

HVS-190S / 190OU / 190I Datasheet

1. Specifications

HVS-190S Basic specifications

Temperature	0°C to 40°C (If 3 cards of HVS-100DI-A installed: 0°C to 35°C)
Humidity	10% to 90% (no condensation)
Power	AC 100 V to 240 V $\pm 10\%$ 50/60 Hz
Consumption	Standard: 66 W (at AC 100-120 V) 68 W (at AC 220-240 V) W/ full options: 184 W (at AC 100-120 V) 178 W (at AC 220-240 V)
Dimensions	430 (W) x 245 (D) x 88 (H) mm (Not including protrusions) 480 (W) (Including rack mount brackets)
Weight	5.85 kg (Standard), 7.7 kg (W/ full options)
Consumables (at 24-hour operation)	Power unit: Recommended replacement period: 5 years Cooling fan: Recommended replacement period: 4 years

HVS-190S Technical specifications

Video format	1080p/59.94, 50(Level-A) 1080i/59.94, 50 1080p/23.98, 24, 25, 29.97 1080PsF/23.98, 24, 25, 29.97 720p/59.94, 50	
Color sampling	YCbCr: 4:2:2 10bit	
Number of video inputs	Std: 8	SDI x 8
	Max: 20	Up to 3 cards (on I/O option slots)
Video input	HD-SDI or 3G-SDI 75 Ω BNC x 8 - All inputs with frame synchronizer for each - 1080p / 59.94, 50(Level-A/B) - ANC data is not passed for Level-B signals or when using FS.	
Video input (option)	Up to 3 cards (on I/O option slots)	
HVS-100DI-A	HD-SDI or 3G-SDI 75 Ω BNC x 4 - All inputs with frame synchronizer for each - 1080p / 59.94, 50(Level-A/B) - SD-SDI acceptable to Input 1 and 2 (Up-resized to HD after input. Unavailable in 1080p mode) - ANC data is not passed for Level-B signals or when using FS or up-resizing.	
HVS-NIF	NDI (High Bandwidth) or NDI HX 4 inputs 1000BASE-T RJ-45 x 2	
HVS-DNT	D-SDI or 3G-SDI 75 Ω BNC x 2 (Max) (Input / output switchable) - 1080p/59.94, 50 (Level-A/B) supported - Ancillary data not passed-through on Level-B signals	
Number of video outputs	Std: 5	SDI x 4, HDMI x1
	Max: 11	Up to 3 cards (on I/O option slots)

Video output		HD-SDI or 3G-SDI(Level-A only) 75Ω BNC x 4	
		HDMI 2.0 Level-B (Type-A) x 1 (AUDIO support)	
Video output (option)		Up to 3 cards (on I/O option slots)	
HVS-100DO		HD-SDI or 3G-SDI(Level-A only) 75Ω BNC x 2 SD-SDI(down-sized output) 75Ω BNC x 2 * Available in HD formats	
HVS-NIF		NDI (High Bandwidth) or NDI HX 2 outputs 1000BASE-T RJ-45 x 2	
HVS-DNT		HD-SDI or 3G-SDI (Level-A only) 75Ω BNC x 2 (Max) (Input / output switchable)	
Genlock input		BB (NTSC/PAL) or Tri-level sync 75Ω BNC x 1 Loop-through or 75Ω terminated	
Genlock adjustment range		Horizontal timing: ±1H	
Genlock output		BB (NTSC/PAL) or Tri-level Sync 75Ω BNC x 1	
FS / Proc Amp		W/ frame synchronizer and Proc Amp for all inputs	
Effects			
Pattern		For BKGD and KEY	
		WIPE	100 patterns, w/ border and softness
		2D DVE	58 patterns
Sub effect channel		2 channels (1 channel in 1080p/59.94, 50) (MOSAIC, PAINT, DEFOCUS, NEGA, MONO, STROBE, FREEZE)	
Transition		Operation: Fader, AUTO button or CUT button Type: MIX, WIPE (including DVE)	
Still/Clip memory		Still: 2 memories Clip: 2 memories Recording time: 937 frames (approx. 31 seconds for 1080/59.94i) * Backup data with HVS-190SSD (option)	
Key	KEY1 KEY2	Bus key, Luminance key and Full key Edge/shadow available	
	FLEXaKEY 1-4	Bus key, Luminance key and Full key Insertion to M/E or AUX videos	
Chromakey		1 channel	
DVE channel		4 channels (2 channels in 1080p/59.94, 50) (For BKGD, KEY1-2 and FLEXaKEY1-4)	
Multi-viewer		Std: 1 channel Max: 2 channels (2-16 windows, 39 layout patterns) Features: Title, Tally, Audio meter, Safety area and Border Delay: 1 frame referring to PGM output.	
Event memory		100 events: Settings for BKGD, KEY1-2, FLEXaKEY1-4, AUX, MV, CK, SUBEFF, STILL.	
Input adjustment range		±0.5 H (-0.3 H to +0.7H for 1080/50p Level-B)	
I/O delay		Minimum delay	1H
		W/ FS	0-1 F + minimum delay
		W/ up-resizing	1-2 F + minimum delay

