

Datasheet

GV Korona K-Frame S-series

Video Production Center





GV Korona 3 M/E Switcher







All the switcher power you want, with the affordability you need.

The new GV Korona K-Frame S-series systems from Grass Valley, a Belden Brand, combine ultimate mid-range switcher performance, along with proven workflows and simplified control of complex productions. These unrivaled capabilities are offered in three system packages, with 3 M/Es, 2 M/Es or 1 M/E, for exceptional value. The GV Korona panel is primarily referenced with the S-series and V-series, but GV Korona can be used with any K-Frame video processing frame.

GV Korona K-Frame S-series systems offer a choice between three new control surfaces with a built-in touchscreen menu system, innovative touchscreens in transition areas, and a K-Frame S-series video processing engine. The systems come pre-configured with 1, 2 or 3 M/Es, 32 inputs and 16 outputs, and software licenses that include floating iDPMs and chromakeyers, 2DDPMs for each keyer, internal 16 GB ImageStore, two multiviewers, and FlexiKey functionality.

The switchers are fully future-ready, with multiformat support including licensable 1080p and 4K UHD. Switching of 4K UHD is offered without the need for any hardware or software upgrades beyond the 1080p license.

The K-Frame S-series 6 RU video frame delivers a high level of functional integration for space efficiency. It supports up to 6 M/Es across two suites, with four keyers per M/E, and up to eight licensable floating iDPMs. The frame itself has internal main and back-up power supplies, a controller module with on-board ImageStore and multiviewer. All this processing power is combined with a large scalable I/O footprint of 80x48 (maximum) supporting SDI and IP for outstanding versatility.

GV Korona K-Frame S-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.

This exceptional breadth of capabilities makes these switchers ideal for a wide range of environments, from mobile trucks to fixed facilities. Typical applications include stadiums, broadcast facilities, production houses, corporate studios, houses of worship and educational media.

To match individual user requirements, a single frame can be split into separate suites to provide resources across multiple switcher panels. This resource allocation minimizes costs and also saves precious space.

Many advanced features — including DoubleTake (split M/E mode) and Source Rules — can be enabled with software licenses to further customize the configuration and minimize up-front costs.







KEY FEATURES

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 – learn one panel, learn them all!
- Made by Grass Valley a company with a proven and reliable pedigree in production switchers

K-Frame S-series

- Compact Frame (6 RU) with 10-bit 4:2:2 video processing:
 - 32 standard inputs, up to 80 maximum
 - 16 standard outputs, up to 48 maximum
 - Up to 6 M/Es for exceptional creative freedom
 - Up to 8 floating DPMs, accessed as either iDPM or eDPM at the user's discretion
- 4 full function keyers in every M/E, with standard keying modes including chromakey
- 2D DPMs (resizers) on every keyer, with 4 pairs of 2D DPMs per M/E
- · Floating 3D iDPMs for more complex digital effects
- Future-Ready with multiformat support, including 1080p (level A or B) and 4K

- The K-FRM-IO-10GE IP I/O board for the K-Frame video processing engine offers video-over-IP connectivity for all K-Frame production switchers, using either uncompressed SMPTE ST 2022-6 or 4K 1-wire compressed IP
- Smart I/O modules provide up/down/crossconversion (optional)
- Integrated macro builder/editor allows users to edit macros online (or offline) on a PC running the menu application
- DoubleTake split M/E mode effectively doubles the number of M/Es (optional)
- FlexiKey programmable clean feed mode for separately programmable configurations of keyers from 4 M/E outputs
- Aux bus transitions for dissolves and wipes on aux bus outputs
- Built-in Image Store for storing up to 3,000 stills or 50 seconds of 1080p video to 10 video+key pair outputs
- Integrated external ClipStore provides multiple channels of video+key pairs for up to 10+ hours of non-volatile video/key/audio clip storage
- Built-in, dual output multiviewer with 5 pre-configured layouts (maximum 14 panes per layout) with On-Air and Preview tally
- Interfaces with Grass Valley routers and external Kaleido multiviewers, as well as their control systems
- LDK Series & LDX Series camera control with Ethernet tally via Connect Gateway
- 999 macros with multiple means of recall from the panel
- 1,000 E-MEM registers with Define E-MEM for fine control in creation and editing of effects
- RGB color correction on the M/E buses and aux bus outputs (optional)
- System Control area with device control sub-sections, switched preview, aux bus delegation and macro controls
- Source Rules links keyers to sources and set rules for "on/off/left alone" on every M/E with full look-ahead preview
- Ethernet tally connection for integration with external tally systems
- · VDCP Ethernet connect for stadium applications
- Integrated control of XPression graphics engine using RossTalk protocol



