Panasonic

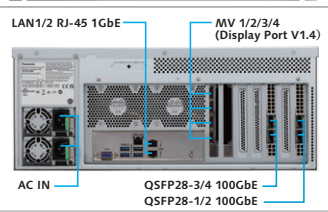
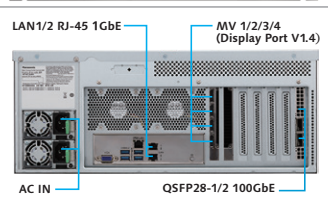
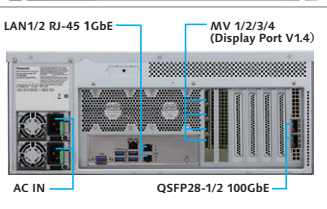
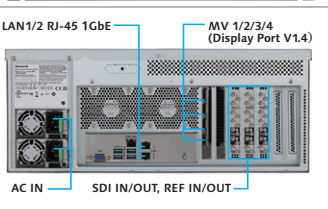
July 2026

IT/IP Platform "KAIROS"

Product Lineup and Specification Comparison Chart

KAIROS

Kairos Core (Main Frame) Lineup and Specification Comparison

Product Name Model Number		Kairos Core 2000 AT-KC2000S2	Kairos Core 2000 AT-KC2000X1	Kairos Core 200 AT-KC200X1	Kairos Core 200 AT-KC200L1
Product Image					
Rear Panel Connectors					
MSRP					
Number of Video I/O Please check the web for details on the number of I/O due to operation.					
Agile Input Routing		√			√ *2
Smart Routing *1		√			— *2
ST 2110 *3	1.5G	64 in / 40 out			64 in / 40 out *2
	3G	64 in / 40 out	32 in / 40 out		32 in / 40 out *2
	4K	16 in / 10 out	8 in / 10 out		8 in / 10 out *2
ST 2022-7 Redundancy		√ No halving of both input/output	√ No halving of input, halving of output		√ No halving of input, halving of output *2
SDI *4*5	1.5G	Max. 16 in / 8 out *4	Max. 32 in / 16 out *4		24 in / 12 out (Max. 32 in / 16 out) *5
	3G	Max. 16 in / 8 out *4	Max. 32 in / 16 out *4		24 in / 12 out (Max. 32 in / 16 out) *5
	4K	Max. 8 in / 4 out *4	Max. 16 in / 8 out *4		12 in / 6 out (Max. 16 in / 8 out) *5
HDMI *6		Max. 8 in or 8 out *6	Max. 16 in or 16 out *6		Max. 8 in or 8 out *6
NDI® High Bandwidth (HD only)		2 in / 2 out, 16 CH audio for each			
SRT/RTSP/RTP/RTMP (HD only)		16 in / 4 out (only input for RTSP)		8 in / 2 out (only input for RTSP)	
Number of Audio I/O *7					
ST 2110		64 in / 40 out			64 in / 40 out *2
ST 2022-7 Redundancy		√ No halving of both input/output			√ No halving of both input/output *2
I/O Terminals					
QSFP (ST 2110, PTP sync)		100G QSFP28 × 4	100G QSFP28 × 2		Optional support, 100G QSFP28 × 2 *2
SDI IN/OUT		Micro BNC × Max. 24 *4	Micro BNC × Max. 48 *4		Micro BNC × Max. 36 (Max. 48 with option) *5
HDMI IN/OUT *6		HDMI Type A × Max. 8 *6	HDMI Type A × Max. 16 *6		HDMI Type A × Max. 8 *6
REF IN/OUT		Micro BNC × Max. 4 *4	Micro BNC × Max. 8 *4		Micro BNC × Max. 6 (Max. 8 with option) *5
Canvas					
Canvas		Up to 12K (66 M-pixels)		Up to 8K (32 M-pixels)	
Player					
Still Store		12 GB storage, up to 4K		7 GB storage, up to 4K	
RAM Player (uncompressed)		8 CH, 67 GB storage *8	8 CH, 83 GB storage *8	8 CH, 27 GB storage *8	8 CH, 32 GB storage *8 *9
Clip Player (compressed)		2 CH, 850 GB storage (share with audio player), AVC-Intra/H.264/DN×HD/ProRes		2 CH, 400 GB storage (share with audio player), AVC-Intra/H.264/DN×HD/ProRes	
Audio Player (compressed)		4 CH, 850 GB storage (share with clip player), WAV/MP3/Ogg/FLAC/AIFF		4 CH, 400 GB storage (share with clip player), WAV/MP3/Ogg/FLAC/AIFF	

