

HVS-190S / 190OU / 190I Datasheet

1. Specifications

HVS-190S Basic specifications

Temperature	TBA
Humidity	30% to 90% (no condensation)
Power	AC 100 V to 240 V±10%, 50/60 Hz
Consumption	TBA
Dimensions	430 (W) x 245 (D) x 88 (H) mm 480 (W) mm (Including rack mount brackets)
Weight	5.85 kg (Standard configuration), 7.7 kg (With all options)
Consumables (at 24-hour operation)	Power supply unit: Replace every 5 years. Cooling fans: Replace every 4 years.

HVS-190S Technical specifications

Video formats		
HD (3G-SDI)	1080p/59.94, 50(Level-A)	
HD (HD-SDI)	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	Standard: 8	SDI x 8
	Max.: 20	3 optional I/O card slots for optional inputs / outputs
Video inputs	HD-SDI or 3G-SDI 75Ω BNC x 8 (Each input equipped with a frame synchronizer)	
Video inputs (optional)	Up to 3 input cards (Up to 3 option cards for inputs and outputs)	
HVS-100DI-A	HD-SDI or 3G-SDI 75Ω BNC x 4 (Each input equipped with a frame synchronizer) (IN1 and IN2 can accept SD-SDI signals that are scaled to HD size.)	
HVS-NIF	NDI(High Bandwidth) or NDI HX 4 inputs 1000BASE-T RJ-45 x 2	
Number of video outputs	Standard: 5	SDI x 4, HDMI x1
	Max.: 11	3 optional I/O card slots for optional inputs / outputs
Video outputs	HD-SDI or 3G-SDI 75Ω BNC x 4	
	HDMI 2.0 Level-B (Type-A) x 1 (Audio supported)	
Video outputs (optional)	Up to 3 output cards (Up to 3 option cards for inputs and outputs)	
HVS-100DO	HD-SDI or 3G-SDI 75Ω BNC x 2	
HVS-NIF	NDI(High Bandwidth) or NDI HX 2 outputs 1000BASE-T RJ-45 x 2	

Genlock input		BB (NTSC/PAL) or Tri-level sync, 75Ω, BNC x1, loop-through (to be terminated with 75Ω terminator, if unused)	
Genlock phase adjust		Horizontal phase: ±1H	
Genlock output		BB (NTSC/PAL) or Tri-level sync, 75Ω, BNC x1	
FS and Proc Amp		Each input equipped with a frame synchronizer and a proc amp.	
Effects			
Pattern		For background and keys	
		WIPE	100 patterns with border and/or softness
		2D DVE	58 patterns
Sub effect channel		2 channels (1 channel in 1080p/59.94, 50 mode) (Mosaic, Paint, Defocus, Nega, Mono, Strobe and Freeze)	
Transition		Execution: Fader, AUTO or CUT button Type: MIX, WIPE (including DVE effects)	
Still/clip memory		2 memory buffers for still images 2 memory buffers for clips (Up to 31 seconds for HD video) Backup available with HVS-190SSD	
Key	KEY1 KEY2	Upstream key: Bus key, Luminance key, Full key Chroma key(One channel, switcher source or direct output) Edge or shadow effect available	
	FLEXaKEY 1-4	Downstream key: Bus key, Luminance key, Full key Direct insertion on the M/E and AUX outputs	
DVE channel		4 channels (2 channels in 1080p/59.94, 50 mode) For background, KEY1-2 and FLEXaKEY1-4	
Multi-viewer channel		Standard: 1 channel, Max: 2 channels (39 layout patterns with 2-16 windows) Display contents: Title, tally, audio level meter, safety area marker and border. Delay: One frame delayed referring to the PGM output	
Event memory		100 events: BKGD, KEY1-2, FLEXaKEY1-4, AUX, MV and CK settings Crossfade switching available when loading an event.	
Input video adjust range		±0.5 H (-0.3 H to +0.7H for 1080/50p Level-B)	
Video I/O delay		Minimum delay	1H
		W/ FS or input resize	0 to 1 frames + Minimum delay
		W/ FS or input resize plus DVE	2 to 3 frames + Minimum delay
		W/ FS or input resize plus output resize and DVE	3 to 4 frames + Minimum delay
Audio input/output (option) HVS-49AES		Digital audio (AES/EBU) input: 4 stereo pairs, 32/44.1/48 kHz, 16- to 24-bit Balanced, 110Ω, 25-pin D-Sub (female) x 1 (inch screw) For both input and output) or Unbalanced, 75Ω, BNC x 4	
		Digital audio (AES/EBU) output: 4 stereo pairs, 48 kHz, 24-bit Balanced, 110Ω, 25-pin D-Sub (female) x 1 (inch screw) For both input and output) or Unbalanced, 75Ω, BNC x 4	

