

GV Korona K-Frame V-series

Video Production Center

Grass Valley switcher power, with the size/price/performance flexibility you need.

The new GV Korona K-Frame V-series systems from Grass Valley are specifically designed for low- and mid-range broadcast and media applications, where compromising on performance is not an option. GV Korona K-Frame V-series systems are available in a variety of system packages, with 1, 2 or 3 M/Es and a complement of licenses, for exceptional value and incredible power. Because of its modular design, even a transition from SDI to IP is as easy as an I/O board swap.

The small footprint of the GV Korona K-Frame V-series is ideal for smaller stations, sub-studios, mobile environments, corporate, sports venues, eSports, educational, government and houses of worship production facilities. With its modular design for simple scalability and serviceability to its handling SD/HD and the ability to produce in 3G/1080p with no loss of functionality and 4K UHD with a simple license upgrade, it is ready for anything.

Out of the box, GV Korona K-Frame V-series provides you with 3G/1080p and 4K UHD (quad-split and 2SI) support capabilities, up to 3 M/Es plus two additional and powerful Video Processing Engines (VPEs) for all the no-compromise mixing and keying power you will ever need. Its native 10-bit 4:2:2 processing even supports High Dynamic Range (HDR). This is real big switcher performance in a small form factor with a lower CAPEX cost than previously available.



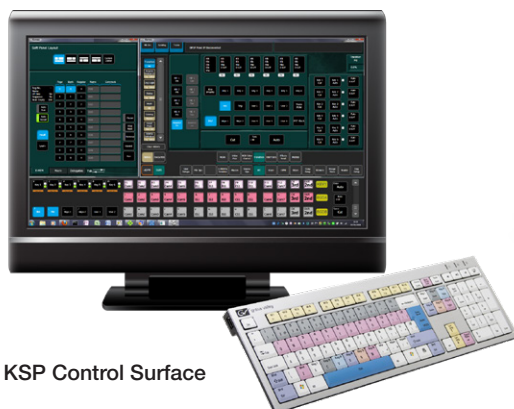
GV Korona 3 M/E Switcher



GV Korona 2 M/E Switcher

Setting up a 4K UHD show has never been easier than with a unique EZ 4K frame operating mode that automatically gangs buses, ImageStore channels and I/Os. Supporting up to three 4K UHD M/Es each with two full function keys and an optional channel of iDPM, you will produce extremely high-quality content. The conversion I/O boards offer 12G-SDI for single link connectivity reducing cabling requirements and gearboxing of 4K UHD signals to move between single link and quad link video formats.

The K-Frame family of Video Production Centers has a unique feature where any Kayenne, Karrera, or GV Korona control panel can control any K-Frame video processing engine from the GV K-Frame X to the K-Frame V-series. This gives you the power to build a show on one panel, with the confidence to know that it will play back on any other panel. To lower training costs, once a TD learns one Grass Valley panel, they've learned them all, as the panels are based on the same software, making upgrading and moving between panels easy. K-Frame and menu emulators are available and are great tools for training and operation providing the ability to create, edit and save shows offline.



KSP Control Surface



GV Korona 1 M/E Switcher

KEY FEATURES

K-Frame V-series

- Supports 3G-SDI without compromising any other features
- VPEs offer four full function keyers, resizers and a mixer for all the keying power you will ever need
- Supports 2160p for UHD-1 productions with up to 3 M/Es
- Using K-FRM-IO-CONV-V every path supports frame sync and up/down/crossconversion between SD, HD, 1080p, quad-link 4K UHD 2SI or SDQS, plus gearboxing of 12G-SDI
- Modular design, buy only what you need today and reconfigure/upgrade as your needs change
- AIMS-compliant IP I/O option protects your investment
- Media Ports for non-SDI production signal types
- Optional iDPM for added 3DDVE capabilities
- Optional KSP GUI control software can be used instead of, or in conjunction with, hardware panels

GV Korona Panel

- Fully integrated multitouch menu system and innovative touchscreen in transition area
- Same familiar user interface and power as Karrera, but in a smaller form factor
- Compatibility with all K-Frame series frames — can be deployed as a second control panel for large events
- Just like any K-Frame switcher, the ability to load shows from Kayenne or Karrera show files
- No compromises on enterprise features, even with such a competitively priced product
- Training costs can be spread across the entire GV production switcher range (Kayenne, Karrera or GV Korona) — learn one panel, learn them all!
- Made by Grass Valley — a company with a proven and reliable pedigree in production switchers
- Includes redundant power supply

