

MV-1640IP Datasheet

1. Specifications

Basic specifications

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| Temperature | 0°C to 40°C |
| Humidity | 30% to 90% (no condensation) |
| Power | 100 V AC to 240 V AC \pm 10%, 50/60 Hz |
| Consumption | 205 VA (199 W) at 100V AC to 120V AC 217 VA (192 W) at 200V AC to 240V AC |
| Dimensions | 430 (W) x 44 (H) x 500 (D) mm EIA 1RU 480 (W) (Including rack mount brackets) |
| Weight | 9.55 kg |
| Consumables (at 24-hour operation) | Cooling fan: Replace every 5 years Power Supply: Replace every 5 years |

Technical specifications

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| Video format | |
| IP signal | ST2110-20 HD: 1080/59.94i |
| | ST2022-6 HD: 1080/59.94i |
| SDI signal | 3G-SDI 1080/60p, 1080/59.94p, 1080/50p (Level-A/B) |
| | HD-SDI 1080/60i, 1080/59.94i, 1080/50i, 720/60p, 720/59.94p, 720/50p, 1080/30p, 1080/29.97p, 1080/25p, 1080/24p, 1080/23.98p, 720/24p, 720/23.98p, 1080/30PsF, 1080/29.97PsF, 1080/25PsF, 1080/24PsF, 1080/23.98PsF, 1035/60i, 1035/59.94i |
| | SD-SDI 525/59.94i, 625/50i |
| | * PsF signals are internally processed as interlaced. Flicker may be noticeable in some images. |
| Video input | Supports IP inputs and SDI inputs. (mixed inputs and asynchronous inputs are possible) |
| IP input | ST2110-20, ST2022-6 |
| SDI input (MV-1640SDI option) | HD-BNC x 16 3G-SDI: 3.0 Gbps (Up to 5C-FB 70 m) HD-SDI: 1.5 Gbps (Up to 5C-FB 100 m) SD-SDI: 270 Mbps (Up to 5C-2V 200 m) • Quantization: Y: 10-bit, C: 10-bit • Number of inputs: MV-1640SDI 16 inputs |
| Audio input | |
| IP signal Audio packet | • ST2110-30 Level C 16ch • Sampling frequency: 48 kHz (Synchronized to input video) • Quantization: 24-bit |

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| SDI signal Embedded | <ul style="list-style-type: none"> • Sampling frequency: 48 kHz (Synchronized to input video) • Quantization: 16-bit to 24-bit • 16 channels for each SDI (*1) input (4 groups, 8 stereo pairs) |
| LTC input (MV-1640IF option) | BNC x1 SMPTE-compliant timecode: within 1.0 Vp-p ±6 dBm |
| Video output | |
| HDMI | HDMI (TYPE A): 1 output <ul style="list-style-type: none"> • Quantization: Y: 10-bit, C: 10-bit (4: 4: 4) or Y: 8-bit, C: 8-bit (4: 2: 0) or R: 8-bit, G: 8-bit, B: 8-bit (4: 4: 4) • Resolution: 3840 x 2160, 1920 x 1080 • Frequency: 59.94 Hz • Range: Limited • HDMI2.0 Level B output mode (Enables 4K output with one HDMI cable) |
| 12G/3G/HD-SDI | 75Ω BNC (4K output supported in SQD or 2SI display of 3840 x 2160 signals) Quantization: Y: 10-bit, C: 10-bit (4: 2: 2) <ul style="list-style-type: none"> • BNC x 1 (12G-SDI or 3G/HD-SDI) • HD-BNC x 3 (3G/HD-SDI) -12G-SDI: 12 Gbps 2160/59.94p -3G-SDI: 3 Gbps 1080/59.94p (Level-A) -HD-SDI: 1.5 Gbps 1080/59.94i |
| Audio output | |
| Embedded (SDI) | <ul style="list-style-type: none"> - Number of outputs: 16 channels, 4 groups (8 stereo pairs) per output - Sampling frequency: 48 kHz - Quantization: 24-bit |
| Embedded (HDMI) | <ul style="list-style-type: none"> - Number of outputs: 8 channels, 4 stereo pairs per output - Sampling frequency: 48 kHz - Quantization: 24-bit |
| Genlock input | <ul style="list-style-type: none"> • REF IN (MV-1640IF option) BB: 0.429 V (p-p) (NTSC), 0.45 V (p-p) (PAL) Tri-level sync.: 0.6 V (p-p) 75Ω BNC • INPUT LOCK (SDI input 1 only when MV-1640SDI installed and cascade input.) 1080/59.94p, 1080/50p(Level-A) • PTP LOCK * Supported by SFP Port A/B 1080/59.94i |
| Video input/output delay (*2) | HDMI/SDI output <SDI1-4/HDMI Out> 0.5 frame (Field mode) 1 frame (Frame mode) |
| Count up/down timer (*3), Schedule timer | Can be displayed in information window. (Internal clock or LTC is selectable for schedule timer.) |
| Background display | Store and display background images - Max. size: 3840 x 2160 (4K layout mode) |
| Logo display | Store and display logo images - Max. size: 1024 x 512 |
| Screen layout | User customized layout - Layouts for each output can be saved on the viewer |