	W/ FS + DVE	1-2 F + minimum delay
	W/ FS + resizing output + DVE	2-3 F + minimum delay
Audio input/output (option)		
HVS-49AES	Digital audio input (AES/EBU): 4 stereo-pairs 32/44.1/48kHz 16-24bit Balanced 110Ω 25-pin D-sub (female) x 1 (inch screws) (for both in /out) Or unbalanced 75Ω BNC x 4	
	Digital audio output (AES/EBU): 4 stereo-pairs 48kHz 24bit Balanced 110Ω 25-pin D-sub (female) x 1 (inch screws) (for both in /out) Or unbalanced 75Ω BNC x 4	
HVS-DNT	Dante audio input (64 channels) 44.1/48kHz 16/24bit	
	Dante audio input (64 channels) 48kHz 16/24bit	
Interfaces		
TO OU	For HVS-190OU connection RJ-45 x 1	
HVS-LAN	100BASE-TX/1000BASE-T RJ-45 x 1	
EXT-LAN	100BASE-TX/1000BASE-T RJ-45 x 1	
GPI IN/TALLY OUT	25-pin D-sub (female) x 1 (inch screws) 24-input/output: GPI in/out, tally output (program output available) Open collector or relay contact input Open collector output	
RS-422	9-pin D-sub (female) x 2 (inch screws) For video recorder/player, router, tally unit and editor connection	
USB	USB2.0 (Type-A) x 1 For USB stick connection	

HVS-190S Options

HVS-190SSD	SSD expansion
HVS-49AES	Digital audio input/output card
HVS-190ED	Editor control software
HVS-190MV	Multi-view channel expansion
HVS-190SPSM	Redundant power unit supply for HVS-190S
HVS-100DI-A	4-channel digital input card
HVS-100DO	2-channel digital output card
HVS-NIF	NDI I/F card
HVS-DNT	Dante I/F card

HVS-190S Accessories

AC adapter, Power cord, and Quick setup guide

HVS-190OU Basic specifications

Temperature	0°C to 40°C
Humidity	10% to 90% (no condensation)
Power	AC 100 V to 240 V $\pm 10\%$ 50/60 Hz DC12V (supplied with the AC adapter)
Consumption	15 W (at AC100-120V), 15 W (at AC220-240V)
Dimensions	420 (W) x 246 (D) x 87.2 (H) mm (Not including protrusions)
Weight	3.0 kg (Standard, w/ AC adapter) 3.4 kg (w/ HVS190IPSO)
Consumables (at 24-hour operation)	Power unit: Recommended replacement period: 5 years

HVS-190OU Technical specifications

Interface	
TO OU	For HVS-190S connection RJ-45 x 1

HVS-190OU options

HVS-190PSO	HVS-190OU redundant power supply unit
EIA rack mount brackets	

HVS-190OU Accessories

MU/OU connection cable, AC adaptor and Power cord

HVS-190I Basic specifications

Temperature	0°C to 40°C		
Humidity	10% to 90% (no condensation)		
Power	AC 100 V to 240 V $\pm$ 10% 50/60 Hz DC12V / 16A (supplied with the AC adapter)		
Consumption	Standard:	78 W (at AC 100-120V)	74 W (at AC 220-240V)
	W/ full options:	155 W (at AC 100-120V)	153 W (at AC 220-240V)
Dimensions	420 (W) x 246 (D) x 136 (H) mm (Not including protrusions)		
Weight	6 kg (Standard , including AC adapter) 7.8 kg (W/ full options)		
Consumables (at 24-hour operation)	Power unit: Recommended replacement period: 5 years Cooling fan: Recommended replacement period: 4 years		