K-Frame V-series Capabilities

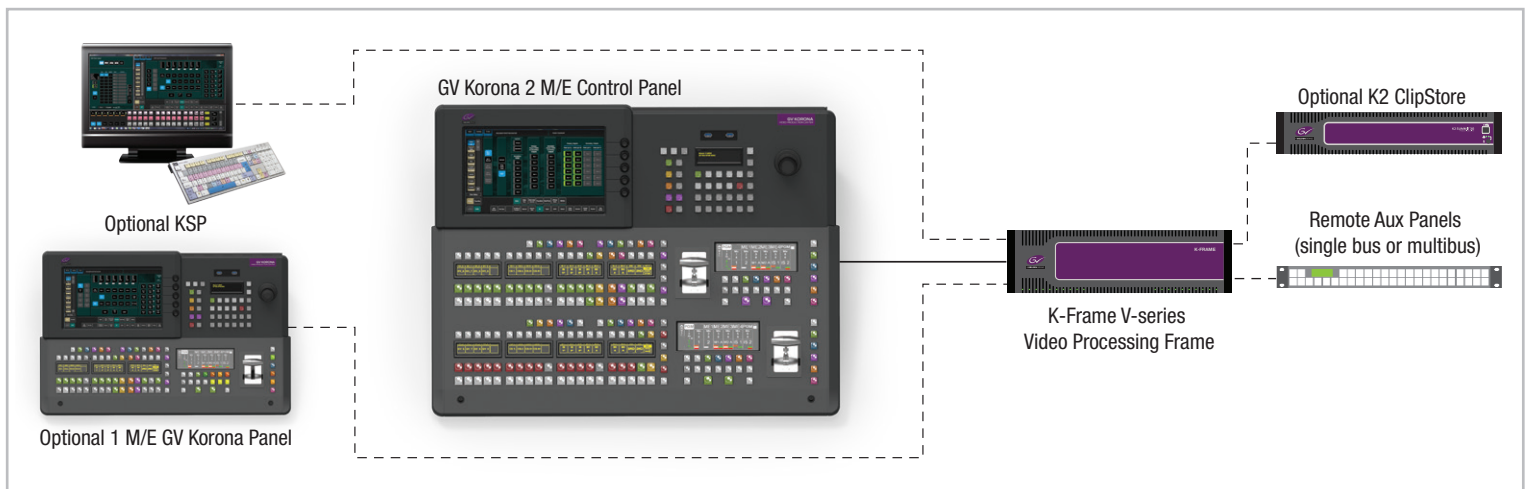
- V-series compact frame (3 RU) with 10-bit 4:2:2 video processing:
 - Up to 32 SDI/IP and 4 Media Port inputs (Media Port inputs not supported on IP I/O board)
 - Up to 16 SDI/IP outputs and 2 Media Port outputs
 - Up to 3 M/Es each with 4 keyers (6 program, preview and clean feed outputs per M/E)
 - Up to 2 VPEs each with 4 keyers (6 program, preview and clean feed outputs per VPE)
 - Up to 20 2D DPMs, 1 for every keyer
 - Up to 20 floating chromakeyers
 - Up to 32 GB, 8 channel (video plus key), internal ImageStore with RAM Record
 - 2 integrated internal analog sync offset outputs
 - 2 internal multiviewers
 - FlexiKey functionality
 - 3G/1080p and 12G/2160p (optional)
 - iDPM capability (optional)
 - eDPM capability (optional)
 - Up/down/crossconverters with frame syncs (optional)
 - RGB color correction (optional)
 - DoubleTake effectively doubling the number of M/Es (optional)
 - Suites Mode: Allows K-Frame to be utilized on up to four concurrent separate productions
 - Redundant power supply (optional)

GV Korona K-Frame V-series systems offer a choice between three control surfaces with a built-in touchscreen menuing system, innovative touchscreens in transition areas, and a K-Frame V-series Video Production Center. The systems come pre-configured with a 1-stripe (15 button), 2-stripe (20 button) or 3-stripe (25 button) control surface, a processing frame with a base 16 inputs x 8 outputs in either SDI or IP and 2x2 Media Ports, capable of expanding the footprint to 32x16 and 4x2. Software licenses include 1, 2 or 3 M/Es and two VPEs, each with 4 keyers and a mix effects engine, 2D DPMs (resizers) for every keyer, internal 16 GB ImageStore ready to record, store and instantaneously cue and playback over one minute of HD video, two internal multiviewers, two chromakeys, two analog sync offset reference outputs and FlexiKey for programmable clean feeds.

