Virtual Processor/Chroma Keyer

VRP-100

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

- 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
- DSK: Combine up to 5 layers (background + 4 DSKs)
- 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

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

Block diagram

- Standard
- Option
Specifications

**Video Formats**
- 3G-SDI: 1080/59.94p, 1080/50p (Level-A)
- HD-SDI: 1080/59.94i, 1080/50i, 720/59.94p, 720/50p

**Processing**
- 4:2:2:4 Component

**Quantization**
- 10-bit

**Video Inputs**
- HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x8 (Max. x4)
- Number of inputs will be changed by install slot

**Video Inputs (Option)**
- Up to 2 cards can be installed (Total 3 slots for input/output card)

**HVS-100DI-A**
- HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x4 or x2

**HVS-100DI-A (HDMI/VGA)**
- 1080p: XGA to WXGA, HDTV
- 1030p: HDTV
- SD: VGA to XGA, SDTV
- HDMI (Type-A) or 15-pin D-sub (female) x2

**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)
- Up to 2 cards can be installed (Total 3 slots for input/output card)

**HVS-100DO**
- HD-SDI: 1.5 Gbps or 3G-SDI: 3 Gbps, 75Ω BNC x2

**HVS-100PCO (HDMI/RGB)**
- 1080p: HDTV
- 1080i: SXGA to WXGA, HDTV
- 720p: XGA to WXGA, HDTV
- HDMI (Type-A) or 15-pin D-sub (female) x2

**Genlock Input**
- 8B: NTSC: 0.429 Vp-p / PAL: 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p
-Terminate with 75Ω terminate plug, if unused

**Genlock Output**
- 8B: NTSC: 0.429 Vp-p / PAL: 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p
-Terminate with 75Ω terminate plug, if unused

**I/O Delay**
- SD-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+C1+CK2)
- Frame Synchronizer (FS)
- Frame 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

**Proc. Amp.**
- Adjusts Luminance level and Setup level

**Color Control**
- Adjusts Chroma level and Chroma phase

**DSK**
- Key Mix Mode: Normal, Add, Full
- Mix Layers: up to 5 layers
- Can be controlled of Key clip, Key gain and Transparency

**Event Memory**
- 100 events

**Multi Viewer**
- x 1 (2/4/5/7/10/11/16-split)

**Interfaces**
- Ethernet 10/100BASE-TX, RJ-45 x1
- GPI 25-pin D-sub (female) x1 (24 inputs/outputs)

**Temperature / Humidity**
- 0°C to 40°C / 30% to 90% (no condensation)

**Power**
- 100 VAC to 240 VAC ±10%

**Consumption**
- Standard: 105 W (100 V AC to 120 V AC), 119 W (220 V AC to 240 V AC)
- Full features: 158 W (100 V AC to 120 V AC), 174 W (220 V AC to 240 V AC)
- *Redundant power supply is standard

**Dimensions / Weight**
- 430 (W) x 235 (D) mm
- Standard: 6 kg, Full features: 7.6 kg

**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

**Accessories**
- VRP-100 CD-ROM (Operation Manual), AC cord with connecting clip x2, Rack mount brackets
- VRP-100RU CD-ROM (Operation Manual), AC cord with connecting clip x1, Rack mount brackets, Button film

**Options**
- HVS-100DI-A: 3G/HD-SDI input card (4 inputs)
- HVS-100PCO: HDMI/VGA input card (HDMI x 2 or HDMI x 1 + VGA x 1)
- HVS-100DO: 3G/HD-SDI output card (2 outputs)*
- HVS-100PCO/HDMI/VGA output card (HDMI x 2 + VGA x 1)
- VRP-100RU: Remote control unit

*1 Not compatible with HDCP
*2 Provides two down-converted outputs for HD only.