HVS-190I Technical specifications

Video format	1080p/59.94, 50(Level-A) 1080i/59.94, 50 1080p/23.98, 24, 25, 29.97 1080PsF/23.98, 24, 25, 29.97 720p/59.94, 50	
Color sampling	YCbCr: 4:2:2 10bit	
Number of video inputs	Std: 8	SDI x 8
	Max: 16	Up to 2 cards (on I/O option slots)
Video input	HD-SDI or 3G-SDI 75 Ω BNC x 8 - All inputs with frame synchronizer for each - 1080p/59.94, 50(Level-A/B) - ANC data is not passed for Level-B signals or when using FS.	
Video input (option)	Up to 2 cards (on I/O option slots)	
HVS-100DI-A	HD-SDI or 3G-SDI 75 Ω BNC x 4 - All inputs with frame synchronizer for each - 1080p / 59.94, 50(Level-A/B) - SD-SDI acceptable to Input 1 and 2 (Up-resized to HD after input. Unavailable in 1080p) - ANC data is not passed for Level-B signals or when using FS or up-resizing.	
HVS-NIF	NDI (High Bandwidth) or NDI HX 4 inputs 1000BASE-T RJ-45 x 2	
HVS-DNT	HD-SDI or 3G-SDI 75 Ω BNC x 2 (Max) (Input / output switchable) - 1080p/59.94, 50 (Level-A/B) supported - Ancillary data not passed-through on Level-B signals	
Number of video outputs	Std: 5	SDI x 4, HDMI x1
	Max: 9	Up to 2 cards (on I/O option slots)
Video output	HD-SDI or 3G-SDI(Level-A only) 75 Ω BNC x 4	
	HDMI 2.0 Level-B (Type-A) x 1 (AUDIO support)	
Video output (option)	Up to 2 cards (on I/O option slots)	
HVS-100DO	HD-SDI or 3G-SDI(Level-A only) 75 Ω BNC x 2 SD-SDI(down-sized output) 75 Ω BNC x 2 * Available in HD formats	

HVS-NIF		NDI (High Bandwidth) or NDI HX 2 outputs 1000BASE-T RJ-45 x 2	
HVS-DNT		HD-SDI or 3G-SDI (Level-A only) 75Ω BNC x 2 (Max) (Input / output switchable)	
Genlock input		BB (NTSC/PAL) or Tri-level sync 75Ω BNC x 1 Loop-through or 75Ω terminated	
Genlock adjustment range		Horizontal timing: ±1H	
Genlock output		BB (NTSC/PAL) or Tri-level Sync 75Ω BNC x 1	
FS / Proc Amp		W/ frame synchronizer and Proc Amp for all inputs	
Effects			
Pattern		For BKGD and KEY	
		WIPE	100 patterns, w/ border and softness
		2D DVE	58 patterns
Sub effect channel		2 channels (1 channel in 1080p/59.94, 50) (MOSAIC, PAINT, DEFOCUS, NEGA, MONO, STROBE, FREEZE)	
Transition		Operation: Fader, AUTO button or CUT button Type: MIX, WIPE (including DVE)	
Still/Clip memory		Still: 2 memories Clip: 2 memories Recording time: 937 frames (approx. 31 seconds for 1080/59.94i) * Backup data with HVS-190SSD (option)	
Key	KEY1 KEY2	Bus key, Luminance key and Full key Edge/shadow available	
	FLEXaKEY 1-4	Bus key, Luminance key and Full key Insertion to M/E or AUX videos	
Chromakey		1 channel	
DVE channel		4 channels (2 channels in 1080p/59.94, 50) (For BKGD, KEY1-2 and FLEXaKEY1-4)	
Multi-viewer		Std: 1 channel Max: 2 channels (2-16 windows, 39 layout patterns) Features: Title, Tally, Audio meter, Safety area and Border Delay: 1 frame referring to PGM output.	
Event memory		100 events: Settings for BKGD, KEY1-2, FLEXaKEY1-4, AUX, MV, CK Cross fade switching available at event recall	
Input adjustment range		±0.5 H (-0.3 H to +0.7H for 1080/50p Level-B)	
I/O delay		Minimum delay	1H
		W/ FS	0-1 F + minimum delay
		W/ up-resizing	1-2 F + minimum delay
		W/ FS + DVE	1-2 F + minimum delay
		W/ FS + resizing output + DVE	2-3 F + minimum delay