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

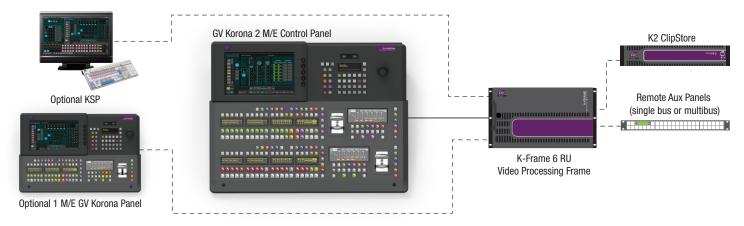


GV Korona 2-Stripe Control Panel (KOR-PNL-200-20)



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

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-100CS	558.8 mm (22.0 in.)	482.8 mm (19 in.)	266 mm (10.47 in.)	36.7 kg (81 lbs.)	6

Frame	M/Es	Inputs	Outputs	GPI Inputs Per Board	GPI/Tally Outputs Per Board	Smart I/O (MatchDef/SetDef)
S-series 6 RU	1 to 6	32 standard, 80 maximum, includes 16 Smart I/O that are SDI or IP**	16 standard, 48 maximum, includes 16 Smart I/O that are SDI or IP**	· ·	32 per input board	Each Smart I/O module provides 4 inputs and 4 outputs with access to 4 up/down/crossconversion (MatchDef/SetDef) capability
Board Count						
S-series 6 RU	Up to 2 tri-M/E boards	Up to 2 input boards (32 inputs per input board)	Up to 2 output boards (16 dual outputs per out- put board)			Up to 4 Smart I/O modules that are SDI or IP**

^{*} Heights for GV Korona panels include tub rubber feet.

Video Standards

4K UHD Mode

2-Sample-Interleave (2SI), 4x 1080p or TICO-compressed 4K 1-Wire

4 quadrant quad link, 4x 1080p

3G Mode:

1080p 50 Hz SMPTE ST 425-1 section 4 -Level A

1080p 59.94 Hz SMPTE ST 425-1 section

4 - Level A

1080p 60 Hz SMPTE ST 425-1 section 4 -

Level A

1080p 50 Hz SMPTE ST 425-1 section 5 -

1080p 59.94 Hz SMPTE ST 425-1 section

5 - Level B

1080p 60 Hz SMPTE ST 425-1 section 5 -Level B

HD Mode:

1080i25/29.97/30/50/59.94

1080PsF23.976/24/25/29.97/30

720p50/59.94/60

SD Mode:

525i59.94 625i50

Serial Digital Video Inputs

3G video formats SMPTE ST 424-2006

HD video formats SMPTE ST 292-1998

SD video formats SMPTE ST 259-1997 ITU-R

BT.656

Return loss:

>15 dB, 5 MHz to 1.5 GHz

>10 dB, 1.5 GHz to 3.0 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

3G video 140m (459 ft.) typical

HD video 200m (656 ft.) typical

SD video 350m (1,148 ft.) typical

Serial Digital Video Outputs

Interface:

3G video formats SMPTE ST 424-2006

HD video formats SMPTE ST 292-1998

SD video formats SMPTE ST 259-1997 ITU-R BT.656

Return loss:

>15 dB, 5 MHz to 1.5 GHz >10 dB, 1.5 GHz to 3.0 GHz

Type of connector: 75Ω BNC (SMPTE ST 259) Nominal amplitude: 800 mVp-p across 75Ω

