

Specifications

SB-4024-A/SB-4027

Input / Output Formats

Name	Connector	Format	Resolution / Bit Depth	Standard	Frame Rate
4K-IN 4K-OUT	BNC x 4 1 line BNC x 4 1 line	12G-SDI Level A 2SI	3840 x 2160 4:2:2 10 bits	SMPTE ST 2082-1	59.94p/60p/50p
		3G-SDI Level A/B SQD	3840 x 2160 4:2:2 10 bits	SMPTE ST 424	59.94p/60p/50p
		3G-SDI Level A/B 2SI	3840 x 2160 4:2:2 10 bits		59.94p/60p/50p
		1.5G-SDI SQD	3840 x 2160 4:2:2 10 bits	SMPTE ST 292-1	59.94i/60i/50i/29.97PsF/30PsF/24PsF/23.98PsF/25PsF/29.97p/30p/25p/24p/23.98p
		1.5G-SDI 2SI	3840 x 2160 4:2:2 10 bits		59.94i/60i/50i/29.97p/30p/25p/24p/23.98p
HD-IN HD-OUT	BNC x 1 1 line BNC x 1 1 line	1.5G-SDI	1920 x 1080 4:2:2 10 bits	SMPTE ST 292-1	59.94i/60i/50i/29.97PsF/30PsF/24PsF/23.98PsF/25PsF/29.97p/30p/25p/24p/23.98p
		3G-SDI Level A/B	1920 x 1080 4:2:2 10 bits	SMPTE ST 424	59.94p/60p/50p

LAN	RJ-45 Ethernet 100Base-TX	Control	■ SB-4027 only
GPIO	12-pin Connector HIROSE HR-10G-10R-12S (71)	GPIO 1 to 4 GPIO 1 to 4	

Functions

Item	Format	Description
Colorimetry Conversion	Input	Rec. ITU-R BT.2020/Rec. ITU-R BT.709
	Output	Rec. ITU-R BT.2020/Rec. ITU-R BT.709
	Grid	32 x 32 x 32
	Internal	Irregular Interval Each interval of R/G/B is the same.
	Grid Precision	Non-linear 10 bits
	Operational Precision	16 bits
	EOTF/OETF	Non-linear, linear conversion
HDR/SDR Conversion	1D LUT	Non-linear 10 bits
Preset Numbers		8
Time Code	LTC / VITC	LTC/VITC is bypassed with same delay as process delay
Payload	SMPTE ST 352	Payload is embedded with input / output format and colorimetry setting information.
Reference	Input	Available both on BE-4028/NXL-FR318
	BB SYNC	Frame rate 59.94i/50i
	Tri-level Sync	Frame rate 59.94i/60i/50i/24p/25p
	SDI Output Phase Adjustment	SDI output phase can be adjusted based on reference input. Vertical ±8 LINE (-237μsec to +237μsec) Horizontal 1100 to +1099 steps
	SDI Input Phase Difference	-0.1H ~ +0.4H (-2.9μsec ~ +11.8μsec) Phase difference between each channel is -0.25 to + 0.25H (-7.4μsec to +7.4μsec) from CH1
	Input Setting	Reference Input/SDI (CH1) /AUTO *Video input and reference input shall be synchronized.

General Specifications

Dimensions (board)	Front board 275.8 (W)x114.5 (H)mm Rear board 115.15 (W)x114 (H)mm Input board 115.15 (W)x108 (H)mm Excluding protrusions Two slots occupied
Weight	0.5kg
Power Consumption	22W (MAX)
Power Requirement	DC 12V
Guaranteed Operating Temperature Range	+5 to 40°C (no condensation) *1
Guaranteed Operating Humidity Range	+10 to 35°C (no condensation) *1
Operating Temperature Range	+20 to 80% RH (no condensation)
Operating Humidity Range	-20 to 60°C (no condensation)

*1 Ambient temperature when the board is in the NXL-FR318.

