Modular Matrix Switcher
FDX-S08

The FDX-S08 is an HDCP-compliant modular digital matrix switcher that supports resolutions up to 4K@30. It provides up to 8 inputs and 8 outputs.
Video and embedded audio can be switched simultaneously.
With audio boards, input digital audio signals can be converted into output analog audio or Dante network audio signals. Input analog audio signals and Dante network audio signals can be converted into digital audio signals and embedded to desired output video channels.

The FDX-S08 features RS-232C/LAN ports for remote control, redundant power supply, and system check that outputs an alarm in case an abnormality is detected in power supply voltage, fans, internal temperature, or board.
The redundant power supply ensures constant availability and minimizes the chance of a failure even for mission-critical environments.

■ Specification

Item		Description
Input board		2 slots (Up to 8 inputs)
Output board		2 slots (Up to 8 outputs)
Audio board		1 slot　(Up to 32 stereo channels)
Transmission signal	Video	Up to 4K@30
	Audio	Multi-channel LPCM up to 8 channels
	Control	Up to 38.4 kbps of RS-232C, Up to 100Base-TX of LAN
Instant Alert output		1 port/captive screw (2-pin) Non-voltage contact input up to DC 24 V 300 mA Monitoring power supply voltage, fans, internal temperature, board, and audio board status
Control	RS-232C	1 port/captive screw (3-pin), full duplex, up to 38.4 kbps
	LAN	1 port/RJ-45 10Base-T/100Base-TX (Auto Negotiation), Auto MDI/MDI-X
Functions		I/O board, audio board, CPU board, fan unit, and power unit can be replaced without removing from rack, Preset memory (32 settings), Last memory, Button security lockout, System check, WEB browser control, Status notification, HDBaseT status display
General	Power	100 - 240 VAC ±10%, 50 Hz/60 Hz ±3 Hz
	Power consumption	About 10 Watts
	Dimensions	16.9 (W) × 3.5 (H) × 15.7 (D)" (430 (W) × 88 (H) × 400 (D) mm) (2U high) (Excluding connectors and the like)
	Weight	20.5 lbs. (9.3 kg) (With redundant power supply: 21.4 lbs. (9.7 kg))
	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)

■ I/O boards

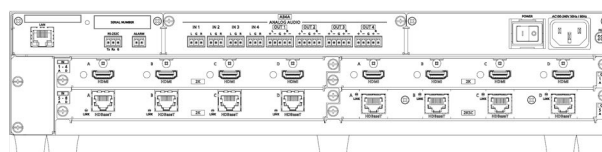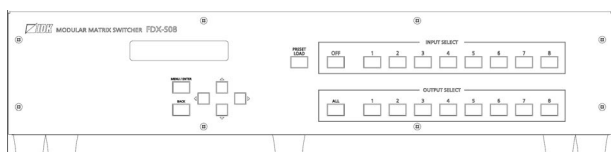| Item	Parts Number	Description	
Input board	FDX-SIV4H	4 inputs	4K@30 HDCP 1.4 HDMI/DVI
	FDX-SIV4T	4 inputs	4K@30 HDCP 1.4 HDBaseT
	FDX-SIV4S	4 inputs	3G-SDI/HD-SDI/SD-SDI
Output board	FDX-SOV4H	4 outputs	4K@30 HDCP 1.4 HDMI/DVI
	FDX-SOV4T	4 outputs	4K@30 HDCP 1.4 HDBaseT
	FDX-SOV4HS	4 outputs	1080p HDCP 1.4 HDMI/DVI scan conversion
	FDX-SOV4TS	4 outputs	1080p HDCP 1.4 HDBaseT scan conversion

■ Audio board

Item	Parts Number	Description
Audio board	FDX-SAB4A	4 inputs　　Unbalanced 4 outputs　　Balanced/Unbalanced
	FDX-SOA12A	12 outputs　Unbalanced
	FDX-SAB64D	1 input/output　　64 Dante protocol channels (32 stereo channels)

■ Redundant power supply unit

Item	Parts Number	Description
Redundant power supply unit	FDX-SRP08	Redundant power unit with two independent power connectors

■ Front & Rear Panels

This drawing (rear) is an example.