Rise and fall times:

3G & HD video formats ≤ 135 ps between 20% and 80% amplitude

SD video formats, 400 to 1400 ps between

20% and 80% amplitude

Timing jitter:

3G video formats ≤ 2.0 UI

HD video formats ≤ 1.0 UI

SD video formats ≤ 0.2 UI

Alignment jitter:

3G video formats ≤ 0.3 UI

HD video formats ≤ 0.2 UI

SD video formats ≤ 0.2 UI

Output impedance: 75Ω

DC offset: ${<}500$ mV with ${75}\Omega$ termination

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

EDH: blanked

Analog Reference Input

Video standard: Analog Black or Tri-level sync

Return loss: >40 dB, up to 5 MHz Connectors: 2 BNC loop-through Impedance: 75Ω external termination

Communications

Connections:

PCU to video frame: LAN cable 100m (328 ft.)

Control panel to PCU: dedicated cables, choice of 7.5m or 15m

Menu panel to PCU: dedicated cables, choice of 7.5m or 15m

Interoperability: The Video Production Centers are interoperable with the 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 the K2 Summit and K2 Solo), legacy Profile servers. M-Series iVDRs. Turbo iDDRs and T2 iDDRs.

Supported Control Protocols

The Video Production Centers support Ethernet and serial AMP protocol (standard in all systems), serial BVW and Odetics protocols, as well as controlling devices using PBus II and GPIs

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 Grass Valley editor protocol for edit controllers

and external control

VDCP Serial and Ethernet RossTalk protocol support for direct control of

XPression graphics engine

Video Processing Frame 6 RU:

Line voltage: 100V-240 VAC ±10% power factor corrected

Automatic line-voltage sensing for 120V and 240V sources

Line frequency: 50/60 Hz ±5%

Power consumption: max. 900W (750W for

"S-series" board set)

Leakage current: <2.5 mA **GV Korona 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

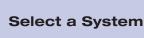
Leakage current: <2.5 mA

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)

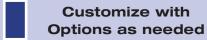
Electromagnetic environment: E2 (according to

EN55103-1, -2)

^{**} IP I/O do not support MatchDef/SetDef



Choose SPORT **Performance Suite** if desired





S-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-KCS	1*	1	15	Compact (S-series)	32**	16***
KOR-2-20-2M-KCS	2*	2	20	Compact (S-series)	32**	16***
KOR-3-25-3M-KCS	3*	3	25	Compact (S-series)	32**	16***

^{*} S-series frames support up to 6 M/Es

^{***} S-series frames support up to 48 outputs





GV Korona Performance Suite

KOR-SPORT-PS

K-Frame Compact S-series SPORT Performance Package adds additional functionality to the KOR- 3-25-3M-KCS, KOR-2-20-2M-KCS or KOR-1-15-1M-KCS models.

DoubleTake capability (K-FRM-LIC-DBL)

Additional storage for the ImageStore (K-FRM-LIC-IMG-32GB) Movies capability for the ImageStore (K-FRM-LIC-IMG-RAMR)

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 multitouch display and menu system.

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 multitouch display and menu system.

KOR-PNL-300-25

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

Includes three 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 kever source selection, multi-function and E-MEM area, horizontal keyer cut/ mix, multi-function keypad and display. Includes built-in multitouch display and menu system.

GV Korona K-Frame S-series Systems

KOR-1-15-1M-KCS

GV Korona K-Frame S-series 1 M/E system — includes control panel, video frame and licenses.

1-stripe (1 M/E) GV Korona panel (KOR-PNL-100-15) with built-in multitouch touchscreen menu.

