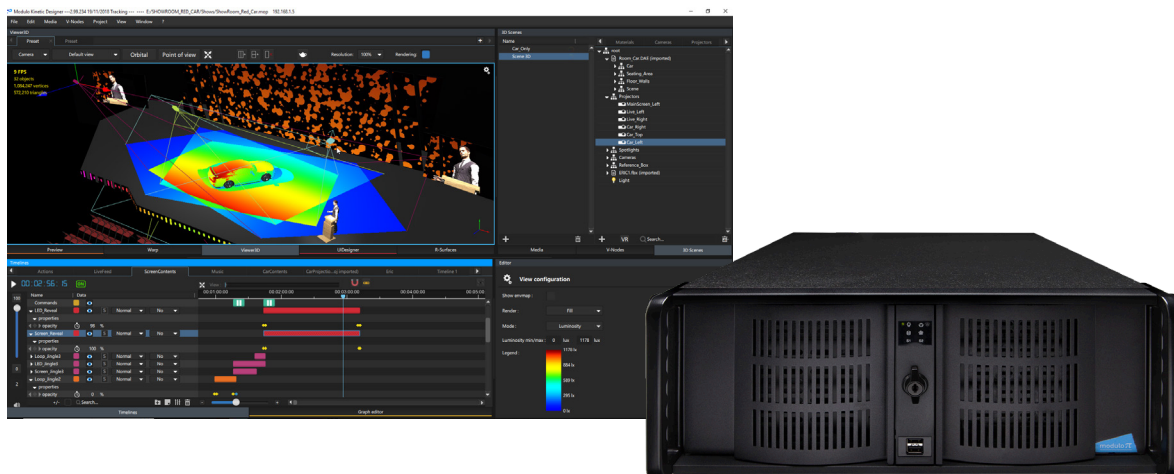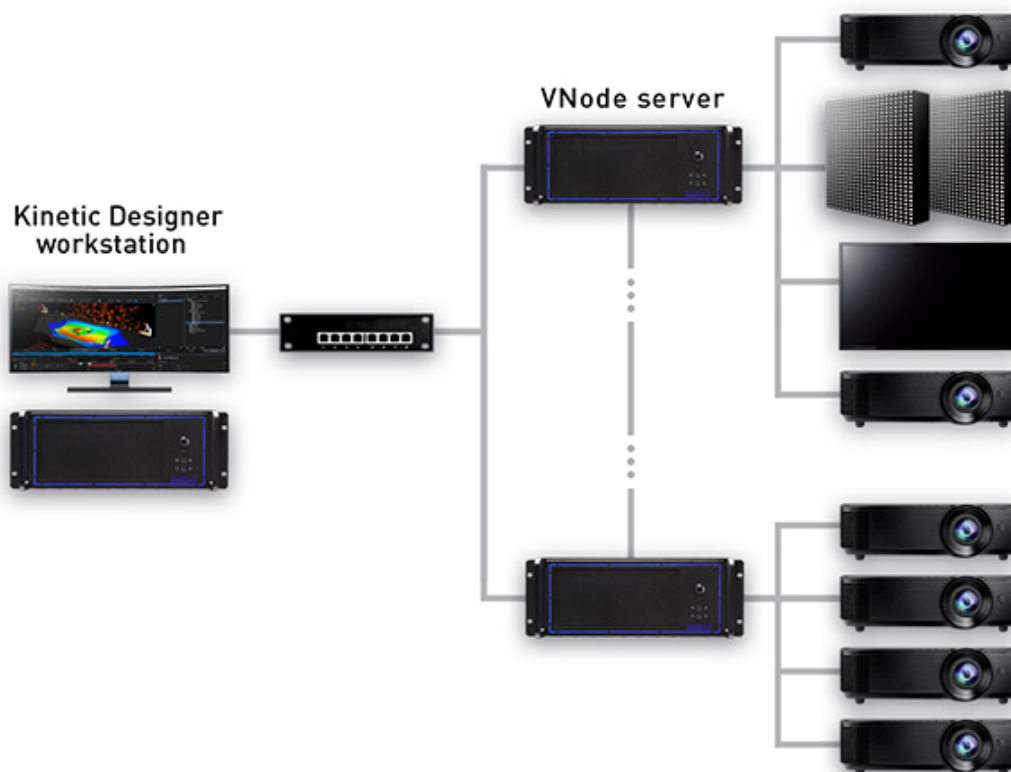# Modulo Kinetic

The super high-end fully-integrated media server solution

Modulo Kinetic is the ultimate video solution tailored for the most challenging projects.