Audio input/output (option)	
HVS-49AES	Digital audio input (AES/EBU): 4 stereo-pairs 32/44.1/48kHz 16-24bit Balanced 110Ω 25-pin D-sub (female) x 1 (inch screws) (for both in /out) Or unbalanced 75Ω BNC x 4
	Digital audio output (AES/EBU): 4 stereo-pairs 48kHz 24bit Balanced 110Ω 25-pin D-sub (female) x 1 (inch screws) (for both in /out) Or unbalanced 75Ω BNC x 4
HVS-DNT	Dante audio input (64 channels) 44.1/48kHz 16/24bit
	Dante audio input (64 channels) 48kHz 16/24bit
Interfaces	
HVS-LAN	100BASE-TX/1000BASE-T RJ-45 x 1
EXT-LAN	100BASE-TX/1000BASE-T RJ-45 x 1
GPI IN/TALLY OUT	25-pin D-sub (female) x 1 (inch screws) 24-input/output: GPI in/out, tally output (program output available) Open collector or relay contact input Open collector output
RS-422	9-pin D-sub (female) x 2 (inch screws) For video recorder/player, router, tally unit and editor connection
USB	USB2.0 (Type-A) x 1 For USB stick connection

HVS-190I Options

HVS-190SSD	SSD expansion
HVS-49AES	Digital audio input/output card
HVS-190ED	Editor control software
HVS-190MV	Multi-view channel expansion
HVS-190IPSM	Redundant power unit supply for HVS-190I. Power cord included.
HVS-100DI-A	4-channel digital input card
HVS-100DO	2-channel digital output card
HVS-NIF	NDI I/F card
HVS-DNT	Dante I/F card
EIA Rack Mount Brackets	