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| Title display | Character limit: Max. 16 characters x 2 lines for each input channel Supported characters: - Letters, numbers, symbols and Japanese kana/kanji (JIS 1 and 2) |
| Tally display | Indicated as a frame (red/green/amber) or marker (red/green/amber) on each input window. |
| Audio level display (*7) | Up to 16 audio channels of audio level metering per input |
| Time code display | - Display for 3G/HD/SD-SDI ancillary timecode (ATC) (*4) - Reader mode (*5) |
| Video monitoring | Detects video loss, frozen frames, incorrect luminance/black level, and CRC error. |
| Audio monitoring | Detects audio loss, silence, and excessive audio levels. |
| Metadata monitoring | Detects timecode loss error. (IP input signal only) |
| Interface | LAN1: 100BASE-TX/1000BASE-T, RJ-45 x 1 (CAT 5-compliant) LAN2: Same as above SFP+(A-D): 25GBASE-SR SFP+ x 4 |
| GPI-IO (MV-1640IF option) | 50 pin D-sub (female) x1 · up to 45-pin for input/ 23-pin for output (selectable, and can be used for input and output) |
| Layout Manager | Software for customizing window sizes and positions, switching windows, and registering backgrounds and logos (Windows® software) |
| Live Viewer | Software for video streaming (Windows® software) |
| Data backup | Stores settings internally to the memory (rewrite capacity: approx. 100,000 times) (*6) Time information is held by a super capacitor. |
| Daytime accuracy | Monthly difference within ±15 seconds Accuracy duration when power is off: 60 hours |

(*1) For 3G-SDI Level-B, only Link-A audio is supported, not Link-B.

(*2) Using interlaced input

(*3) Count up/down timer uses an internal crystal oscillator: ±50 ppm within operating temperature. (0°C to 40°C)

(*4) Ancillary time code (ATC) is not passed through.

(*5) Time code from LTC input is not displayed.

(*6) Frequent setting changes may impair data retention.

(*7) When input audio frequency is under 60Hz, audio level may not be displayed correctly.

Options

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| MV-1640PS | Redundant power supply (Includes an AC adaptor and AC cord) |
| MV-1640IF | Interface option |
| MV-1640SDI | SDI16 input card |

Other Options

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| HVS-AUX16A/16B/16C/16D/32A/64A (*) | Auxiliary unit (Ethernet LAN Connection) |
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Accessories

AC cord, EIA rack mount brackets, Rubber feet, HDMI cable lacing bracket and CD-ROM

2. External Dimensions

(All dimensions in mm.)