Interface	
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 screw) 24 inputs and outputs (GPI in, GPI out, Tally out, Tally program available) Open-collector or relay contact input, open-collector output
RS-422	9-pin D-sub (female) x 2 (inch screw) For video recorder/player, router, tally unit and editor connection
USB	USB2.0 (Type-A) x 1 For USB flash drive memory connection

HVS-190S Options

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

HVS-190S Accessories

AC cord, EIA rack mount brackets, and Quick setup guide

HVS-190OU Basic specifications

Temperature	TBA
Humidity	30% to 90% (no condensation)
Power	AC 100 V to 240 V±10%, 50/60 Hz 12 V DC (Supplied with the AC adaptor)
Consumption	14W (at AC100-120V), 17W (at AC220-240V)
Dimensions	420 (W) x 246 (D) x 87.2 (H) mm
Weight	3.0 kg (Standard, including AC adaptor), 3.4 kg (W/ HVS-190PSO)
Consumables (at 24-hour operation)	Power supply unit: Replace every 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

HVS-190I Basic specifications

Temperature	TBA
Humidity	30% to 90% (no condensation)
Power	AC 100 V to 240 V \pm 10%, 50/60 Hz 12V DC / 16 A (Supplied with AC adaptor)
Consumption	TBA
Dimensions	420 (W) x 246 (D) x 136 (H) mm
Weight	6 kg (Standard, including AC adaptor), 7.8 kg (With all options)
Consumables (at 24-hour operation)	Power supply unit: Replace every 5 years. Cooling fans: Replace every 4 years.

HVS-190I Technical specifications

Video formats		
HD (3G-SDI)	1080p/59.94, 50(Level-A)	
HD (HD-SDI)	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	Standard: 8	SDI x 8
	Max.: 16	2 optional I/O card slots for optional inputs / outputs
Video inputs	HD-SDI or 3G-SDI 75 Ω BNC x 8 (Each input equipped with a frame synchronizer)	
Video inputs (optional)	Up to 2 input cards (Up to 2 option cards for inputs and outputs)	
HVS-100DI-A	HD-SDI or 3G-SDI 75 Ω BNC x 4 (Each input equipped with a frame synchronizer) (IN1 and IN2 can accept SD-SDI signals that are scaled to HD size.)	
HVS-NIF	NDI(High Bandwidth) or NDI HX 4 inputs 1000BASE-T RJ-45 x 2	
Number of video outputs	Standard: 5	SDI x 4, HDMI x1
	Max.: 9	2 optional I/O card slots for optional inputs / outputs
Video outputs	HD-SDI or 3G-SDI 75 Ω BNC x 4	
	HDMI 2.0 Level-B (Type-A) x 1 (Audio supported)	
Video outputs (optional)	Up to 2 output cards (Up to 2 option cards for inputs and outputs)	
HVS-100DO	HD-SDI or 3G-SDI 75 Ω BNC x 2	
HVS-NIF	NDI(High Bandwidth) or NDI HX 2 outputs 1000BASE-T RJ-45 x 2	
Genlock input	BB (NTSC/PAL) or Tri-level sync, 75 Ω , BNC x1, loop-through (to be terminated with 75 Ω terminator, if unused)	
Genlock phase adjust	Horizontal phase: \pm 1H	
Genlock output	BB (NTSC/PAL) or Tri-level sync, 75 Ω , BNC x1	

