

# VIRTUAL PROCESSOR/CHROMA KEYER VRP-100

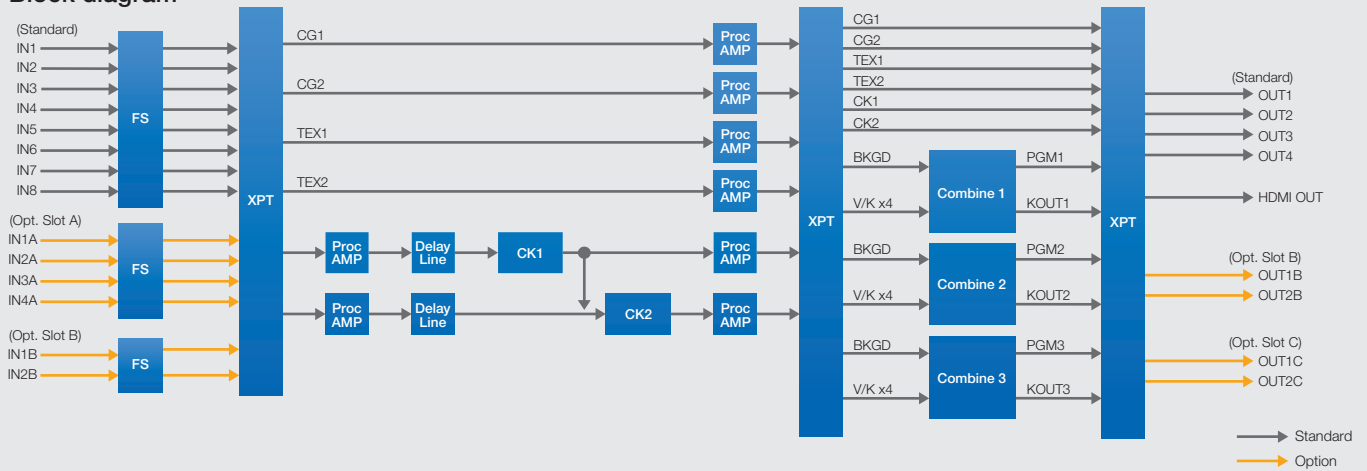
Virtual processor with multi-format (3G/HD) support.  
 Superior chroma keying backed by innovation.



Detailed compositing that outshines traditional chroma keying.  
 FOR-A technology makes it possible. Now with multiviewer output.

- 1080p (Level-A) supported
- 3G/HD-SDI 8 inputs/4 outputs + 1 HDMI output, expandable to 14/6 or 12/8
- HDMI and VGA outputs supported (optional)
- Two lines for newly developed chroma keying
- Combine both lines for dual chroma keying
- 3 DSK Channels: Combine up to 5 layers (background + 4 layers) for each
- Redundant power supply
- Adjust gain/offset for each bus with built-in Proc Amp
- Frame Synchronizer on all inputs with captured image display and still store function
- Adjust chroma level and chroma phase
- Adjust camera input delay (up to 10 frames)
- Freely assign video to any window in the multiviewer, with 2/4/5/7/9/10/11/16 splits
- Title and tally display (up to 8 characters) on the multiviewer
- 24 GPIO (General Purpose Input/Output) pins
- Remote control via dual RS-422 ports
- VRP-100RU: Remote control unit (sold separately)

