Panasonic

KAIROS

Kairos Core 200 AT-KC200L1
for Innovative Live Video Production in SDI

Flexible and Diverse Video Production

Using a GPU for video processing, KAIROS enables multilayer production with no limit on the number of MEs or keys, and production and output of video in irregular aspects such as 32:9 and 16:9, as well as portrait mode, using the CANVAS function. With such capabilities and more, KAIROS ensures highly flexible and diverse video production.
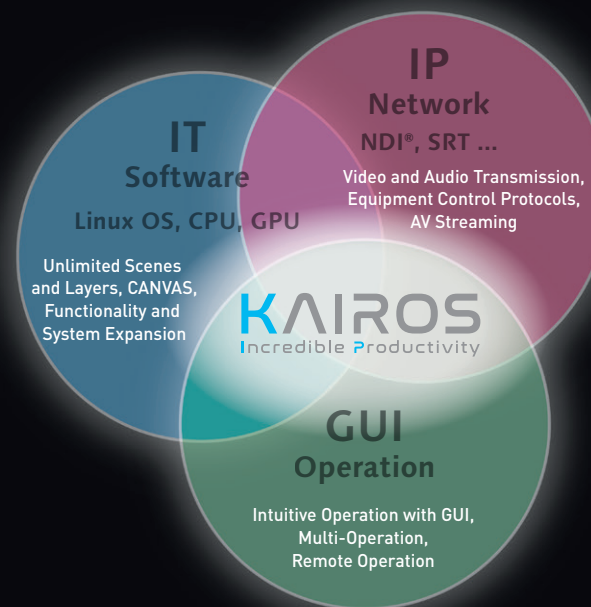
Increased Efficiency and Productivity

With a network connection, a single system can be operated via multiple control panels or intuitive GUI software. Remote operation and pre-building of scenes (effects) are also possible.

High Flexibility and Expandability

Supports a wide variety of video inputs and outputs, including SDI baseband, as well as SRT and NDI®. Software-based open architecture allows for easy integration with external devices and third-party systems through software upgrades.

•NDI® is a registered trademark of Vizrt NDI AB in the United States and other countries.

IT
Software
Linux OS, CPU, GPU

IP
Network
NDI®, SRT …
Video and Audio Transmission, Equipment Control Protocols, AV Streaming

Unlimited Scenes and Layers, CANVAS, Functionality and System Expansion

KAIROS
Incredible Productivity

GUI
Operation
Intuitive Operation with GUI, Multi-Operation, Remote Operation

AT-KC200L1 front panel

AT-KC200L1 rear panel

Kairos Core 200 AT-KC200L1 Specifications

General

Power Requirement:	AC IN ×2, 100-127 V/200-240 V, 50/60 Hz, Redundant power supply
Current Consumption:	10.0 A / 5.0 A
Operating/Storage Temperature:	5 to 35 ˚C / –20 to 60 ˚C
Operating Humidity:	10% to 90%, no condensation
Weight:	Approx. 17.8 kg / 39.24 lb, without accessories & options
Dimensions: (W x H x D)	430 mm × 176 mm × 505 mm / 16-15/16" x 6-15/16" x 19-7/8" (4 RU size) excluding protruding parts
OS:	Linux

Number of Video I/O

SDI: *1	1.5G:	24 in / 12 out (Max. 32 in / 16 out) *1
	3G:	24 in / 12 out (Max. 32 in / 16 out) *1
	4K:	12 in / 6 out (Max. 16 in / 8 out) *1
ST 2110:	1.5G:	64 in / 40 out *2
	3G:	32 in / 40 out *2
	4K:	8 in / 10 out *2
NDI® High Bandwidth:		2 in / 2 out, 16 CH audio for each, HD only
SRT/RTSP/RTP/RTMP:		8 in / 2 out (only input for RTSP), HD only

I/O Terminals

QSFP:	Optional support in future
DisplayPort:	DisplayPort 1.4 × 4, for Multiviewer Output
LAN:	RJ-45 × 2, 1 GbE
SDI IN/OUT:	Micro BNC × Max. 36 (Max. 48) *5
REF IN/OUT:	Micro BNC × Max. 6 (Max. 8) *5
HDMI IN/OUT:	Use external converters (Please refer to "KAIROS Alliance Partners/ Tested Third Party Products".)
VGA:	Dsub-15 pin, for system installation
USB:	USB3.2 Gen1 Type-A×4, for system installation