FS and Proc Amp		Each input equipped with a frame synchronizer and a proc amp.	
Effects			
Pattern		For background and keys	
		WIPE 100 patterns with border and/or softness	
		2D DVE 58 patterns	
Sub effect channel		2 channels (1 channel in 1080p/59.94, 50 mode) (Mosaic, Paint, Defocus, Nega, Mono, Strobe and Freeze)	
Transition		Execution: Fader, AUTO or CUT button Type: MIX, WIPE (including DVE effects)	
Still/clip memory		2 memory buffers for still images 2 memory buffers for clips (Up to 31 seconds for HD video) Backup available with HVS-190SSD	
Key	KEY1 KEY2	Upstream key: Bus key, Luminance key, Full key Chroma key(One channel, switcher source or direct output) Edge or shadow effect available	
	FLEXaKEY 1-4	Downstream key: Bus key, Luminance key, Full key Direct insertion on the M/E and AUX outputs	
DVE channel		4 channels (2 channels in 1080p/59.94, 50 mode) For background, KEY1-2 and FLEXaKEY1-4	
Multi-viewer channel		Standard: 1 channel, Max: 2 channels (39 layout patterns with 2-16 windows) Display contents: Title, tally, audio level meter, safety area marker and border. Delay: One frame delayed referring to the PGM output	
Event memory		100 events: BKGD, KEY1-2, FLEXaKEY1-4, AUX, MV and CK settings Crossfade switching available when loading an event.	
Input video adjust range		±0.5 H (-0.3 H to +0.7H for 1080/50p Level-B)	
Video I/O delay		Minimum delay	1H
		W/ FS or input resize	0 to 1 frames + Minimum delay
		W/ FS or input resize plus DVE	2 to 3 frames + Minimum delay
		W/ FS or input resize plus output resize and DVE	3 to 4 frames + Minimum delay
Audio input/output (option) HVS-49AES		Digital audio (AES/EBU) input: 4 stereo pairs, 32/44.1/48 kHz, 16- to 24-bit Balanced, 110Ω, 25-pin D-Sub (female) x 1 (inch screw) For both input and output) or Unbalanced, 75Ω, BNC x 4	
		Digital audio (AES/EBU) output: 4 stereo pairs, 48 kHz, 24-bit Balanced, 110Ω, 25-pin D-Sub (female) x 1 (inch screw) For both input and output) or Unbalanced, 75Ω, BNC x 4	
Interface			
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 screw) 24 inputs and outputs (GPI in, GPI out, Tally out, Tally program available) Open-collector or relay contact input, open-collector output	

RS-422	9-pin D-sub (female) (inch screw) x 2 For recorder, router, tally unit and editor connection
USB	USB2.0 (Type-A) x 1 For USB flash drive memory connection

HVS-190I Options

HVS-190ED	Editor control software
HVS-190MV	Multi-viewer expansion
HVS-190SSD	SSD expansion
HVS-190IPSM	HVS-190I Redundant power supply
HVS-100DI-A	4-channel digital input card
HVS-100DO	2-channel digital output card
HVS-NIF	NDI I/F card
HVS-49AES	Digital audio input/output card