## Block diagram



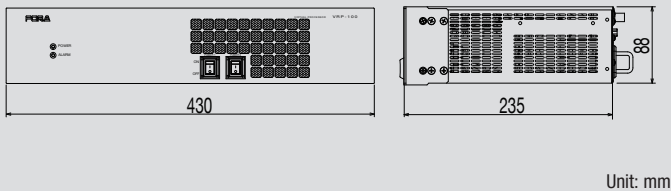
Specifications

Video Formats	3G-SDI: 1080/59.94p, 1080/50p (Level-A) HD-SDI: 1080/59.94i, 1080/50i, 720/59.94p, 720/50p	Proc. Amp.	Adjusts Luminance level and Setup level
Processing	4:2:2:4 Component	Color Control	Adjusts Chroma level and Chroma phase
Quantization	10-bit	DSK	Key Mix Mode: Normal, Add, Full Mix Layers: up to 5 layers Can be controlled of Key clip, Key gain and Transparency
Video Inputs	HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x8 (Max. x14)	Event Memory	100 events
Video Inputs (Option)	Up to 2 cards can be installed (Total 3 slots for input/output card)	Multi Viewer Channels	x 1 (2/4/5/7/9/10/11/16-splits) Display information: Source Titles, Tally
HVS-100DI-A	HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x4 or x2 (Number of inputs will be changed by install slot)	Delay Adjustments	0 H to 10 frames
HVS-100PCI (HDMI / VGA)	1080i: XGA to WUXGA, HDTV 1080p: HDTV 720p: XGA to WXGA, HDTV SD: VGA to XGA, SDTV HDMI (Type-A) or 15-pin D-sub (female) x2*1	Interfaces	Ethernet 10/100BASE-TX, RJ-45 x1 RS-422 9-pin D-sub (female) x2 GPI 25-pin D-sub (female) x1 (24 inputs/outputs)
Video Outputs	HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x4 (Max. x8) HDMI: HDTV (audio outputs are CH1 and CH2 of embedded audio)	Temperature / Humidity	0°C to 40°C / 30% to 90% (no condensation)
Video Outputs (Option)	Up to 2 cards can be installed (Total 3 slots for input/output card)	Power	100 VAC to 240 VAC ±10%, 50/60 Hz
HVS-100DO	HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x2	Consumption	Standard: 105 W (100 V AC to 120 V AC), 109 W (220 V AC to 240 V AC) Full features: 188 W (100 V AC to 120 V AC), 178 W (220 V AC to 240 V AC) *Redundant power supply is standard
HVS-100PCO (HDMI: RGB)	1080p: HDTV 1080i: SXGA to WUXGA, HDTV 720p: SXGA, WXGA, HDTV HDMI (Type-A) or 15-pin D-sub (female) x2*1	Dimensions / Weight	430 (W) x 88 (H) x 235 (D) mm Standard: 6 kg, Full features: 7.6 kg
HVS-100PCO (VGA)	1080i: SXGA to WUXGA (RGB), HDTV (YPbPr) 720p: XGA, WXGA (RGB), HDTV (YPbPr)	Consumables	VRP-100 Power supply units: to be replaced every 5 years Cooling fans: to be replaced every 4 years VRP-100RU Button cell (CR2032): to be replaced every 3 years, no - conduction (in 24/7 applications at normal temperature)
Genlock Input	BB: NTSC: 0.429 Vp-p / PAL: 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p, 75Ω or loopthrough BNC x1 (Terminate with 75Ω terminate plug, if unused)	Accessories	VRP-100 CD-ROM (Operation Manuals), AC cord with connecting clip x2, Rack mount brackets VRP-100RU CD-ROM (Operation Manuals), AC cord with connecting clip x1, Rack mount brackets, Button film
Genlock Output	BB: NTSC: 0.429 Vp-p / PAL: 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p, 75Ω BNC x1	Options	HVS-100DI-A: 3G/HD-SDI input card (4 inputs) HVS-100PCI: HDMI/VGA input card (HDMI x 2 or HDMI x 1 + VGA x 1) HVS-100DO: 3G/HD-SDI output card (2 outputs*2) HVS-100PCO: HDMI/VGA output card (HDMI x 2 + VGA x 1) VRP-100RU: Remote control unit
I/O Delay	3G-SDI: Approx. 3μs (Min. delay), HD-SDI: Approx. 6μs (Min. delay) 0 to 1 frame + Min. delay (FS) 1 to 2 frames + Min. delay (FS+CK) 1 to 2 frames + Min. delay (FS+CK1+CK2) 2 to 12 frames + Min. delay (FS+CK1+CK2+Delay line)		
Frame Synchronizer (FS)	FSS on each inputs ANC data does not pass-through in FS mode		
Chroma Keyer	4:4:4:4 RGBA 13-bit internal process (Color space convert and Up-sampling process)		

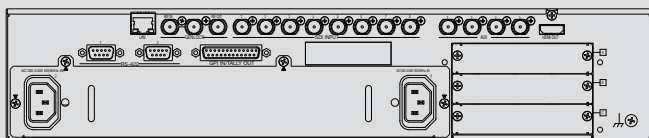
\*1 Not compatible with HDCP

\*2 Provides two down-converted outputs for HD only.

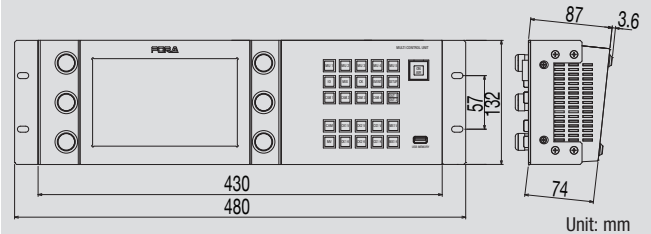
VRP-100 Dimensions



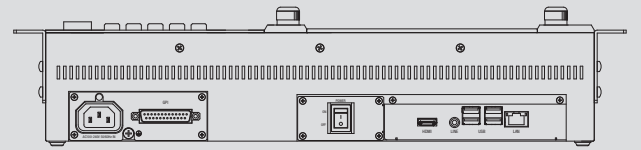
VRP-100 Rear Panel



VRP-100RU Dimensions



VRP-100RU Rear Panel



ISO 9001 and 14001 certified (Sakura R&D)

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