Dual 4K HDMI input

- Allows resolutions up to 4096 x 2160/60p

Dual 4K Streaming & Media input

- Dual, low latency, H.264 and H.265 network streaming
- Dual 4K playback of clips and stills

Dual 4K HDBaseT input

- Supports resolutions up to 4096 x 2160/60p
- 500ft reach with HD-One DX500

Dual DVI Universal input

- Supports resolutions up to 1920 x 1200/60p

Dual 3G-SDI broadcast input

- Supports resolutions up to 1920 x 1080/60p

Quad HD-SDI broadcast input

- Supports resolutions up to 1920 x 1080/30p

4K HDMI scaled output

- Supports all resolutions up to 3840 x 2160/30p

Quad HDMI scaled output

- Supports resolutions up to 1920 x 1080/60p
- Compatible with CORIOmaster, C3-540

Dual DVI-I Scaled output

- Supports resolutions up to 1920 x 1200/60

Dual HDBaseT scaled

- Supports resolutions up to 1920x1200/60p
- 328ft reach with Magenta Receiver

Dual 3G-SDI broadcast output

- Supports resolutions up to 1920x1080/60p

S/PDIF and Analog Audio

- Embed and de-embed audio from S/PDIF or analog
- Cross convert digital and analog audio

Support legacy equipment with adapters

HDMI

CV

Analog PC

YC (S-Video)

Analog RGBHV

YPbPr/YUV

- DVI-U - one connector, eight adaptors - all formats covered!

Custom Control

CORIOgrapher

CORIOmaster app

Third party control

Wall mount control panel

Streaming Media Encoder

- Single channel H.264 video encoder
- Auto discovered by CORIOmaster streaming input module
- Control using CORIOgrapher
- HDMI or analog support
- Supports low latency mode

...this is video processing **without restrictions.**

The CORIOmaster difference

Create the ultimate video experience with CORIOmaster, the world's most advanced & flexible family of video processors, allowing any signal in to any signal out in glorious, eye popping 4K quality.

Adobe's global HQ

1. Secure control with simultaneous multi-user access
2. Go large and creative with 360° rotation and up to 56 displays per system
3. Make it sing with embedded audio or external break out
4. Mix low latency AV, IP & Broadcast sources in a single chassis.
5. Manage four video walls from a single chassis
6. Doing LED Right! Pixel perfect set ups - guaranteed

> We've been very impressed with the C3-503. It is very versatile and very powerful, but also very easy to configure. We did the integration ourselves, and the CORIOmaster worked for us right out of the box. This was one example where the phrase plug-and-play meant what it said.

Peter Ransom,
Kent University, UK

You can trust your reputation with CORIOmaster. It's proven reliability is delivered through a mix of high-quality design, modularity and hand built manufacturing with a 100% test regime. In our stringent, in house, tests we see over 50,000 hours MTBF in even the harshest environmental conditions. This is why we are chosen by military, healthcare and government users globally.

Go large! with your video wall with the option for up to 56 outputs from a single 4RU chassis – just perfect for eye catching video experiences in public venues and retail.

Secure connectivity, multi-user control and event feedback are essential for collaborative and security conscious installations.

- Benefit from our secure HTTPS communications and a REST API for your secure applications.
- Event feedback – pro-actively monitor signal or system glitches for critical signal path management in mission critical environments.
- Multiple control points – up to four users can control the CORIO**master** via REST API which makes programming external control simple and offers new opportunities for multiple canvas systems.
- **CORIO**grapher user management profiles allow easy control of access to CORIO**master** for administrators, power users and users.

Put the A into AV!

Get your digital audio direct from source to video wall with audio de-embed/re-embed capability. This simplifies install, integration and system complexity. If you need to break out audio, simply add an audio module for both digital and analog connectivity to and from your external systems.