*1: When using the Smart Routing function, up to 64 inputs can be set and operated virtually, regardless of video format.
*2: Please contact your distributor on using ST 2110 input/outputs on the AT-KC200L1.
*3: AT-KC2000S2, AT-KC2000X1, AT-KC200X1, and AT-KC200L1 (when ST 2110 is available), using 1.5G or 3G, up to 20 outputs per QSFP port and up to 40 outputs with two ports. For 4K, up to 5 outputs per QSFP port and up to 10 outputs with two ports.
*4: The optional AT-KC20M1 SDI I/O boards are required. Each board has 8 input terminals, 4 output terminals and REF IN/OUT (max. 8 inputs/4 outputs in FHD/HD). Up to four boards can be installed on the AT-KC2000X1/KC200X1 and up to two boards on the AT-KC2000S2. The numbers of input/output shown here are the maximum numbers that can be loaded. Installation of the optional board is carried out by the dealer. Always consult your dealer for installation.
*5: Three boards are preinstalled on the AT-KC200L1. One additional board can be installed. Installation of the optional board is carried out by the dealer. Always consult your dealer for installation.
*6: Requires the optional HDMI Input Board AT-KC20M2 or HDMI Output Board AT-KC20M3. The AT-KC20M2 has 4 HDMI input terminals, while the AT-KC20M3 has 4 HDMI output terminals. Up to four boards can be installed on the AT-KC2000X1/AT-KC200X1, and up to two boards on the AT-KC2000S2/AT-KC200L1. The numbers of input/output shown here are the maximum numbers that can be loaded. Installation of the optional board is carried out by the dealer. Always consult your dealer for installation.
*7: The number of inputs and outputs when both Audio1 and Audio2 are used.
*8: Max. RAM capacity is reduced with SDI I/O boards, HDMI input boards, or HDMI output boards installed. For details, please check our website.
*9: The maximum capacity is reduced by 2 GB when updating to version 1.8 or later, and is reduced by another 2 GB in version 2.0.1 or later.

Kairos Core (Main Frame) Specifications Common to the Entire Lineup

General

Power Requirement, Current Consumption	AC IN x 2, 100-127 V/200-240 V, 50/60 Hz, 10.0 A / 5.0 A Redundant Power Supply
Operating/Storage Temperature	5 to 35 °C / –20 to 60 °C
Operating Humidity	10% to 90%, no condensation
Weight, without accessories & options	Approx. 17 kg / 37.47 lb, AT-KC200L1: approx. 17.8 kg / 39.24 lb
Dimensions (W x H x D)	430 mm x 176 mm x 505 mm / 16-15/16" x 6-15/16" x 19-7/8" (4 RU)
OS	Linux

Video/Audio Format

4K	3840 x 2160	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
FHD	1920 x 1080	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p, 60i, 59.94i, 50i
HD	1280 x 720	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
SD NTSC*10	720 x 480	59.94i
SD PAL*10	720 x 576	50i
DCI 2K*10	2048 x 1080	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
DCI 4K*10	4096 x 2160	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
16:9*10	1366 x 768, 1600 x 900	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
4:3*10	640 x 480, 1024 x 768, 1400 x 1050, 1600 x 1200	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
16:10*10	1280 x 800, 1440 x 900, 1680 x 1050, 1920 x 1200, 3840 x 2400	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
5:4*10	1280 x 1024	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.98p
Resolution-Free		In addition to the above formats, supports any resolution up to a maximum of 9.8 megapixels (adjustable pixel units: 4 pixels) *11
Color Space and Bit Depth		YCbCr 4:2:2 - 8/10/12 bit YCbCr 4:4:4 - 8/10/12 bit *10 RGB - 8/10/12 bit *10 RGBA - 8/10/12 bit *10 Key - 8/10/12 bit *10
Video IP Transmission Format		ST 2110-20
Audio Format		ST 2110-30(AES67), 48kHz/24bit

I/O Terminals

DisplayPort	DisplayPort 1.4 x 4, for Multiview Output External converters are required for video output.
LAN	RJ-45 x 2, 1 GbE
HDMI IN/OUT	Use external converters. Please refer to "KAIROS Alliance Partners/Tested Third Party Products".
VGA (for system installation)	Dsub-15 pin
USB (for system installation)	USB 3.2 Gen1 Type-A x 4

Synchronization

PTP Sync	QSFP and GbE, both ports supported *12
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