That is just the starting point, you can optionally add many additional features including a larger 32 GB ImageStore, Grass Valley’s legendary iDPM capability, up/down/crossconverters with frame syncs, DoubleTake to effectively double the number of M/Es and even AIMS-compliant IP I/O boards to support your migration to IP.

GV Korona K-Frame V-series switchers build on Grass Valley’s legendary ease of use, which simplifies the running of the most complex productions. Operators can rapidly build, save, punch and load shows for optimum efficiency. These highly familiar workflows help prevent on-air errors, and simplify the hiring and management of operator teams.

GV Korona System Setup Options



SPECIFICATIONS

Mechanical Specifications

For complete product dimensions and installation instructions, please refer to the documentation library at www.grassvalley.com.

Component	Depth	Width	Height	Weight	Rack Units
Control Panels					
KOR-PNL-100-15	419.8 mm (16.5 in.)	668.5 mm (26.3 in.)	236.2 mm (9.3 in.)*	12.3 kg (27.1 lbs.)	n/a
KOR-PNL-200-20	576.5 mm (22.7 in.)	764.5 mm (30.1 in.)	261.6 mm (10.3 in.)*	17.6 kg (38.7 lbs.)	n/a
KOR-PNL-300-25	736.6 mm (29.0 in.)	861 mm (33.9 in.)	287 mm (11.3 in.)*	27.9 kg (61.4 lbs.)	n/a
Frames					
K-FRM-100V (3 RU)	563.5 mm (21.2 in.)	482.6 mm (19.0 in.)	132.6 mm (5.2 in.)	28 kg (62 lbs.) (with one power supply)	3

* Heights for GV Korona panels include tub rubber feet.

Frame	M/Es	Inputs	Outputs	GPI Inputs	GPI/Tally Outputs	Mod I/O (MatchDef/SetDef)
V-series 3 RU	1 to 5	8-32 SDI/IP plus 1-4 Media Ports	4-16 SDI/IP plus 2 Media Ports	8 per frame	32 per frame	Each CONV I/O card provides 8 SDI and 1 Media Port inputs and 4 outputs with 12 MatchDef/SetDef capability
Board Count						
V-series 3 RU	Up to 1 M/E board (five M/Es per board)	Up to 4 input/output boards (8 SDI/IP and 1 Media Port input and 4 SDI/IP outputs per board; IP board does not have Media Port input)				Up to 4 I/O modules

Video Standards

4K UHD Mode:

- 2160p 50/59.94/60
- 4K 2SI Quad Link 50/59.94/60
- 4K SDQS Quad Link 50/59.94/60

3G Mode: 1080p50/59.94/60, Level A and Level B

HD Mode:

- 1080p 23.976/24/25/29.97/30
- 1080i25/29.97/30
- 1080PsF23.976/24/25/29.97/30
- 720p50/59.94/60

SD Mode:

- 525i29.97
- 625i25

Serial Digital Video Inputs

Interface:

- 4K UHD-SDI (12 Gb/s): SMPTE ST 425-5, SMPTE ST 2082-10
- 3G (3 Gb/s): SMPTE ST 424
- 1080PsF (3 Gb/s): SMPTE RP 211
- HD (1.5 Gb/s): SMPTE ST 274, SMPTE ST 292, SMPTE ST 296
- SD (270 Mb/s): SMPTE ST 259 ITU-R BT.656

Return loss:

- >15 dB, 5.0 MHz to 1.5 GHz
- >10 dB, 1.5 GHz to 3.0 GHz
- >7 dB, 3.0 GHz to 6.0 GHz
- >4 dB, 6.0 GHz to 12.0 GHz

Type of connector: 75Ω BNC (SMPTE ST 259)

Nominal amplitude: 800 mVp-p terminated

Input impedance: 75Ω

Max. cable length: Using Belden 1694A type cable

- 12G: 60 meters (197 ft.) typical
- 3G: 140m (459 ft.) typical
- HD: 200m (656 ft.) typical
- SD: 350m (1,148 ft.) typical