The Cube, Australia

Applications

KTVU FOX 2, USA

Broadcast

1. Manage up to four independent video walls from a single chassis
2. Low latency performance guaranteed
3. Seamlessly combine broadcast, AV and IP feeds with a built-in media player
4. Go large and creative - up to 56 displays per system
5. Secure, encrypted control with simultaneous multi-user access and monitoring

Command & Control

1. Multi-zone capability for control, video and audio
2. Secure control with simultaneous multi-user access
3. Wide range of video formats supported for mission critical operations
4. Never miss a beat with source or system health monitoring
5. Mix low latency AV, IP and broadcast in a single chassis

Public Venues

1. Secure control with simultaneous multi-user access
2. Make it sing with embedded audio or external break out
3. Remote monitoring of sources and system set-up
4. Large, creative edge-blends with mixed orientation and up to 56 outputs
5. Doing LED Right! Pixel perfect set ups - guaranteed
6. Save power with eco mode display switch off capability.

New London Architecture, UK

Edge Hill University, UK

Corporate

1. Secure control with simultaneous multi-user access
2. Experience complete design freedom to create a 'one of a kind' video wall.
3. Make it sing with embedded audio or external break out
4. Mix low latency AV, IP and broadcast sources in a single chassis
5. Manage four video walls from a single chassis

Warwick University, UK

Warwick University, UK

Education

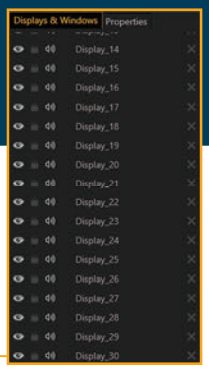
1. Manage four video walls from a single chassis
2. Make it sing with embedded audio or external break out
3. Secure control with simultaneous multi-user access
4. Mix low latency AV, IP and broadcast sources in a single chassis
5. Grab your audience with eye-catching transitions

"The video wall in the entrance area is our showcase for what is happening in the University. CORIOmaster has given us unique flexibility – we can use each screen as an individual display, or combine all four into one massive, and hugely impressive, 16K resolution show screen."