Tally, External Device Support, Supported Standards and Protocols

Tally	6-color Independent Tally Indicators, NDI® Tally, Compatible External Tally Box
Supported Tally Protocol	TSL 5.0, Compatible with Panasonic PTZ Camera and AK-UC4000 4K Studio Camera.
Connectable Control Panel	Total 16 units (AT-KC10C1 or AT-KC10C2, each up to 8 units), Up to two Kairos Core units can be operated from one control panel *13
PTZ Control	Panasonic PTZ Camera
Supported Standards and Protocols	REST API, Protocol and command tables is available from the PASS KAIROS Website. Ross Talk *14, Optional AT-SFE01 is required. TSL 5.0 NMOS *12 *15, Optional AT-SFE03 is required. AMP (Advanced Media Protocol) SNMP *16 ST 2110 *12 (ST 2110-10, ST 2110-20, ST 2110-30) HTML5 Graphics *13

*This is only a partial list. For details and supported KAIROS versions, please refer to our website "KAIROS Alliance Partners/Tested Third Party Products".

Functions

Multiviewer	HD/4K x 4 out, max. 36 PiP for each Display: GPU Meter, Audio Level Meter, Clock, Vectorscope, Waveforms, etc.
Number of Layer	No restriction, depend on GPU performance, Visible usage with GPU meter
Scene (ME)	No restriction, depend on GPU performance, Visible usage with GPU meter
Key	No restriction, 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, Film-look Effect*16, Glow Effect*16 etc.
Transition	Multimix, Offset Transition, Transition Effects
Macro	Scene-Specific Macros, LUA Script Support
Color Mat	Bicolor Wash Mat, Test Pattern
Other Functions	Audio Mixer *17, Title Generator, Snapshot, User Management Function, Multi-Scene Control*18

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

*10: Supported for ST 2110 input/output with software version 1.8. From software version 2.0 onward, supported for both ST 2110 and HDMI input/output. However, the number of inputs and outputs may decrease depending on the resolution used.
*11: Requires software version 2.0, and supported for both ST 2110 and HDMI input/output. However, the number of inputs and outputs may decrease depending on the resolution used.
*12: Please contact your distributor on using ST 2110 inputs and outputs on the AT-KC200L1.
*13: Requires software version 1.8 or later.
*14: RossTalk, Ross and XPression, are trademarks or registered trademarks of Ross Video Limited.
*15: NMOS (Networked Media Open Specifications) is a protocol standardized by AMWA (Advanced Media Workflow Association) for controlling and managing devices via IP networks.
*16: Requires software version 1.7.0 or later.
*17: Optional AT-SF005 is required.
*18: Requires software version 2.0.

• NDI® is a video connectivity technology and is registered as a trademark by Vizrt NDI AB in the United States and other countries.

KAIROS System Equipment

Kairos Control (Control Panel)

AT-KC10C1 Kairos Control (Control Panel)
24XPT style, standard type control panel. Can be connected to up to two Kairos Core units with Ver. 1.8.

•Power Requirement: DC 12V,* XLR 4 pin x 2, Redundant Power Supply •Current Consumption: 8.0 A •Dimensions: 1140 mm x 94 mm x 420 mm (44-7/8" x 3-45/64" x 16-17/32"), W x H x D, excluding protrusion •Weight: Approx. 15.4 kg (33.95 lb)
•Terminals: LAN (RJ-45 × 1, 1 GbE), USB 2.0 (type A) × 2 (1 on Rear Panel, 1 on Control Panel)

AT-KC10C2 Kairos Control (Control Panel)
12XPT style, compact type control panel. Can be connected to up to two Kairos Core units with Ver. 1.8.

•Power Requirement: DC 12V,* XLR 4 pin x 2, Redundant Power Supply •Current Consumption: 4.0 A •Dimensions: 600 mm x 90 mm x 420 mm (23-5/8" x 3-35/64" x 16-17/32"), W x H x D, excluding protrusion •Weight: Approx. 8.5 kg (18.74 lb)
•Terminals: LAN (RJ-45 × 1, 1 GbE), USB 2.0 (type A) × 1

* AC adapter not included. Please check recommended products.

Kairos Creator (GUI Software)

AT-SFC10 Kairos Creator (GUI Software)
Intuitive GUI for easy configuration of inputs/outputs, scenes, layers, etc.

• OS: Windows 10/11, macOS Ventura/Sonoma/Sequoia

Kairos Emulator
Free software that allows production and training with Kairos Creator in offline environments such as outside the studio or at home.

• OS: Windows10/11
* Requires version 1.7.0 or later.
* Some functions can't use on Kairos Emulator.

Kairos Creator Subset Software
Kairos Media, Kairos Painter, Kairos Audio Mixer*
Free of charge for Kairos Creator users.

• OS: Windows10/11
* The AT-SF005 Audio Mixer Option is required for use.