Reliable across the complete workflow, Modulo Kinetic enables study, simulation, show creation, encoding, playback and control,... all of it through one single box.
With its intuitive user interface and advanced innovative features, Modulo Kinetic offers unprecedented real-time 3D, interactivity, and tracking.

The platform relies on **Kinetic Designer**, a powerful user interface with a dedicated workstation, connected to one or several **Kinetic VNode media servers.**

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Modulo Kinetic Designer
REF: KI-DES

A powerful user interface with dedicated workstation

The Modulo Kinetic Designer is the cornerstone of your workflow. It comes with a dedicated workstation and powerful software. It can be used off-line for show study, simulation, and pre-encoding.

Versions

Reference		
KI-DES	2TB SSD storage	120GB system SSD

Options

Reference	
TC-PCIE-R	Time code reader card - Pcie
TC-PCIE-RW	Time code reader generator card - Pcie
TC-USB-R	Time code reader card - USB

Modulo Kinetic VNode
REF: KI-VNO-1, KI-VNO-2, KI-VNO-4, KI-VNO-6, KI-VNO-2x4K, KI-VNO-3x4K, KI-VNO-4x4K

Versatile media servers

One or several Modulo Kinetic VNode servers can be connected to your Kinetic Designer. When connected to the VNode media servers, Kinetic Designer will automatically distribute the media content to the VNode servers on the network.

Versions

Reference	Physical outputs	Outputs	Storage Data
KI-VNO-1	4 x DP 1.4	1 output up to WQXGA[1]	2TB SSD
KI-VNO-2	4 x DP 1.4	2 outputs up to WQXGA[1]	2TB SSD
KI-VNO-4	4 x DP 1.4	4 outputs up to WQXGA[1] or 1 output up to 4K[2]	2TB SSD
KI-VNO-6	6 x mini DP 1.4	6 outputs up to WQXGA[1] or 1 output up to 4K[2]	2TB SSD
KI-VNO-2x4K	6 x mini DP 1.4	6 outputs up to WQXGA[1] or 2 outputs up to 4K[2]	4 TB PCIE NVME SSD
KI-VNO-3x4K	6 x mini DP 1.4	6 outputs up to WQXGA[1] or 3 outputs up to 4K[2]	4 TB PCIE NVME SSD
KI-VNO-4x4K	6 x mini DP 1.4	6 outputs up to WQXGA[1] or 4 outputs up to 4K[2]	4 TB PCIE NVME SSD

[1] 2560 x1600
[2] 4096x2160

Options

Reference		Reference	
DELTA-3G-2	Live Capture 2 x 3G SDI 3G	AD-GEN	Genlock card
DELTA-412G	Live Capture 1 x12G SDI or 4 x 3G SDI	TC-PCIE-R	Time code reader card - Pcie
DELTA-812G	Live Capture 2x 12G SDI or 8 x 3G SDI	TC-PCIE-RW	Time code reader generator card - Pcie
DELTA-HDMI2	Live Capture 2 x HDMI 2.0		

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Hardware specifications

Operating System: Windows 10 LTSB x64
RAM: 4 x 4GB DDR4
Storage: 1 x SSD 120GB OS / DATA: depending on version
Processor: Intel® Core™ i9
LAN: 2 x RJ45 10GbE

Audio: 8 channels (mini jack 3.5mm asymmetrical)
USB: 2 x USB 3.1 (Gen 2) + 4 x USB 3.0
Graphics Card: AMD Radeon Pro
Power Supply: 100-240 VAC / 50-60Hz / 850W
Average power consumption (high load): 450W

Software specifications

Modulo Kinetic Designer
Dedicated application (PC) to control any number of networked Modulo Kinetic VNode servers
Reliable across the complete workflow, from show design and simulation, to show encoding and control
Smart easy-to-use user interface
Fully reliable solution with an automatic primary/secondary back-up

Timelines
Unlimited number of timelines with unlimited number of layers
High flexibility allowing last-minute changes
Command layers with control cue (Pause/loop/device action,...)