BE-4028

General Specifications

Dimensions	430(W) x 44(H) x 410(D)mm (Excluding Protrusions)
Weight	3.8 kg
Power Consumption	52W MAX (With Two Boards)
Power Requirement	AC100 - 240V (50/60Hz)
Operating Temperature Range	5 to 40°C
Operating Humidity Range	20 to 80%RH (No Condensation)

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HD-4K Converting Board Series

4K Converting Board

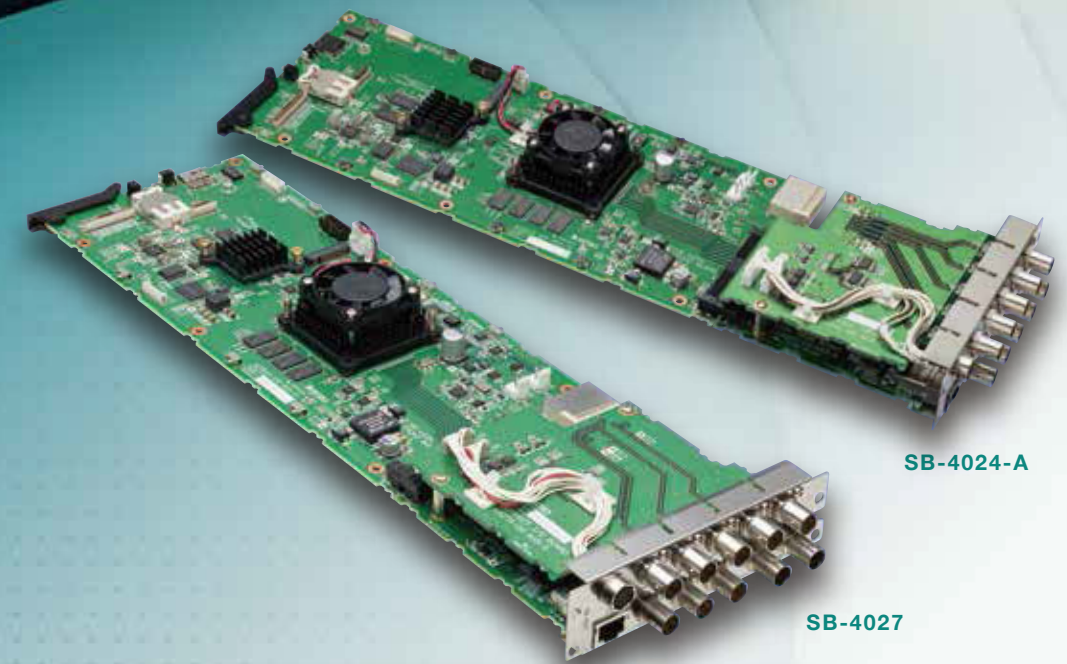
SB-4024-A / SB-4027

Board Enclosure

BE-4028

HDR

SR Live
for HDR



SB-4024-A

SB-4027

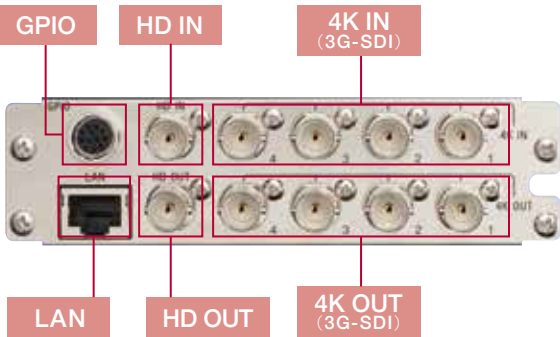


BE-4028

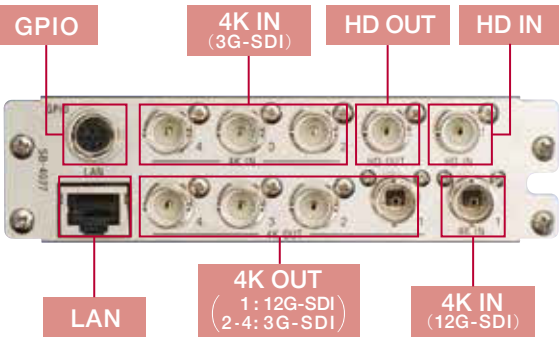
High Quality Conversion, Utility Functions and Space Saving

Cross converter board that supports 4K HDR production.