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FDX-S Input Board
FDX-SIV4H

The FDX-SIV4H is a four-input HDMI board designed for FDX-S series Modular Matrix Switchers.
The board supports HDMI and DVI at video resolutions up to 4K@30 and complies with HDCP 1.4.
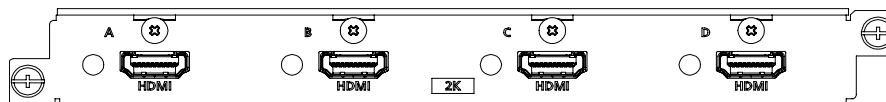
■ **Specification**

Item		Description
Input		4 inputs
Video	HDMI/DVI	HDMI/DVI 1.0 TMDS single link, HDCP 1.4 TMDS clock: 25 MHz to 300 MHz, TMDS data rate: 0.75 Gbps to 9 Gbps 36 bit Deep Color 　For WQHD, WQXGA, and 4K formats, 24 bit is supported. 　x.v.Color/3D/HDR/ARC/HEC/CEC are not supported. EDID emulation
	Format	VGA to 4K (Dot clock: 25 MHz to 300 MHz) 　For WQHD/WQXGA, only Reduced Blanking is supported. 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K 　For 4K formats, 24 Hz/25 Hz/30 Hz are supported.
Audio	Digital	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
Connector		Female HDMI Type A (19-pin)
Maximum transmission distances		98 ft. (30 m) (1080p@60), 66 ft. (20 m) (4K@30) (*1)
General	Power consumption	About 11 Watts
	Weight	0.7 lbs. (0.3 kg)
	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　The maximum cable distance varies depending on the connected devices and was measured under following conditions:
　・1080p@60 : When IDK's 24 AWG cable was used and signals of 1080p@60 24 bit/pixel (8 bit/component) was input.
　・4K@30　　: When IDK's 24 AWG cable was used and signals of 4K@30 24 bit/pixel (8 bit/component) was input.
　The maximum cable distance depends on the connected devices. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
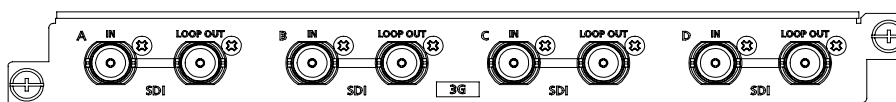
■ **Panel**

IDK Corporation

FDX-S Input Board
FDX-SIV4S

The FDX-SIV4S is a four-input SDI board with loop-though designed for FDX-S series Modular Matrix Switchers.
The board supports 3G-SDI, HD-SDI, and SD-SDI and receives video signals from source devices up to 984 ft. (300 m) over coaxial cables.

■ Specification

Item		Description
Input		4 inputs (With loop-through output) Note: When the FDX-S is powered on, SDI input signals are output from SDI loop-through output connectors.
Video	SDI	3G-SDI/HD-SDI/SD-SDI NRZI/NRZ, 0.8 V[p-p]/75 Ω SMPTE 424M (3G-SDI)/SMPTE 292M (HD-SDI)/SMPTE 259M-C (SD-SDI)

	Format	480i / 576i / 720p / 1080i / 1080p
		  3G-SDI signals: Level A and Level B
		  720p: 23.98 Hz and 24 Hz are not supported.

Audio	Digital	LPCM up to 8 channels (Selecting 2 groups of audio groups1 to 4) Sampling frequency: 48 kHz, Sample size: 16 bit to 24 bit Reference level: -20 dBFS, Max. input level: 0 dBFS
Connector		BNC
Cable		75 Ω coaxial cable for high frequency signal
Maximum transmission distances		With 1505A (BELDEN RG-59), SD-SDI: 1083 ft. (330 m)/HD-SDI: 656 ft. (200 m)/3G-SDI: 394 ft. (120 m) With 1694A (BELDEN RG-6), SD-SDI: 1312 ft. (400 m)/HD-SDI: 787 ft. (240 m)/3G-SDI: 459 ft. (140 m) *The maximum distances may be shorten depending on the quality of cable. Please make sure that the cable is long enough.
Function		3G-SDI/HD-SDI/SD-SDI input
General	Power consumption	About 30 Watts
	Weight	0.9 lbs. (0.4 kg)
	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)

■ Panel

IDK Corporation

FDX-S Input Board
FDX-SIV4T

The FDX-SIV4T is a four-input HDBaseT board designed for FDX-S series Modular Matrix Switchers.
The board supports video resolutions up to 4K@30 and complies with HDCP 1.4.
Input video signals can be transmitted up to 328 ft. (100 m); 1080p (24 bit) video signals can be sent up to 492 ft. (150 m) in Long reach mode.
RS-232C bidirectional communication and LAN transmission are also supported.