HVS-190I Accessories

AC adaptor, AC cord, and Quick setup guide

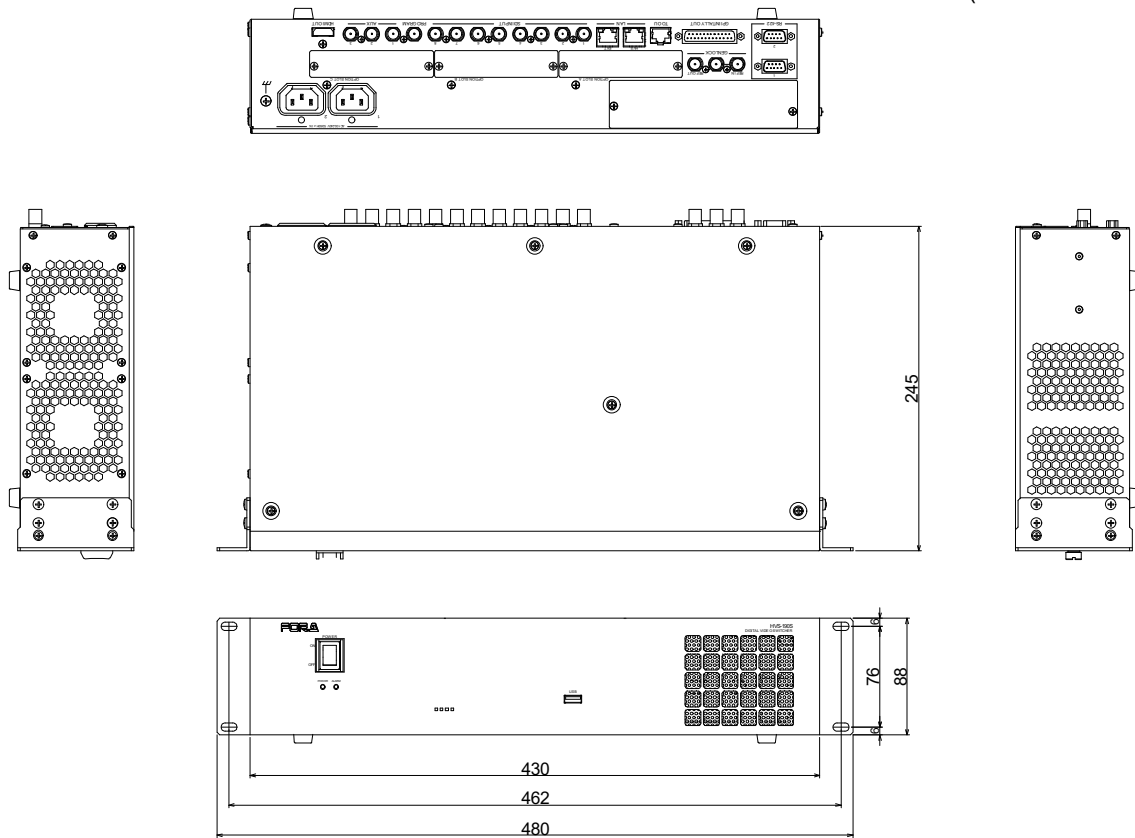
HANABI Series Options

HVS-AUX16A/16B/16C/16D/32A/64A	AUX bus control box (Ethernet LAN connection)
HVS-TALR32	Tally relay output unit (RS-422 connection)
HVS-TALOC32	Tally open collector output unit (RS-422 connection)

2. External Dimensions

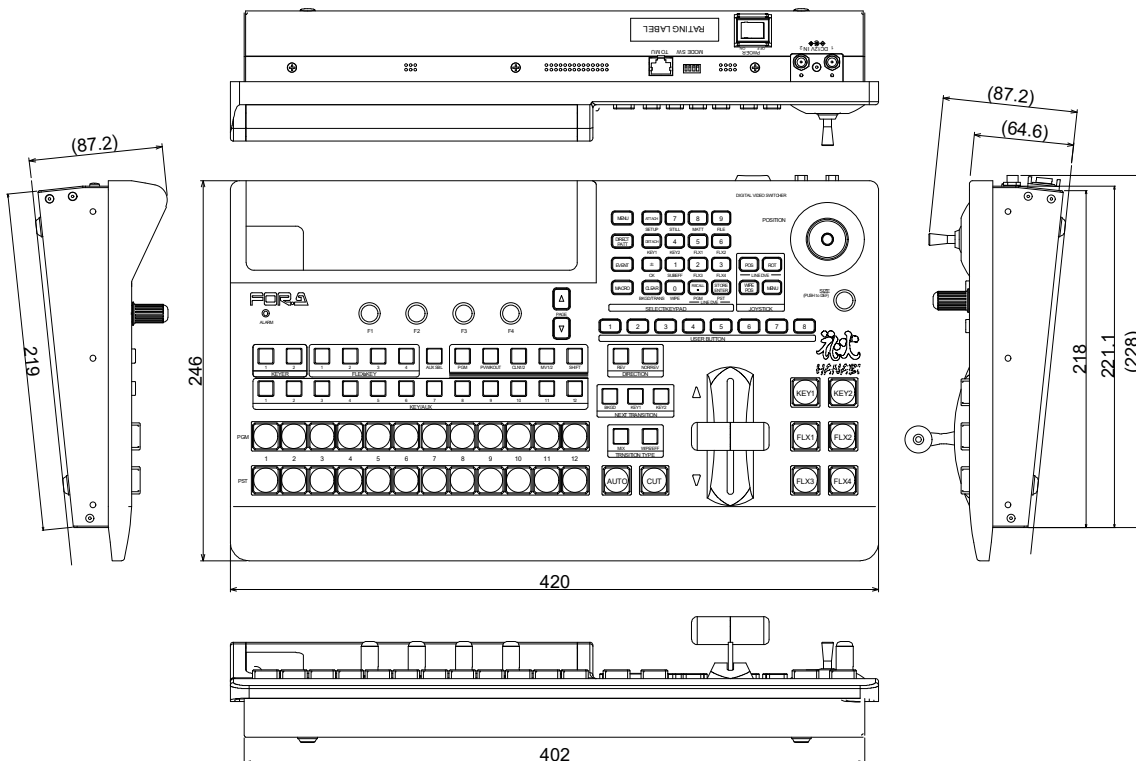
HVS-190S

(All dimensions in mm.)



HVS-190OU

(All dimensions in mm.)



HVS-190I

(All dimensions in mm.)