Media Port Inputs & Outputs

SD:

- 720p (1440) x 480i 29.97 Hz
- 720p (1440) x 576i 25 Hz

HD:

- 1280x720p 50/59.94/60 Hz
- 1920x1080i 25/29.97/30 Hz
- 1920x1080p 50/59.94/60 Hz

Serial Digital Video Outputs

Interface:

- 4K UHD (SMPTE ST 2082) 12.0 Gb/s
- 3G: SMPTE ST 424
- HD (1.5 Mb/s): SMPTE ST 292
- SD (270 Mb/s): SMPTE ST 259 ITU-R BT.656

Return loss:

- >15 dB, 5.0 MHz to 1.5 GHz
- >10 dB, 1.5 GHz to 3.0 GHz
- >7 dB, 3.0 GHz to 6.0 GHz
- >4 dB, 6.0 GHz to 12.0 GHz

Type of connector: 75Ω BNC (SMPTE ST 259)

Nominal amplitude: 800 mVp-p across 75Ω ± 10%

Rise and fall times:

- 12G: ≤ 45 ps between 20% and 80%amplitude
- 3G & HD: ≤ 135 ps between 20% and 80% amplitude
- SD: 400 to 1400 ps between 20% and 80% amplitude

Timing jitter:

- 12G: ≤ 2.0 UI
- 3G: ≤ 2.0 UI
- HD: ≤ 1.0 UI
- SD: ≤ 0.2 UI

Alignment jitter:

- 12G: ≤ 0.3 UI
- 3G: ≤ 0.3 UI
- HD: ≤ 0.2 UI
- SD: ≤ 0.2 UI

Output impedance: 75Ω

DC offset: <50 mV with 75Ω termination

Ancillary and embedded data: Blanked or passed (user selectable)

EDH: Blanked

IP Interfaces

Video:

- SMPTE ST 2110-20
- SMPTE ST 2110-21 => Receiver Type N (gapped only), Sender Type N
- SMPTE ST 2022-6
- 4K UHD TICO over SMPTE ST 2022-6

Audio: SMPTE ST 2110-30

Ancillary Data: SMPTE ST 2110-40

Redundancy: SMPTE ST 2022-7

Timing: SMPTE ST 2110-10 (future release)

Analog Reference Input

Video standard: Tri-level sync or color black, analog equivalent to the currently configured standard being used

Return loss: >40 dB, up to 5.0 MHz

Connectors: 2 BNC loop-through

Impedance: 75Ω external termination

DC offset: <50 mV with 75Ω termination

SPECIFICATIONS (CONT.)**Reference Output**

Return loss: >40 dB, 0 to 5.0 MHz

Nominal amplitude: 1 Vp-p into a 75Ω load

Communications

Connections: Panel to frame: LAN cable 100m (328 ft.) max. length

Interoperability: The GV Korona K-Frame V-series Video Production Center is interoperable with the Sirius, Encore, Jupiter, SMS-7000 and NV9000 routing control systems; LDK Series and LDX Series cameras using Connect Gateway; and with the K2 media server family (including K2 Summit and K2 Solo), sQ servers, legacy Profile servers, M-Series iVDRs, Turbo iDDR and T2 iDDR.

Supported Control Protocols

The GV Korona K-Frame V-series Video Production Center supports Ethernet and serial AMP protocol (standard in all systems), serial BVW and Odetics protocols, as well as controlling devices using PBus II and GPIs

RossTalk (for Xpression control)

Single-point-of-control integration for graphics with ChyronHego Click Effects PRIME

Serial BVW-75 for VTR control

AMP (advanced media protocol) for Profile PVS, Profile XP Media Platform, K2, M-Series, Turbo iDDR and T2 iDDR systems over Ethernet and serial

Grass Valley native protocol for routers/routing control systems (Trinix/Trinix NXT, Venus, Triton, NVISION and third-party routers; Jupiter, Encore and NV9000 router control systems)

Ethernet tally

Grass Valley remote Aux panels via Ethernet

Ethernet CPL to control Grass Valley external remote Aux panels

GV Editor protocol for edit controllers and external control VDCP serial and Ethernet

Power**Video Processing Frame 3 RU:**

Line voltage: 100-240 VAC ±10% power factor corrected with automatic line-voltage sensing for 120V and 240V sources