Settings per layer
Animate all parameters with keyframes
Position, scale, rotation, opacity, color, fade in/out
Advanced colorimetry, crop, progressive mask, clip, keyframed animation
Database of 2D GPU effects
Support for interactive shader format
Movie: In/out time, loop mode, speed change with frame blending

3D engine
Import point cloud, FBX, and COLLADA complete 3D scenes
Projection study & simulation in 3D & VR
Integrated extensive video-projectors database
3D animation editor
Integrated Prefabs (plane, sphere, cube, torus,...)
Lighting
Advanced materials including PBR, MatCap, and Substance by Adobe
Real-time 3D engine with generative content including CPU & GPU particles

Synchronization
Synchronize any number of Modulo Kinetic VNode with a unified view from the Modulo Kinetic Designer
Synchronization with MTC or LTC timecode (optional)
Genlock/Framelock (optional)

Outputs tools
Warping grid (keystone or curve), advanced soft edge, mask, test pattern generator, advanced color adjustment
Exclusive X-Map feature for complex video mapping
3D video-projector calibration
LED Pixel mapper (Art-Net)
Multi-user warp remote available to work simultaneously on the calibration process

Low-latency live mixer
Dedicated multi-user remote application (Mac/PC)
Live Preview/Program/Confidence screens
Unlimited number of destinations and mix engines
Preset and Quickset
Mask & keying
Transition effects: Cut, fade, flying,...
Cut & Take buttons
Sources: Workspace, HDMI 2.0, low-latency SDI 3G/12G, NDI

Medias
MPEG-2 (4:2:2), H264 (4:2:0)
HAP, HAP alpha, HAP Q support
Apple ProRes with 10 bits supports
Uncompressed still sequence TGA or 10 bits DPX
QuickTime uncompressed RGB, YUV8 or YUV10bits
Multichannel audio file (wav,aiff)
Still images: png, jpg, tiff
Other media: Text, scrolling text, counter/countdown/clock, web page
Automatic generation of lower resolution proxy in the Modulo Kinetic Designer for a full preview

Show Control
Create, control, and play automated tasks for a wide number of preloaded external devices including video-projectors, matrix switchers, video processors
The devices' main parameters are available in our extensive library to ensure fast and easy control through Modulo Kinetic Designer
Trigger tasks from specific devices such as Calendar, MIDI, OSC, GPIO, Art-Net and DMX
Possibility to control Modulo Kinetic Designer with ASCII TCP/IP command with an extensive protocol

Interactivity
Easily control the parameters of your media – including position, rotation, opacity, color,... – using external devices (OSC, Art-Net, MIDI, TCP/IP rotary encoder)
Flexible nodal programming including JavaScript block
Powerful optical tracking module (optional)
Send beacon position using PosiStageNet protocol (PSN)

User Panel
Easily create different user panels: Drag & drop tasks, add buttons, texts, images, web pages, etc.
User panels are compatible with PC, Mac, iOS, and Android devices

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Environmental specifications

Max altitude: 2 700 m
Operation temperature: 10°C ~ 35°C
Non operation temperature: -40°C ~ 70°C
Non operation humidity: 20% ~ 90% (Non condensing)

Complimentary

EU power cord
1 x active adaptor (mini) DP->DVI single link per output
Warp Remote: PC/Mac software dedicated to warping
Kinetic Panel: PC/Mac application to host your custom user panels. Also available on iOS and Android

Warranty
2-year return-to-base

Physical specifications

Frame	19-inch rack 4U		
Product	**W**	**H**	**D**
Dimensions without handles	427 mm 16.81"	176,80 mm 6,96"	480 mm 18,90"
Dimensions with handles	485 mm 19,10"	176,80 mm 6,96"	530 mm 20,87"
Weight	~ 20 kg	~ 44 lbs	
Shipping	**W**	**H**	**D**
Dimensions	545 mm 21,46"	285 mm 11,22"	665 mm 26,18"
Weight	~ 24 kg	~ 53 lbs	

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