■ Specification

Item		Description
Input		4 inputs

Video	HDBaseT	HDBaseT
		HDCP 1.4
		36 bit Deep Color
		    For WQHD, WQXGA, and 4K formats, 24 bit is supported.
		    x.v.Color/3D/HDR/ARC/HEC/CEC are not supported.
		EDID emulation, RS-232C/LAN

	Format	VGA to 4K (Dot clock: 25 MHz to 300 MHz)
		    For WQHD/WQXGA, only Reduced Blanking is supported.
		480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K
		    For 4K formats, 24 Hz/25 Hz/30 Hz are supported.

Audio	Digital	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
Connector		RJ-45 (*1)
Cable		CAT.5E HDC, Cat5e UTP/STP, Cat6 UTP/STP (T568A/T568B straight-through)
Maximum transmission distances		328 ft. (100 m), 492 ft. (150 m) (Long reach mode is used) (*2)
General	Power consumption	About 30 Watts
	Weight	1.1 lbs. (0.5 kg)
	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   RJ-45 (HDBaseT connector) is only for extending digital video and audio signals over a Cat5e/Cat6 cable. Use it with IDK's HDBaseT Products. Do not use for LAN devices.
*2   The maximum transmission distance was obtained when IDK's CAT.5E HDC cable was used. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
       The maximum transmission distance is the shorter distance of connected HDBaseT product or sink device's maximum transmission distance.
       Up to 492 ft. (150 m): 1080p (24 bit) in Long reach mode. For Long reach mode, use IDK's HDBaseT Products that supports 328 ft. (100 m) or longer.

■ Panel
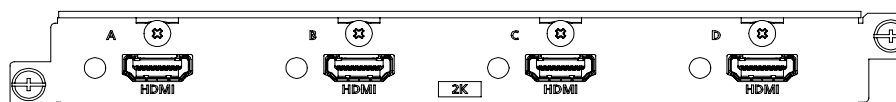
IDK Corporation

FDX-S Output Board
FDX-SOV4H

The FDX-SOV4H is a four-output HDMI board designed for FDX-S series Modular Matrix Switchers.
The board supports HDMI and DVI at video resolutions up to 4K@30 and complies with HDCP 1.4.

■ Specification

Item		Description
Output		4 outputs
Video	HDMI/DVI	HDMI/DVI 1.0 TMDS single link, HDCP 1.4 TMDS clock: 25 MHz to 300 MHz, TMDS data rata: 0.75 Gbps to 9 Gbps 36 bit Deep Color 　For WQHD, WQXGA, and 4K formats, 24 bit is supported. 　x.v.Color/3D/HDR/ARC/HEC/CEC are not supported.
	Format	VGA to 4K (Dot clock: 25 MHz to 300 MHz) 　For WQHD/WQXGA, only Reduced Blanking is supported. 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K 　For 4K formats, 24 Hz/25 Hz/30 Hz are supported.
Audio	Digital	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
Connector		Female HDMI Type A (19-pin)
Maximum transmission distances		98 ft. (30 m) (1080p@60), 66 ft. (20 m) (4K@30) (*1)
Functions		Anti-snow, Connection Reset (*2)
General	Power consumption	About 9 Watts
	Weight	1.1 lbs. (0.5 kg)
	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　The maximum cable distance varies depending on the connected devices and was measured under following conditions:
　・1080p@60 : When IDK's 24 AWG cable was used and signals of 1080p@60 24 bit/pixel (8 bit/component) was output.
　・4K@30　　 : When IDK's 24 AWG cable was used and signals of 4K@30 24 bit/pixel (8 bit/component) was output.
　The maximum cable distance depends on the connected devices. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
*2　For digital systems, some problems, such as an HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will fix these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the FDX-S's output. If other devices are connected between the FDX-S's output and sink device, this feature may be invalid.

■ Panel

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FDX-S Output Board
FDX-SOV4HS

The FDX-SOV4HS is an HDCP 1.4-compliant four-output HDMI/DVI board designed for FDX-S series Modular Matrix Switchers.
The board includes a scan converter that supports resolutions up to QWXGA or 1080p and switches input video signals fast.
Videowall can easily be configured using this board.