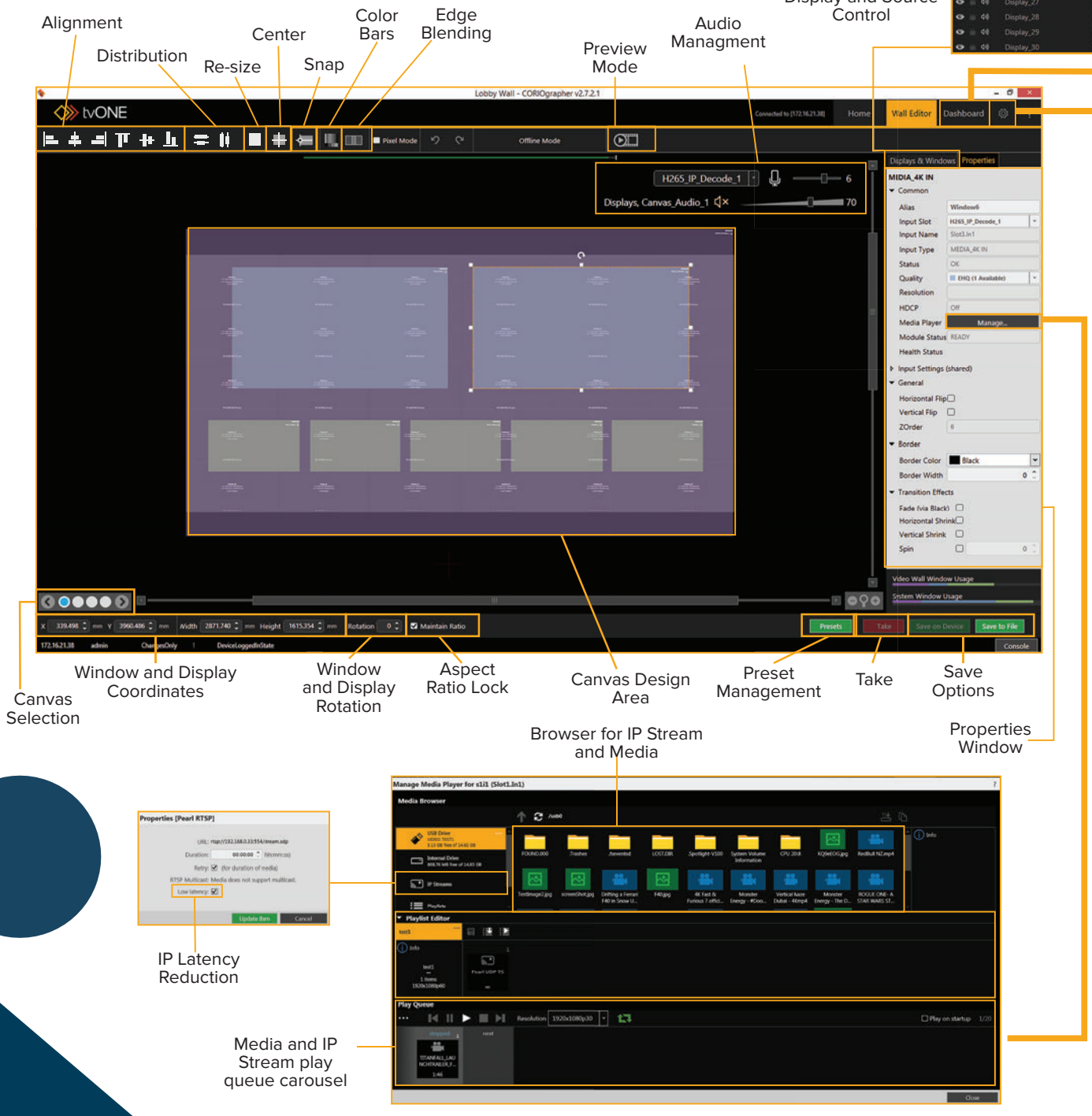
Ian Mason,
Warwick University, UK

CORIOgrapher

Let your creativity go wild! Rotate sources and displays with complete 360° rotation, mix and match display types, create overlaps or edge-blends and automatically correct for display size and bezels to create unique, eye-catching experiences.