Video/Audio Format

Video Format:	4K:	2160/60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
	FHD:	1080/60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
	HD:	1080/59.94i, 50i, 720/60p, 59.94p, 50p
Video Signal Processing:		Y/PB/PR, 4:2:2 10 bit
Audio Format:		ST 2110-30 (AES67)*2, 48 kHz/24 bit

Synchronization

PTP Sync:	GbE port support (QSFP will be supported with an option in the future)
FS (Frame Synchronizer):	All input channels, always ON (without ON/OFF)
Frame Delay	0 frame to 12 frame, by 1-frame step
Latency	Min. 1-frame

Player

Still Store:	7 GB storage, up to 4K
RAM Player:	8 CH, 32 GB storage, uncompressed
Clip Player:	2 CH, 400 GB storage (share with audio player), compressed AVC-Intra/H.264/DNxHD/ProRes
Audio Player:	4 CH, 400 GB storage (share with clip player), compressed WAV/MP3/Ogg/FLAC/AIFF

Functions

*Functions listed here are only a part of the features.
For details, please check our website.

Multiviewer:	HD/4K × 4 out, max. 36 PiP for each, GPU meter, audio level meter, clock, etc.
Canvas:	Up to 8K (32 M-pixels)
Layer:	No restriction on the number of Layers, Scenes (ME) and Keyers, depend on GPU performance, Visible usage with GPU meter
Effect:	Luminance Key, Chroma Key, DVE(2D/2.5D), Soft Border, Corner Fix , Color Correction, Crop
Transition:	Multimix, Offset Transition, Transition Effects
Macro:	Scene-Specific Macros, LUA Script Support
Color Mat:	Bicolor Wash Mat, Test Pattern
Other Functions:	Audio Mixer *3, Title Generator, Snapshot, User Management Function

Supported Standards and Protocols: REST API, Ross Talk*4, TSL 5.0*2, NMOS*5, AMP, ST 2110-30*2

*1: Three boards are pre-installed and only one additional board can be installed.
*2: ST 2110 input/output requires a separate option to be supported in the future.
*3: Optional AT-SF005 is required.
*4: Optional AT-SFE01 is required.
*5: Optional AT-SFE03 is required, future support.
• NDI® is a registered trademark of Vizrt NDI AB in the United States and other countries.

KAIROS System Equipment

AT-SFC10
Kairos Creator (GUI Software/Software Key)
Intuitive GUI for easy configuration of inputs/outputs, scenes, layers, etc.
OS: Windows 10/11, macOS Catalina/Big Sur/Monterey

AT-KC10C1
Kairos Control (Control Panel)
Standard control panel with 2 faders and 24XPT layout.

AT-KC10C2
Kairos Control (Control Panel)
Compact control panel suitable for on-location venues, OB vans and more.

KAIROS Option

AT-KC20M1 SDI I/O Board	Equipped with 8 SDI input terminals, 4 output terminals and REF IN/OUT. One board can be installed to the AT-KC200L1.*1
AT-SFTC10 Touch Control Panel Software	Intuitive touch-screen operation for video selection via multi-viewer.*2
AT-SFCM10 Kairos Core Manager *3	Backup, media synchronization and data transfer with multiple Kairos Core units possible.*2
AT-SF005 Audio Mixer Option	Synthesize, tune and control up to 16 assignable video sources, each with their 16 audio channels.
AT-SFE01 RossTalk*4 Option	Supports RossTalk Xpression character-generator protocol.
AT-SFE03 NMOS*5 Option	AT-KC200L1 support for the KAIROS NMOS option is planned in the coming future.
Kairos Creator Subset Software*2	Kairos Media, Kairos Painter and Kairos Audio Mixer* Free for Kairos Creator users.

*1: Installation on the main frame is carried out by the dealer. Always consult your dealer for installation.
*2: Operating system requirements: Windows 10 or 11, mac OS not supported.
*3: Free for use with up to two Kairos Core units; a licence must be purchased for use with three or more units.

*4: RossTalk, Ross and XPression, are trademarks or registered trademarks of Ross Video Limited.
*5: NMOS (Networked Media Open Specifications) is a protocol standardized by AMWA (Advanced Media Workflow Association) for controlling and managing devices via IP networks.
*6: The AT-SF005 Audio Mixer Option is required.

KAIROS Alliance Partners

An update list of KAIROS Alliance partners and test-verified devices can be found on the website.

KAIROS Support Webpages

FAQ   Tutorial Videos

facebook   Contact Details

For more information, please visit Panasonic web site https://pro-av.panasonic.net/en/qr/

SP-C-KC200L1ENZ1