The Lip Sync feature provides the user with a means to control time alignment between the video and audio.

■ Specification

Item		Description
Output		4 outputs
Video	HDMI/DVI	HDMI/DVI 1.0 TMDS single link, HDCP 1.4 TMDS clock: 25.175 MHz to 202.5 MHz, TMDS data rate: 0.755 Gbps to 6.075 Gbps 30 bit Deep Color x.v.Color/3D/HDR/ARC/HEC/CEC are not supported. Built-in cable EQ
	Format (*1)	VGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA / WXGA (1360x768) / WXGA (1366x768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / VESAHD / WUXGA / QWXGA For VESAHD/WUXGA/QWXGA, only Reduced Blanking is supported. 480p / 576p / 720p / 1080i / 1080p
Audio	Digital	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
Connector		Female HDMI Type A (19-pin)
Maximum transmission distances		131 ft. (40 m) (*2)
Functions	Scan Converter	Motion adaptive interlaced/progressive conversion, Aspect ratio control, Picture adjustment (brightness, contrast, image position, image size, etc.), Seamless Switching
	Others	Videowall output, Lip Sync (Max. 256 ms.), Anti-snow, Connection Reset (*3)
General	Power consumption	About 33 Watts
	Weight	1.8 lbs. (0.8 kg)
	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)

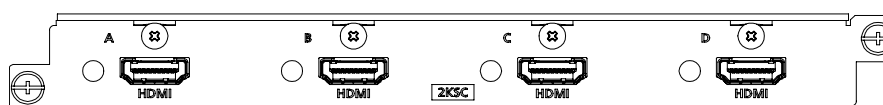*1   Input resolution: VGA to QWXGA and 480i/480p/576i/576p/720p/1080i/1080p are supported.
*2   The maximum cable distance varies depending on the connected devices and was measured under following conditions:
  ・1080p@60: When IDK's 24 AWG cable was used and signals of 1080p@60 24 bit/pixel (8 bit/component) was input or output.
  The maximum cable distance depends on the connected devices. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
*3   For digital systems, some problems, such as an HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will fix these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the FDX-S's output. If other devices are connected between the FDX-S's output and sink device, this feature may be invalid.

■ Panel

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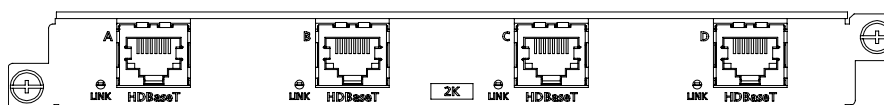
FDX-S Output Board
FDX-SOV4T

The FDX-SOV4T is a four-output HDBaseT board designed for FDX-S series Modular Matrix Switchers.
The board supports video resolutions up to 4K@30 and complies with HDCP 1.4.
Video signals can be transmitted up to 328 ft. (100 m); 1080p (24 bit) video signals can be sent up to 492 ft. (150 m) in Long reach mode.
RS-232C bidirectional communication and LAN transmission are also supported.

■ Specification

Item		Description
Output		4 outputs
Video	HDBaseT	HDBaseT HDCP 1.4 36 bit Deep Color 　For WQHD, WQXGA, and 4K formats, 24 bit is supported. 　x.v.Color/3D/HDR/ARC/HEC/CEC are not supported. RS-232C/LAN
	Format	VGA to 4K (Dot clock: 25 MHz to 300 MHz) 　For WQHD/WQXGA, only Reduced Blanking is supported. 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K 　For 4K formats, 24 Hz/25 Hz/30 Hz are supported.
Audio	Digital	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
Connector		RJ-45 (*1)
Cable		CAT.5E HDC, Cat5e UTP/STP, Cat6 UTP/STP (T568A/T568B straight-through)
Maximum transmission distances		328 ft. (100 m), 492 ft. (150 m) (Long reach mode is used) (*2)
Functions		Anti-snow, Connection Reset (*3)
General	Power consumption	About 18 Watts
	Weight	1.1 lbs. (0.5 kg)
	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　RJ-45 (HDBaseT connector) is only for extending digital video and audio signals over a Cat5e/Cat6 cable. Use it with IDK's HDBaseT Products. Do not use for LAN devices.
*2　The maximum transmission distance was obtained when IDK's CAT.5E HDC cable was used. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
　　The maximum transmission distance is the shorter distance of connected HDBaseT product or sink device's maximum transmission distance.
　　Up to 492 ft. (150 m): 1080p (24 bit) in Long reach mode. For Long reach mode, use IDK's HDBaseT Products that supports 328 ft. (100 m) or longer.
*3　For digital systems, some problems, such as an HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will fix these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the FDX-S's output. If other devices are connected between the FDX-S's output and sink device, this feature may be invalid.