WALL EDITOR



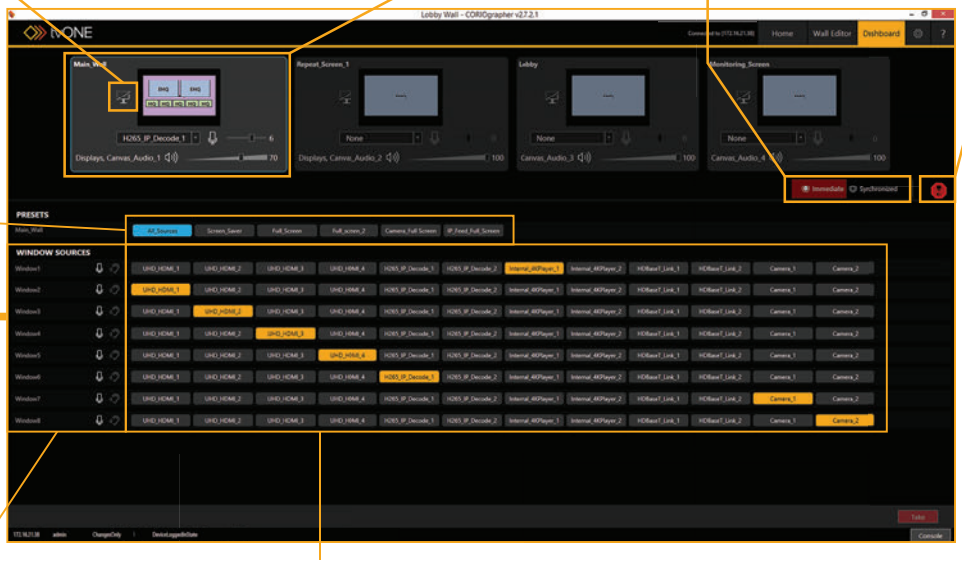
DASHBOARD

Cut to black and mute

Immediate/synchronized mode

Canvas Audio Control

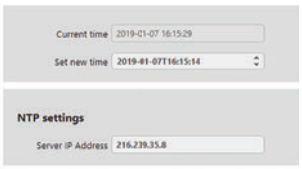
Global cut to black mute



Preset Control

Audio control per window

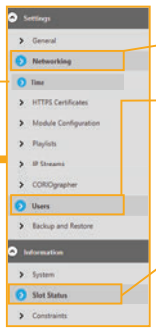
Source Switching



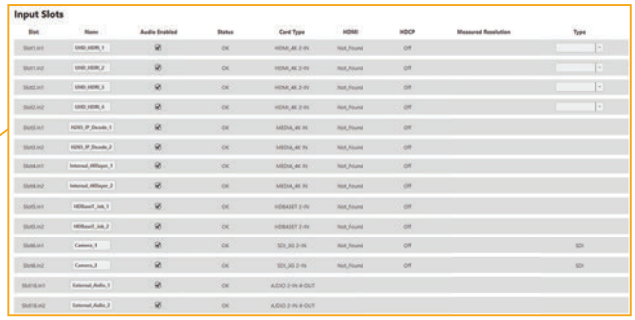
Network Time Protocol

SETTINGS

Secure Networking Setup



Multi-user Login Control



Input/Output Status

tvONE
We Engineer Confidence

Video Processing Power	
Parallel Processing	Yes
Architecture	Yes
CORIO3 Video Processing	Yes
Real Time Video Quality	Yes
Up/Down/Cross Conversion	Yes
Number of Video walls	4 (C3-503, 2 Video Walls)
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 (C3-540)	
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 1920x1080, HD to 1080p60
DVI Signals	PC to 1920x1200, HD to 1080p60
Max Horizontal Scan Rate	Yes
Computer Outputs (C3-540)	
DVI Signals	Up to 28 via DVI-I (HDMI & HDCP compatible)
Analog	Up to 28 via DVI-I
Analog format	RGBHV, RGBS, RGsB, YPbPr
R-G-B Level	0.7 Vp-p
DVI Signals w/EDID	PC to 1920x1200, HD to 1080p60
Analog Signals	PC to 1920x1080, HD to 1080p60
Vertical Refresh Rate	Any to 250Hz
Size and Positionz	User Adjustable
Settings Memory	Non-Volatile
Conversion Technology	Proprietary – CORIO®3
Color	RGB/DVI/HDMI/YPbPr 24-bit 4:4:4, SDI 20-bit 4:2:2
Max. Sampling Rate	162MHz
Firmware Memory	Flash, Upgradeable via download
Video Comb Filter	Adaptive
Video Adjustments	Contrast, Brightness, RGB Gamma
HD Video Resolutions supported (HDMI, DVI, YPbPr, SDI, & 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, 50, 59.94, 60Hz
4K Video Input Resolutions supported (via HDMI & 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 (C3-540)	
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 & HDBaseT

* refer to product specification sheets for exact details

AV over IP (up to 4 module cards)	
Interface	Up to 4x 1 GbE Ethernet Port
IP Video Decoding	H.264 (CBP, Main, High), H.265/HEVC1 (Main)
IP Bit Rates	Up to 8x streams up to 25Mbs per stream
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	Up to 4x USB3.0, Internal Storage, Network
Video Codecs	H.264 (CBP, Main, High), H.265/HEVC1 (Main)
Video Formats	mp4, .mov, .mkv, .m4v, .ts, .mts, .m2ts, .mt2
Playback Bit Rates	Single stream to 100Mbs (per module), Dual Streams to 40Mbs (per module)
File Playback Resolutions Supported	
Up to 3480x2160@30fps	Up to 4
Up to 1080p60@60fps	Up to 8
Up to 7680 x 4320	Still images2
Media Handling	
External	Up to 4x 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 supported3
Video Outputs (C3-540)	
YUV /YPbPr	Up to 28 via DVI
SD/HD/3G-SDI	Up to 28 via BNC
HDBaseT	Up to 28 via RJ45
4K	Up to 14 via HDMI
3G/HD/SD-SDI	
SMPTE259M-C	270Mbps < 0.1UI jitter
(SD-SDI Video)	525/625Line
SMPTE292M	1.485/1.4835Gbps < 0.2 UI jitter
(HD-SDI Video)	720p, 1035i, 1080i, 1080p
SMPTE424M	2.97/2.967Gbps < 0.3 UI jitter
(3G-SDI Video)	1080p 60/59.94
Control Methods	
RS-232	via D9 Female Connector
IP Interface	RJ45 Connector for both HTTP(s)
Warranty	
Limited Warranty	5 Years Parts and Labor
Regulatory Compliance	
Main unit	FCC, CE, RoHS, ULc
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)
Environmental (C3-540)	
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
BTU	1024 BTU/hr
Fan Noise	0-35°C = 37.7dB(A) Min / 40°C = 50.6dB(A) Max
Power (C3-540 & C3-510)	
Internal Power Supply	110v to 240v auto-detecting

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