



MSD-804FD

The IDK MSD-804FD is 8 digital (HDMI) inputs and 4 digital (HDMI) outputs Full Digital Presentation Switcher. The MSD-804 can mount optional HDBaseT output modules. When the optional module is mounted, the switcher can output an HDMI output and an HDBaseT output simultaneously. The MSD-804FD also has 8 digital and 8 analog audio inputs. Audio signals of IN1 to IN8 are switch-selectable between digital audio (HDMI) and analog audio (RCA), and audio output is simultaneous output both digital and analog output. Sound level of input and output can be set respectively. Gaps between video and audio can be compensated by Lip Sync. Front Panel VFD Menu is a useful for checking input and output signal status on the switcher and set or changes the settings of the switcher to support AV systems in a field. The MSD-804FD also has other features such as built-in scan converter, Seamless Switching, and Aspect Ratio Control for complete AV switching and distribution.

■Specification

		Item		Description	
Input	Video	HDMI / DVI	Number / Signal	8 inputs / HDMI Deep Color (*1) / DVI 1.0 / HDCP1.4 - TMDS single link - TMDS clock: 25 MHz to 225 MHz - Dot clock: 25 MHz to 165 MHz	
			Connector	8 female HDMI Type A	
			Others	Built-in Digital Cable EQ, EDID emulation	
		Format	480i / 480p / 576i / 576p / 720p / 1080i / 1080p VGA to QWXGA * WUXGA / QWXGA are supported only with Reduced Blanking		
	Audio	Digital	Number / Signal	8 inputs / Multi-channel LPCM up to 8 channels - Sampling frequency: 32 kHz to 192 kHz - Sample size: 16 bit to 24 bit - Reference level: -20 dBFS - Max. input level: 0 dBFS * IN1 to IN8 are switch-selectable between digital and analog audio	
			Connector	8 female HDMI Type A	
		Analog	Number / Signal	8 inputs / Stereo LR unbalanced signal - Input impedance: 24 kΩ - Reference level: -10 dBu - Max input level: +10 dBu * IN1 to IN8 are switch-selectable between digital and analog audio	
			Connector	8 RCA pin jack	
Output	Video	HDMI / DVI	Number / Signal	4 outputs / HDMI Deep Color (*1) / DVI 1.0 / HDCP1.4 - TMDS single link - TMDS clock: 25 MHz to 225 MHz - Dot clock: 25 MHz to 165 MHz * The switcher can output both an HDMI output and a twisted pair output simultaneously	
			Connector	4 female HDMI Type A	
			Others	Built-in Digital Cable EQ	
		HDBaseT (optional)	Number / Signal	4 outputs (*2) / HDMI Deep Color (*1) / DVI 1.0 / HDCP1.4 - TMDS single link - TMDS clock: 25 MHz to 225 MHz - Dot clock: 25 MHz to 165 MHz * The switcher can output both an HDMI output and a twisted pair output simultaneously	
			Connector	4 RJ-45 (*3) / Cable: CAT.5E HDC, Cat5e UTP / STP, Cat6 UTP / STP (*4)	
			Format	480i / 480p / 576i / 576p / 720p / 1080i / 1080p VGA / SVGA / XGA / WXGA (1280 x 768) / WXGA (1280 x 800) / Quad-VGA / SXGA / WXGA (1360 x 768) / WXGA (1366 x 768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / VESA1080 / WUXGA / QWXGA * VESA1080 / WUXGA / QWXGA are only output as Reduced Blanking	
	Audio	Digital	Number / Signal	4 outputs / Multi-channel LPCM up to 8 channels - Sampling frequency: 32 kHz to 192 kHz - Sample size: 16 bit to 24 bit - Reference level: -20 dBFS - Max. output level: 0 dBFS *The switcher can output both an HDMI output and an HDBaseT output simultaneously	
			Connector	4 female HDMI Type A, 4 RJ-45	
		Analog	Number / Signal	4 outputs / Stereo LR unbalanced signal Output impedance: 75 Ω Reference level: -10 dBu Max. output level: +10 dBu	
			Connector	4 RCA pin jack	
		Lip Sync	Up to 8 frames * Adjusts 5 frames when output signal is 88.2 kHz / 96 kHz (4 frames only when output format is 576i / 576p / 720p@50 / 1080i@50 / 1080p@50), adjusts 2 frames when output is 192 kHz		