Line frequency: 50/60 Hz ±5%

Power consumption: max. 500W

Leakage current: <2.5 mA

Control Panel:

Line voltage: 100-240 VAC ±10% power factor corrected with automatic line-voltage sensing for 120V and 240V sources

Line frequency: 50/60 Hz ±5%

Power consumption: max. 50W (GV Korona control panels)

Leakage current: <2.5 mA

Environmental Conditions

Storage temperature: -20 to 70° C (-4 to 158° F)

Operating temperature: 0 to 40° C (32 to 104° F)

Relative humidity: 0-95% (non-condensing)

Electromagnetic environment: E2 (according to EN55103-1, -2)

ORDERING**KV Systems Include****Selected Panel type, Video Frame with Standard I/O and Licenses**

- Compact (3 RU) K-Frame V-series video processing frame (K-FRM-100V) which includes:
 - V-series controller module (K-FRM-CTRL-V) with internal ImageStore
 - One V-series mix/effects module (K-FRM-ME-V) with multiviewers
 - Two input/output modules each with 8 inputs and 4 outputs (K-FRM-IO-STND-V)
 - One power supply (K-FRM-PSU-V)
- Software licenses include:
 - One (1) to three (3) V-series M/Es with four keyers (K-FRM-LIC-ME-V)
 - Two (2) VPEs with four keyers
 - Two (2) floating Chromakeyers (K-FRM-LIC-CHRO-2)
 - 2D DPMS assigned to every keyer (K-FRM-LIC-2DDPM)
 - Internal ImageStore with 16 GB storage (K-FRM-LIC-IMG-16GB)
 - “Movies” or RAM Record mode with audio for ImageStore (K-FRM-LIC-IMG-RAMR)
 - Two (2) internal Multiviewers (K-FRM-LIC-MLTVWR)
 - FlexiKey functionality (K-FRM-LIC-FLEX)

KV-C Systems Include**Selected Panel type, Video Frame with Conversion I/O and Licenses**

- Compact (3 RU) K-Frame V-series video processing frame (K-FRM-100V-C) which includes:
 - V-series controller module (K-FRM-CTRL-V) with internal ImageStore
 - One V-series mix/effects module (K-FRM-ME-V) with multiviewers
 - Two input/output modules with 8 inputs and 4 outputs (K-FRM-IO-CONV-V)
 - One power supply (K-FRM-PSU-V)
- Software licenses include:
 - One (1) to three (3) V-series M/Es with four keyers (K-FRM-LIC-ME-V)
 - Two (2) VPEs with four keyers
 - Two (2) floating Chromakeyers (K-FRM-LIC-CHRO-2)
 - 2D DPMS assigned to every keyer (K-FRM-LIC-2DDPM)
 - Internal ImageStore with 16 GB storage (K-FRM-LIC-IMG-16GB)
 - “Movies” or RAM Record mode with audio for ImageStore (K-FRM-LIC-IMG-RAMR)
 - Two (2) internal multiviewers (K-FRM-LIC-MLTVWR)
 - FlexiKey functionality (K-FRM-LIC-FLEX)
 - Sixteen (16) frame synchronizers and twenty-four (24) format converters (K-FRM-LIC-SETMAT-V)

KV-I Systems Include**Selected Panel type, Video Frame with IP I/O and Licenses**

- Compact (3 RU) K-Frame V-series video processing frame (K-FRM-100V-I) which includes:
 - V-series controller module (K-FRM-CTRL-V) with internal ImageStore
 - One V-series mix/effects module (K-FRM-ME-V) with multiviewers
 - Two IP input/output modules with 8 inputs and 4 outputs (K-FRM-IO-V-I), SFPs must be ordered separately:
 - 10 GbE: SFP-ETH10G-RT-M85-LC
 - 25 GbE: K-FRM-IO-SFP10-25G
 - One power supply (K-FRM-PSU-V)
- Software licenses include:
 - One (1) to three (3) V-series M/Es with four keyers (K-FRM-LIC-ME-V)
 - Two (2) VPEs with four keyers
 - Two (2) floating Chromakeyers (K-FRM-LIC-CHRO-2)
 - 2D DPMS assigned to every keyer (K-FRM-LIC-2DDPM)
 - Internal ImageStore with 16 GB storage (K-FRM-LIC-IMG-16GB)
 - “Movies” or RAM Record mode with audio for ImageStore (K-FRM-LIC-IMG-RAMR)
 - Two (2) internal Multiviewers (K-FRM-LIC-MLTVWR)
 - FlexiKey functionality (K-FRM-LIC-FLEX)

ORDERING (CONT.)