■ Panel

IDK Corporation

FDX-S Output Board
FDX-SOV4TS

The FDX-SOV4TS is an HDCP 1.4-compliant four-output HDBaseT board designed for FDX-S series Modular Matrix Switchers.
The board includes a scan converter that supports resolutions up to QWXGA or 1080p and switches input video signals fast.
Videowall can easily be configured using this board.
Video signals can be transmitted up to 328 ft. (100 m); 1080p (24 bit) video signals can be sent up to 492 ft. (150 m) in Long reach mode.
RS-232C bidirectional communication and LAN transmission are also supported.

■ Specification

Item		Description
Output		4 outputs
Video	HDBaseT	HDBaseT HDCP 1.4 30 bit Deep Color 　x.v.Color/3D/HDR/ARC/HEC/CEC are not supported. RS-232C/LAN
	Format (*1)	VGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA / WXGA (1360x768) / WXGA (1366x768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / VESAHD / WUXGA / QWXGA 　For VESAHD/WUXGA/QWXGA, only Reduced Blanking is supported. 480p / 576p / 720p / 1080i / 1080p
Audio	Digital	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
Connector		RJ-45 (*2)
Cable		CAT.5E HDC, Cat5e UTP/STP, Cat6 UTP/STP (T568A/T568B straight-through)
Maximum transmission distances		328 ft. (100 m), 492 ft. (150 m) (Long reach mode is used) (*3)
Functions	Scan Converter	Motion adaptive interlaced/progressive conversion, Aspect ratio control, Picture adjustment (brightness, contrast, image position, image size, etc.), Seamless Switching
	Others	Videowall output, Lip Sync (Max. 256 ms.), Anti-snow, Connection Reset (*4)
General	Power consumption	About 40 Watts
	Weight	1.8 lbs.(0.8 kg)
	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　Input resolution: VGA to QWXGA and 480i/480p/576i/576p/720p/1080i/1080p are supported.
*2　RJ-45 (HDBaseT connector) is only for extending digital video and audio signals over a Cat5e/Cat6 cable. Use it with IDK's HDBaseT Products. Do not use for LAN devices.
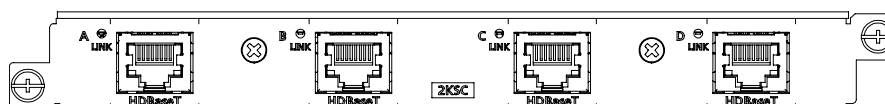*3　The maximum transmission distance was obtained when IDK's CAT.5E HDC cable was used. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
　　The maximum transmission distance is the shorter distance of connected HDBaseT product or sink device's maximum transmission distance.
　　Up to 492 ft. (150 m): 1080p (24 bit) in Long reach mode. For Long reach mode, use IDK's HDBaseT Products that supports 328 ft. (100 m) or longer.
*4　For digital systems, some problems, such as an HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will fix these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the FDX-S's output. If other devices are connected between the FDX-S's output and sink device, this feature may be invalid.

■ Panel

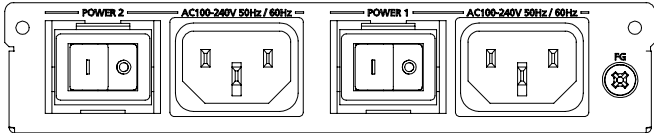IDK Corporation

Redundant Power Supply Unit
FDX-SRP08

The FDX-SRP08 is a redundant power supply unit that includes two independent power connectors for FDX-S08 and FDX-S08U.
In case one of power supplies fails, the other one supplies power, ensuring a proper and reliable operation.

■ **Specification**

Item	Description
Power	100 - 240 VAC ±10%, 50 Hz/60 Hz ±3 Hz, 2 power connectors
Weight	4 lbs. (1.8 kg)
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)

■ **Panel**