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Item		Description	
Maximum extension distance	Digital Input	33 ft. (10 m) to 98 ft. (30 m) (*5)	
	Digital output	HDMI / DVI: 33 ft. (10 m) to 98 ft. (30 m) (*5), HDBaseT: 328 ft. (100 m) (*6)	
Functions	Analog video processing unit	3D Y/C separation	
	Scan Converter	Aspect Ratio Control, Seamless Switching (*7), Picture adjustment (brightness, contrast, display position, display size), Motion adaptive I/P conversion	
	Others	Volume adjustment (volume of input and output ports can be set separately), Audio breakaway enables independent audio and video switching, Cross-point memory (storage for 7 settings), Preset memory (8 settings and startup settings), Last memory Anti-Snow (*8), Connection Reset (*9), External control commands (32 commands), Security lock, Lip Sync	
External control	Serial control port	Number / Signal	2 port / RS-232C
		Connector	2 male D-Sub (9-pin)
	LAN control port	Number / Signal	1 port / 10Base-T (Auto Negotiation), 100Base-TX (Auto Negotiation), Auto MDI/MDI-X
		Connector	1 RJ-45
Command outputs to external device		RS-232C, LAN, CEC (controls power of display) (*10), PLink (class1)	
Others	Power	100 - 240 VAC \pm 10%, 50 Hz/60 Hz \pm 3 Hz	
	Power consumption	About 56 Watts: MSD-804FD About 69 Watts: MSD-804FD (HDBaseT two outputs) About 81 Watts: MSD-804FD (HDBaseT four outputs)	
	Dimensions	16.9 x 3.5 x 13.8" (430 (W) x 88(H) x 350 (D) mm) (EIA 2U high, full rack wide) (Excluding connectors and the like)	
	Weight	11.9 lbs. (5.4 kg): MSD-804FD 12.3 lbs. (5.6 kg): MSD-804FD (HDBaseT two outputs) 12.3 lbs. (5.6 kg): MSD-804FD (HDBaseT four outputs)	
	Temperature	Operating: 32°F to 104°F (0°C to +40°C) Storage: -4°F to +176°F (-20°C to +80°C)	
	Humidity	Operating/ Storage: 20% to 90% (Non Condensing)	

(*1) This product supports 30 bits/pixel Deep color (10 bit/component). It does not support x.v.Color, 3D, ARC, and HEC.

(*2) Digital twisted pair output does not support DVI signals with HDCP. If you need to extend DVI signals with HDCP, please use The IDK HDC-RD100 as a receiver.

(*3) Digital twisted pair output is only for extending video, audio, power for a receiver, control signals using a Cat5e/Cat6 twisted pair cable. IDK receivers are required. Please do not connect LAN devices to this connector.

(*4) T568A or T568B straight. The CAT.5E HDC cable is developed by IDK and recommended by HDBaseT alliance.

(*5) Transmission distance depends on connected equipment. The information above is maximum transmission distance when a cable made by IDK (AWG24) is used and signals (1080p 60 Hz 24bit/pixel (8bit/component)) are transmitted (both inputs and outputs of this product). When connected equipment is not matched to this product or other makers' cables are used, video signal can be unstable or video signals cannot be output, even though transmission distance is within the information above.

(*6) Since some LCD monitors do not stabilize during operation, please have an evaluation before using or ask IDK for advices.

(*7) Seamless Switching has one black frames or back color.

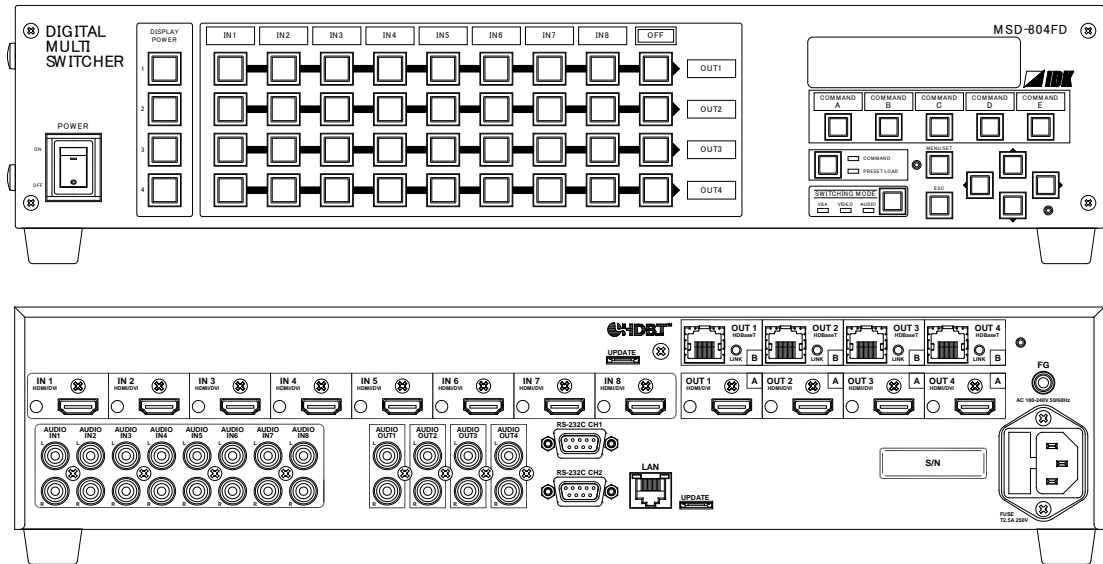
(*8) The Anti-Snow function can automatically recover from snow-noise that is a specific symptom of digital signals having HDCP. Mainly, this snow-noise occurs during system startup. Therefore, this function does not work in case of snow-noise has already occurred before input the signal to IDK switchers or bad quality signal transmission.