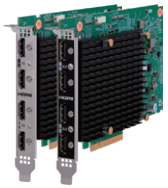
KAIROS Option

Optional Hardware

AT-KC20M1 SDI I/O Board
Enables SDI (micro BNC) input/output. Each board has 8 inputs, 4 outputs, and REF input/output. Up to 4 boards can be installed on a single Kairos Core.

• Installation on the main frame is carried out by the dealer. Always consult your dealer for installation.
* When installed, max. capacity of the RAM player is reduced. For details, please check our website.

AT-KC20M2 HDMI Input Board
AT-KC20M3 HDMI Output Board
Each has four HDMI input or output terminals. Up to 4 boards can be installed on a single Kairos Core.



• Installation on the main frame is carried out by the dealer. Always consult your dealer for installation.

SKAARHOJ's Panasonic Special model
PAN-MKO-V2B-BU Master Key One
PAN-WB-V2B-BU Wave Board and others.

• SKAARHOJ's Panasonic Special Models are not products handled by Panasonic Connect Co. Panasonic Connect does not guarantee the specifications, etc. Please contact SKAARHOJ <https://www.skaarhoj.com/> or SKAARHOJ's resellers <https://www.skaarhoj.com/discover/reseller-list> for more information about the product. Please contact your area's Panasonic Sales Companies for purchase.

Optional Software

AT-SFTC10 Touch Control Panel Software
Intuitive operation by touching the multi-viewer screen.

• OS: Windows10/11
* Requires version 1.5 or later.

AT-SFCM10	Kairos Core Manager • OS: Windows10/11	
AT-SF005	Audio Mixer Option	
AT-SFE01	RossTalk Option	
AT-SFE03	NMOS Option	For use on AT-KC200L1, please contact your distributor.

•RossTalk, Ross and XPression, are trademarks or registered trademarks of Ross Video Limited.

•NMOS (Networked Media Open Specifications) is a protocol standardized by AMWA (Advanced Media Workflow Association) for controlling and managing devices via IP networks.

KAIROS; Platform for Innovative Live Video Production

Flexible Input/Output

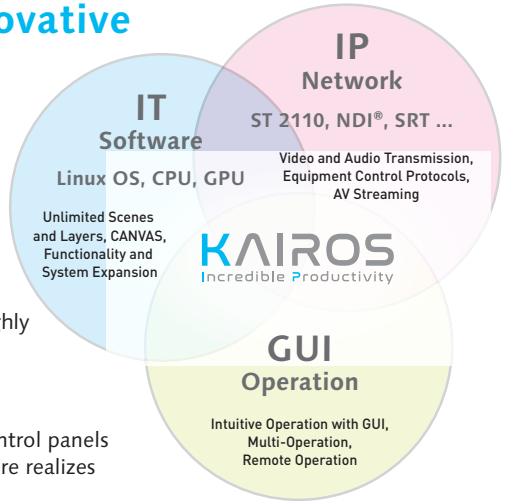
Support for extensive baseband and IP packet signals, video formats, and inputs and outputs.

Unlimited Expression

KAIROS's unlimited scenes and layers combine with CANVAS's unrestricted aspect ratios for highly flexible video production.

Advanced Operation

IP connection enables operation via multiple control panels as well as remote operation. Software architecture realizes high system scalability.



Three technologies that make up KAIROS

KAIROS Alliance Partners

KAIROS leverages ever-expanding IT ecosystems for function expansion via new software and linkage with external devices. To further accelerate such linkage, Panasonic collaborates with diverse IT companies, video equipment manufacturers and suppliers.

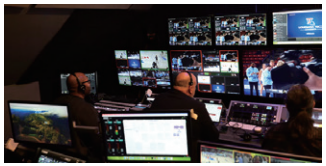
KAIROS Alliance Partners

Update

See website for latest list of KAIROS Alliance Partners and certified devices.

KAIROS Case Studies

See website for many other case studies.

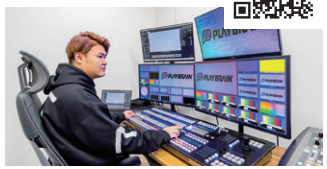


Streamlining sports production with KAIROS

GlobeStream Media & LA Tech
(Rental & Staging)
Country: U.S.A.
Installation: July 2024

IP-based production provides scalability for music festivals

CPL & Camper Calling2024
(Rental & Staging)
Country: UK
Installation: August 2024



More expressive live streaming of e-sports competitions

PLAYBRAIN Inc.
(E-sports management)
Country: Japan
Installation: March 2024

Panasonic Corporation
Imaging Solution Business Division
2-15 Matsuba-cho, Kadoma-shi, Osaka 571-8503, Japan

Specifications are subject to change without notice.

For the latest information, please visit Panasonic website https://pro-av.panasonic.net/en/

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