V-series systems come with additional licenses that provide tremendous value and can be seen below:

System	M/Es	Stripes	Buttons	Frame Type	Inputs	Outputs
KOR-1-15-1M-KV	1 (plus 2 VPEs)*	1	15	V-series	16 SDI (plus 2 Media Ports)**	8 SDI (plus 2 Media Ports)***
KOR-2-20-2M-KV	2 (plus 2 VPEs)*	2	20	V-series	16 SDI (plus 2 Media Ports)**	8 SDI (plus 2 Media Ports)***
KOR-3-25-3M-KV	3 (plus 2 VPEs)*	3	25	V-series	16 SDI (plus 2 Media Ports)**	8 SDI (plus 2 Media Ports)***
KOR-1-15-1M-KV-C	1 (plus 2 VPEs)*	1	15	V-series	16 SDI w/processing (plus 2 Media Ports)**	8 SDI w/processing (plus 2 Media Ports)***
KOR-2-20-2M-KV-C	2 (plus 2 VPEs)*	2	20	V-series	16 SDI w/processing (plus 2 Media Ports)**	8 SDI w/processing (plus 2 Media Ports)***
KOR-3-25-3M-KV-C	3 (plus 2 VPEs)*	3	25	V-series	16 SDI w/processing (plus 2 Media Ports)**	8 SDI w/processing (plus 2 Media Ports)***
KOR-1-15-1M-KV-I	1 (plus 2 VPEs)*	1	15	V-series	16 IP**	8 IP (plus 2 Media Ports)***
KOR-2-20-2M-KV-I	2 (plus 2 VPEs)*	2	20	V-series	16 IP**	8 IP (plus 2 Media Ports)***
KOR-3-25-3M-KV-I	3 (plus 2 VPEs)*	3	25	V-series	16 IP**	8 IP (plus 2 Media Ports)***

* V-series frames support up to 3 M/Es

** V-series frames support up to 32 SDI plus 4 Media Ports inputs or 32 IP inputs

***V-series frames support up to 16 SDI or IP outputs plus 2 Media Port Outputs



GV Korona K-Frame V-series
3 M/E 25-button system

ORDERING (CONT.)**GV Korona Panel Options****KOR-PNL-100-15**

1-stripe (1 M/E) GV Korona panel including redundant power supply, with 15-button source selectors.

Includes one 15-button source select stripe, one 20 meter Ethernet cable, and a system control area with device control, switched preview, alternate bus and aux bus delegation, and macro controls, with controls for background and keyer source selection, multi-function and E-MEM area, horizontal keyer cut/mix, multi-function keypad and display. Includes built-in multi-touch display and menu system.



**GV Korona 1-Stripe Control Panel
(KOR-PNL-100-15)**

KOR-PNL-200-20

2-stripe (2 M/E) GV Korona panel including redundant power supply, with 20-button source selectors.

Includes two 20-button source select stripes, one 20 meter Ethernet cable, and a system control area with device control, switched preview, alternate bus and aux bus delegation, and macro controls, with controls for background and keyer source selection, multi-function and E-MEM area, horizontal keyer cut/mix, multi-function keypad and display. Includes built-in multi-touch display and menu system.



**GV Korona 2-Stripe Control Panel
(KOR-PNL-200-20)**

KOR-PNL-300-25

3-stripe (3 M/E) GV Korona panel including redundant power supply, with 25-button source selectors.

Includes two 25-button source select stripes, one 20 meter Ethernet cable, and a system control area with device control, switched preview, alternate bus and aux bus delegation, and macro controls, with controls for background and keyer source selection, multi-function and E-MEM area, horizontal keyer cut/mix, multi-function keypad and display. Includes built-in multi-touch display and menu system.



**GV Korona 3-Stripe Control Panel
(KOR-PNL-300-25)**

GV Korona Frame Options**K-FRM-100V**

K-Frame V-series (3 RU) video processing frame with internal power supply includes:

- V-series Controller module (K-FRM-CTRL-V)
- One V-series Mix/Effects module (K-FRM-ME-V)
- Two Input/Output modules (K-FRM-IO-STND-V)
- Two additional Media Port outputs
- One power supply (K-FRM-PSU-V)
- Eight (8) GPI inputs, 8 GPI outputs, and 24 tally connections
- AMP protocol
- Ethernet tally
- 999 Macros and 1000 E-MEMs

Video frame has six (6) VPEs each with four (4) keyer capability and a slot for optional DPM module; 36 inputs/18 outputs maximum.