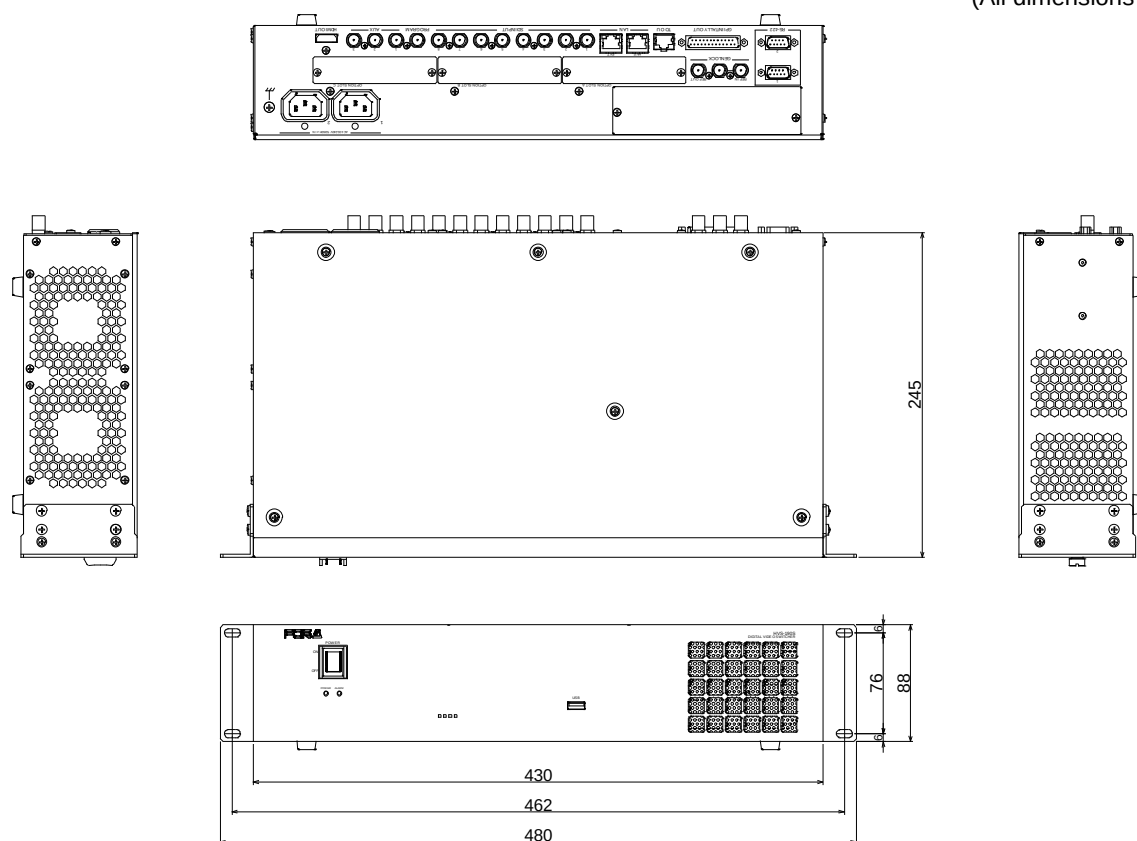
HVS-190I Accessories

AC adaptor, Power cord, and Quick setup guide

2. External Dimensions

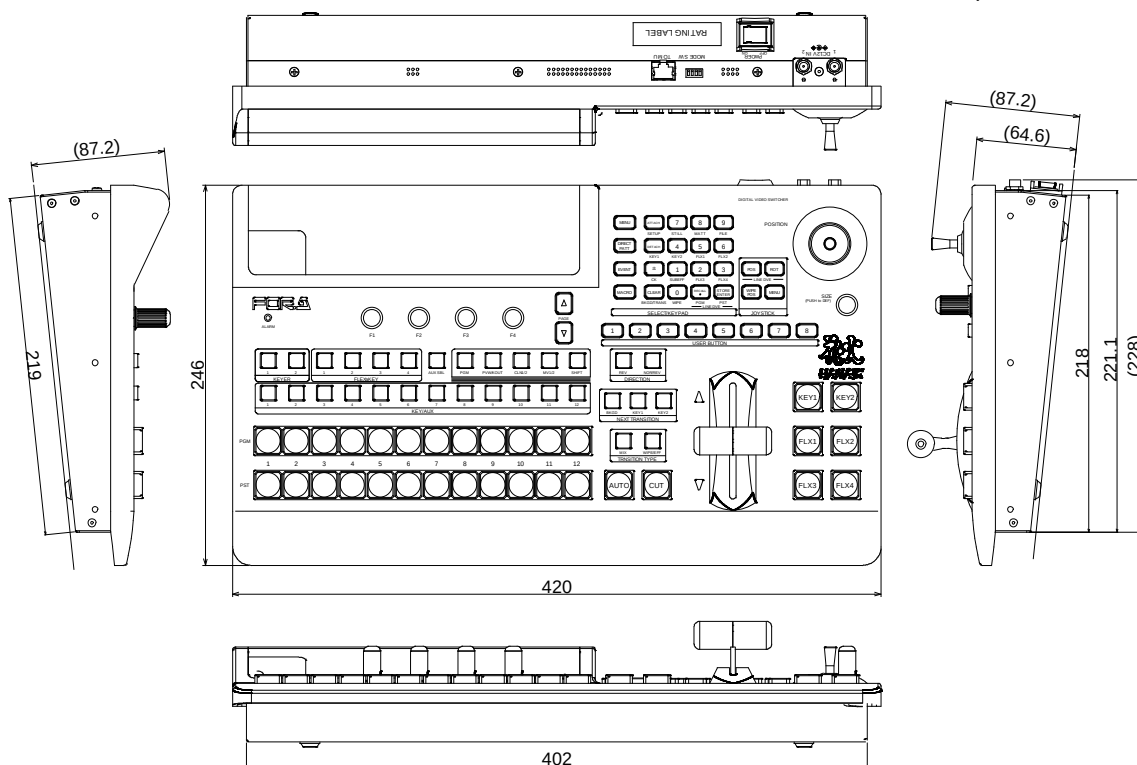
HVS-190S

(All dimensions in mm.)



HVS-190OU

(All dimensions in mm.)



HVS-190I

(All dimensions in mm.)