Compact (6 RU) K-Frame S-series (K-FRM-100CS) which includes: S-series Controller Module (K-FRM-CTRL-CS) with internal ImageStore and Multiviewers

One S-series Mix/Effects module (K-FRM-ME-DPMs)

One Input Module with 32 inputs (K-FRM-INPUT)

One Output Module with 16 outputs (K-FRM-OUTPUT)

One power Supply Unit (K-FRM-PSU)

Software licenses, which include:

One (1) S-series M/Es each with four keyers (K-FRM-LIC-ME-S)

Two (2) floating iDPMs (K-FRM-LIC-IDPM-2)

Two (2) floating Chromakeyers (K-FRM-LIC-CHRO-2)

Four (4) 2D DPMs (K-FRM-LIC-2DDPM)

Internal ImageStore with storage (K-FRM-LIC-IMG-16GB)

Two (2) internal Multiviewers (K-FRM-LIC-MLTVWR)

FlexiKey functionality (K-FRM-LIC-FLEX)

KOR-2-20-2M-KCS

GV Korona K-Frame S-series 2 M/E system — includes control panel, video frame, and licenses.

2-stripe (2 M/E) GV Korona panel (KOR-PNL-200-20) with built-in multitouch touchscreen menu.

Compact (6 RU) K-Frame S-series (K-FRM-100CS) which includes:

S-series Controller Module (K-FRM-CTRL-CS) with internal ImageStore and Multiviewers

One S-series Mix/Effects module (K-FRM-ME-DPMs)

One Input Module with 32 inputs (K-FRM-INPUT)

One Output Module with 16 outputs (K-FRM-OUTPUT)

One Power Supply Unit (K-FRM-PSU)

Software licenses, which include:

Two (2) S-series M/Es each with four keyers (K-FRM-LIC-ME-S)

Two (2) floating iDPMs (K-FRM-LIC-IDPM-2)

Two (2) floating Chromakeyers (K-FRM-LIC-CHRO-2)

Eight (8) 2DDPMs (K-FRM-LIC-2DDPM)

Internal ImageStore with storage (K-FRM-LIC-IMG-16GB)

Two (2) internal Multiviewers (K-FRM-LIC-MLTVWR)

FlexiKey functionality (K-FRM-LIC-FLEX)

KOR-3-25-3M-KCS

GV Korona K-Frame S-series 3 M/E system — includes control panel, video frame, and licenses

3-stripe (3 M/E) GV Korona panel (KOR-PNL-300-25) with built-in multitouch touchscreen menu.

Compact (6 RU) K-Frame S-series (K-FRM-100CS) which includes:

S-series Controller Module (K-FRM-CTRL-CS) with internal ImageStore and Multiviewers

One S-series Mix/Effects module (K-FRM-ME-DPMs)

One Input Module with 32 inputs (K-FRM-INPUT)

One Output Module with 16 outputs (K-FRM-OUTPUT)

One Power Supply Unit (K-FRM-PSU)

Software licenses, which include:

Three (3) S-series M/Es each with four keyers (K-FRM-LIC-ME-S) Two (2) floating iDPMs (K-FRM-LIC-IDPM-2)

Two (2) floating Chromakeyers (K-FRM-LIC-CHRO-2)

Twelve (12) 2DDPMs (K-FRM-LIC-2DDPM)

Internal ImageStore with storage (K-FRM-LIC-IMG-16GB)

Two (2) internal Multiviewers (K-FRM-LIC-MLTVWR)

FlexiKey functionality (K-FRM-LIC-FLEX)



^{**} S-series frames support up to 80 inputs

ORDERING (CONT.)

K-FRM-100CS

K-Frame Compact S-series (6 RU) with one internal power supply, S-series Controller processor module (K-FRM-CTRL-CS), One S-series Mix/Effects module (K-FRM-ME-DPM-S), one Input module with 32 inputs (K-FRM-INPUT), one Output module with 16 dual channel outputs (K-FRM-OUTPUT), eight GPI inputs and 32 GPI outputs, AMP protocol, Ethernet tally, 999 Macros and 1,000 E-MEMs. Frame has six M/Es with four keyers per M/E capability that may include an eDPM license — 80 inputs maximum, 48 outputs maximum.