(*9) The Connection Reset function can fix these problems without physical cable manipulations. This function can work only in this product's output port, which sometimes will not take effect if another device is between output of this product and display device.

(*10) Displays that are used with this product must support CEC. Some displays cannot be controlled by this product through CEC.

■ Front & Rear Panels

* This drawing is an image with optional digital output ports for extension of signals (HDBaseT output)



■ Product Selection

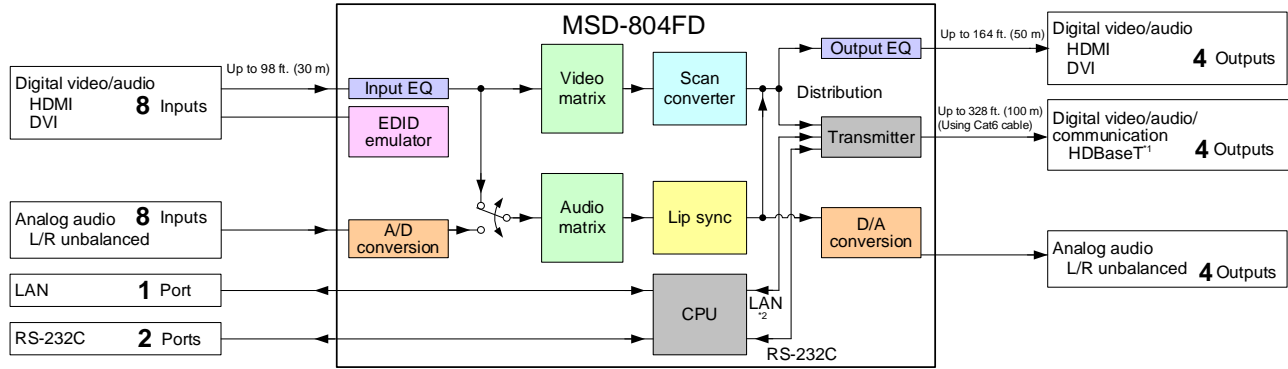
Parts Number	Digital Input Channels	HDMI Output	HDBaseT Output
MSD-804FD	8	4	0
MSD-804FD OB-HDC-02	8	4	2
MSD-804FD OB-HDC-02	8	4	4

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MSD-804FD Diagram and Features

■ Diagram



^{*1} HDBaseT output is optional

^{*2} RS-232C and LAN when outputting signals over Cat6 supports only output of external control commands. Bidirectional communication with a PC from the RS-232C connector and LAN connector is not supported.

[Features]

■ Video

- Up to QW XGA (RB) ^{*1} or 1080p
- Built-in Digital Cable EQ
 - Input: Up to 33 ft. (10 m) to 98 ft. (30 m)
 - Output: Up to 33 ft. (10 m) to 164 ft. (50 m)
- Extends output signal up to 328 ft. (100 m) using a Cat6 twisted pair cable
- Scan converter
- Aspect Ratio Control
- Seamless Switching^{*2}
- Anti-Snow

■ Audio

- A/D, D/A conversion
- Volume adjustment
- Lip Sync

■ Control input

- RS-232C, LAN

■ Control output

- Control command output (controlling projector, etc.)
- PLink
- Power control of sink device over CEC

■ Others

- EDID emulation
- Audio breakaway enables independent audio and video switching
- Preset memory
- Cross-point memory
- Last memory
- Connection reset
- Security lock

^{*1} (RB) = Reduced Blanking

^{*2} Seamless switching with a black frame