K-FRM-100V-C

K-Frame V-series (3 RU) video processing frame with internal power supply includes:

- V-series Controller module (K-FRM-CTRL-V)
- One V-series Mix/Effects module (K-FRM-ME-V)
- Two SDI Input/Output modules (K-FRM-IO-CONV-V) with conversion capability
- Two additional Media Port outputs
- One power supply (K-FRM-PSU-V)
- Eight (8) GPI inputs, 8 GPI outputs and 24 tally connections
- AMP protocol
- Ethernet Tally
- 999 Macros and 1000 E-MEMs

Video frame has six (6) VPEs each with four (4) keyer capability and a slot for optional DPM module; 36 inputs/18 outputs maximum.

K-FRM-100V-I

K-Frame V-series IP based (3 RU) video processing frame with internal power supply includes:

- V-series Controller module (K-FRM-CTRL-V)
- One V-series Mix/Effects module (K-FRM-ME-V)
- Two IP Input/Output modules (K-FRM-IO-V-I), SFPs must be ordered separately:
 - 10 GbE: SFP-ETH10G-RT-M85-LC
 - 25 GbE: K-FRM-IO-SFP10-25G
- Two additional Media Port outputs
- One power supply (K-FRM-PSU-V)
- Eight (8) GPI inputs, 8 GPI outputs, and 24 tally connections
- AMP protocol
- Ethernet Tally
- 999 Macros and 1000 E-MEMs

Video frame has six (6) VPEs each with four(4) keyer capability and a slot for optional DPM module; 36 inputs/18 outputs maximum.

ORDERING

K-Frame V-series Options

K-FRM-DPM-V

K-Frame V-series DPM Module adds iDPM capability to V-series that supports:

- Four (4) licensed V/K channels of iDPM available as floating iDPMs or assignable to eDPM
- Includes the enabling DPM software license (K-FRM-LIC-IDPM-ALL)

K-FRM-CTRL-V

K-Frame V-series Controller Processor module. The internal ImageStore functionality resides on this module, which is licensable

K-FRM-ME-V

K-Frame V-series Mix/Effects Module with six (6) Video Processing Engines (VPE) that can be utilized as M/Es or VPEs. One module per frame:

- V-series M/Es (K-FRM-LIC-ME-V):
 - A/B and Utility 1 and 2 backgrounds
 - Four (4) full-function keyers with 2D DPMs
 - Cut/Mix/Wipe transitions
 - Six (6) program, preview, and clean feed outputs

Two (2) licensable multiviewers (K-FRM-LIC-MLTVWR)

K-FRM-PSU-V

K-Frame V-series Power Supply, for replacement or spares

K-FRM-100V-KIT

K-Frame V-series Spares Kit includes:

- V-series Control Processor (K-FRM-CTRL-V)
- V-series Fan Assembly

K-FRM-IO-V-I

K-Frame V-series IP Input/Output Module (8x4 IP I/O) bidirectional I/O adds 8 IP inputs & 4 IP outputs, SFP connector cages can be stuffed with 10 GbE (SFPs must be ordered separately), one board per slot.

Board can also be licensed for SMPTE ST 2022-7 redundancy by utilizing option: K-FRM-LIC-IO-RDN-V.

K-FRM-IO-STND-V

K-Frame V-series Input/Output Module, adds 8 SDI inputs (plus 1 Media Port input) and 4 SDI outputs

K-FRM-IO-CONV-V

K-Frame V-series Input/Output with Conversion Module, adds 8 SDI inputs (plus 1 Media Port input) and 4 SDI outputs with 8 licensable frame syncs and 12 up/down/crossconverters. Requires one K-FRM-LIC-SETMAT-V license per module. (Supports conversion between SD and HD. 1080p, quad-link 4K UHD 2SI or SDQS conversion, and 12G-SDI requires K-FRM-LIC-3G-V.)