K-Frame S-series Options

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-IDPM-2

Software license enabling two of the available floating iDPM Digital Picture Manipulator 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-IDPM-ALL

Software license enabling all of the available floating iDPM 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-ME-S

Software license enabling mix/effects functionality on the K-FRM-ME-DPM-S Module. Four keyers per M/E. One license required for every M/E. (Only available for S-series systems.)

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-SETMATCH

Software license enabling four SetDef/MatchDef video source format $\,$ converters for up/down/crossconverting inputs or outputs of SD and HD including 1080p. Modular input/output module(s) (K-FRM-IO) are required for SETMATCH software option.

K-FRM-LIC-DBL

Software license enabling DoubleTake (aux bus transitions, etc.)

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-CTRL-CS

Controller Processor module for K-Frame Compact S-series. Both the internal ImageStore and multiviewers functionality reside on this module which are licensable.

K-FRM-100CS-KIT

K-Frame Compact S-series 6 RU spares kit: includes S-series control processor and S-series fan module. (Only available for S-series systems.)

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-I IC-IMG-xx

K-FRM-LIC-SNMP

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

K-FRM-LIC-ME-VIEW

Software license enabling the capability to view an additional preview output from the M/E that displays the input videos for that M/E. Six pre-configured layouts that are separately selectable for each M/E.

K-FRM-ME-DPM-S

K-Frame ME-DPM S-series module: Adds one mix/effects module with three licensable S-series M/Es and four licensable DPMs to the K-Frame S-series M/F includes: A/B and Utility 1 and 2 backgrounds and four full-function keyers, cut/mix/wipe transitions with six program, preview and clean feed outputs. Module hardware may also be utilized to support an eDPM license. (Only available for S-series systems.)

K-FRM-INPUT

K-Frame input module: adds 32 inputs, eight GPI inputs and 32 GPI outputs per input board, one board per frame slot.

K-FRM-OUTPUT

K-Frame output module: adds 16 dual channel outputs (32 outputs) per output board, one board per frame slot.

K-Frame input/output module: adds four inputs and four outputs with four licensable video up/down/crossconverting SD and HD sources including 1080p.

K-FRM-IO-10GE

K-Frame Input/Output IP Module adds SMPTE ST 2022-6 (HD) capability to K-Frame:

2 SFP connectors

4x4 bidirectional IP signals

4K 1-Wire using TICO compression

SDI and 4K uncompressed over 12G SDI

K-FRM-PSU

K-Frame Power Supply for the K-FRM-PSU-FRAME

KAL-32AUXx

Single and multibus remote aux panels.

K-FRM-LIC-3G-C

Software License enabling 3G formats in the K-FRM-100C Compact video processing frame.

GV Korona Panel Options

KOR-PNL-KIT

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

KOR-PNL-PSU

GV Korona power supply unit, for replacement or spares.

KOR-SPORT-PS

K-Frame Compact S-series SPORT Performance Package adds additional functionality to the KOR-3-25-3M-KCS, KOR-2-20-2M-KCS or KOR-1-15-1M-KCS models.

DoubleTake capability (K-FRM-LIC-DBL)

Additional storage for the ImageStore (K-FRM-LIC-IMG-32GB) Movies capability for the ImageStore (K-FRM-LIC-IMG-RAMR)

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-1MF-KBD

Soft Panel interface keyboard for 1 M/E GUI with special Keycap 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.



keyboard option for operating K-Frame.

GVB-1-0587I-EN-DS



WWW.GRASSVALLEY.COM

Join the Conversation at **GrassValleyLive** on Facebook, Twitter, YouTube and Grass Valley - A Belden Brand on Linkedin.







This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents. Belden®, Belden Sending All The Right Signals®, the Belden logo, Grass Valley® and the Grass Valley logo are trademarks or registered trademarks of Belden Inc. or its affiliated companies in the United States and other jurisdictions. Grass Valley products listed above are trademarks or registered trademarks of Belden Inc., GVBB Holdings S.A.R.L. or Grass Valley Canada. Belden Inc., GVBB Holdings S.A.R.L., Grass Valley Canada and other parties may also have trademark rights in other terms used herein.