K-FRM-LIC-3G-V

Software license enabling 3G formats in the K-FRM-100V video processing frame. (Also enables 12G on K-FRM-IO-CONV-V module.) For previously shipped systems, order under K-FRM-SW-OPT configuration and include frame serial number

K-FRM-LIC-IO-RDN-V

Software license enabling K-Frame V-series IP Module to support redundancy (SMPTE ST 2022-7) with SFP optical Ethernet cartridges. SFPs must be purchased separately. One license per K-FRM-100V

K-FRM-LIC-ME-V

Software license enabling M/E functionality on K-Frame V-series Mix/Effects Module

- One license required for every M/E:
 - A/B and Utility 1 and 2 backgrounds
 - Four (4) full-function keyers with 2D DPMs
 - Cut/Mix/Wipe transitions
 - Six (6) program, preview, and clean feed outputs

Six (6) M/E licenses maximum on a K-FRM-ME-V module

K-FRM-LIC-SETMAT-V

Software license enabling 8 frame syncs and 12 SetDef/MatchDef video format converters for up, down, and cross converting inputs and outputs of SD, HD including 1080p and 4K UHD. One Input/Output Module(s) (K-FRM-IO-CONV-V) is required per SETMATCH software option. For previously shipped systems, order under K-FRM-SW-OPT configuration and include frame serial number. (Supports conversion between SD and HD. 1080p, quad-link 4K UHD 2SI or SDQS conversion, and 12G-SDI requires K-FRM-LIC-3G-V.)

K-FRM-LIC-EDPM

Software license enabling M/E hardware to act as either an M/E or an expansion Digital Picture Manipulator (eDPM) for grouping up to six licensed DPMs video and key channels. Includes Kurl with nonlinear transforms including page-turn, page-roll, spheres, ripple, slits, mirrors, splits, size modulation and position modulation, plus Spektra with lighting, wide-range defocus, glow and output recursives.

K-FRM-LIC-2DDPM

Software license enabling all 2D DPMs available on licensed M/Es or eDPM in the video processor frame.

K-FRM-LIC-CHRO-2

Software license enabling two floating chromakeyers to use on any of the six keyers on every M/E.

K-FRM-LIC-CHRO-ALL

Software license enabling all floating chromakeyers in the system. Possible 30 in fully loaded Compact frame, 54 in fully loaded Standard frame. Six chromakeyers per M/E.

K-FRM-LIC-FLEX

Software license enabling FlexiKey programmable clean feed.

K-FRM-LIC-RGB

Software license for RGB color correctors on every M/E bus, with color correction per input and on all outputs.

K-FRM-LIC-DBL

Software license enabling DoubleTake (aux bus transitions, etc.) split M/E.

K-FRM-LIC-MLTVWR

Software license enabling multiviewer functionality on the K-FRM-ME-DPM module. One license required for every multiviewer. Maximum licenses dependent on hardware availability. Five pre-configured layouts, max. 14 panes per layout with On-Air and Preview tally.

K-FRM-LIC-IMG-16GB

Software license enabling the ImageStore to operate with 16 GB of memory.

K-FRM-LIC-IMG-32GB

Software license enabling the ImageStore to operate with 32 GB of memory.

K-FRM-LIC-IMG-RAMR

Software license enabling the ImageStore board to operate in "Movies" RAM Record mode. Requires a K-FRM-IMG and a K-FRM-LIC-IMG-xx.

K-FRM-LIC-SNMP

Software license enabling the SNMP MIB functions to be used by various SNMP health monitoring systems.

GV-RAP-100 or GV-RAP-200

Remote aux panel options.

GV Korona Control Surface

KOR-PNL-KIT

GV Korona critical spares kit for the KOR-PNL-xxx-xx main control panel models, including the controller board.

KOR-PNL-PSU

GV Korona power supply unit, for replacement or spares.

KOR-PNL-LAN-20

20 meter LAN Cable for the GV Korona main control panel to the video processor frame, for replacement or spares.

KSP Control Surface

KSP-PNL-1ME-KBD

Soft Panel interface keyboard for 1 M/E GUI with special Keypac labels and colors for switcher control. Requires the KSP-LIC-1ME-SW software option to operate the KSP.

KSP-LIC-1ME-SW

License enabling control of the K-series video processor frames with the 1 M/E soft panel GUI on a customer supplied PC. Suggest the KSP-PNL-1ME-KBD option.



KSP Control Surface provides a software and keyboard option for operating K-Frame.



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