SB-4024-A



SB-4027



Two Types of Frames for the SB-4024-A/4027

	Capacity	Size	Redundant Power	NXLK-IP40F (SONY SDI-IP Converter Board) Built-in
BE-4028	2	1U	○	×
NXL-FR318	9	3U	○	○

BE-4028



Signal Processing Unit (SONY) NXL-FR318



4K ⇄ HD

Up-Conversion, Down-Conversion

- Motion detection, IP conversion (*)
- Enhance function

(*) Available only in HD → 4K and 4K → HD mode

ITU-R BT.2020 ⇄ ITU-R BT.709

Colorimetry Conversion

- Simultaneous use of 3D LUT and Linear Matrix
- Irregular Interval Grid Format 32 x 32 x 32 grids
- 3D LUT import

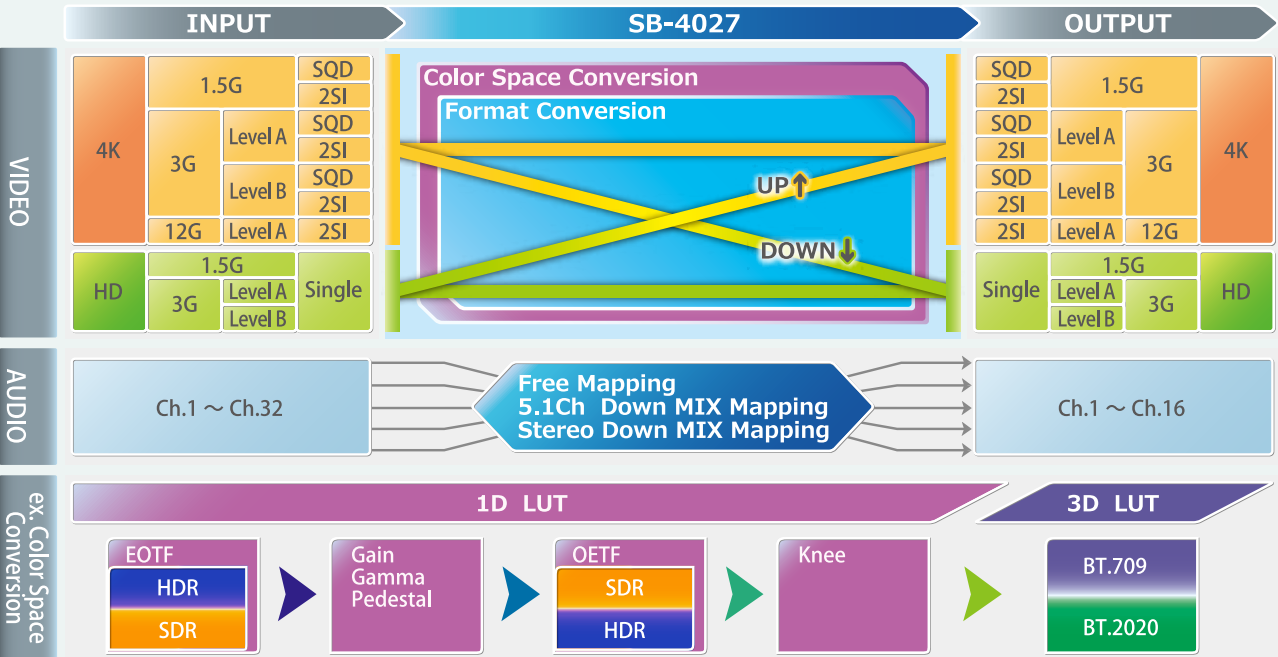
HDR ⇄ SDR

Dynamic Range Conversion

- Gain, Offset, Gamma and Knee adjustment
- Various types of log supported (HLG, PQ, S-Log, Canon Log, V-Log etc.)
- 1D LUT File import

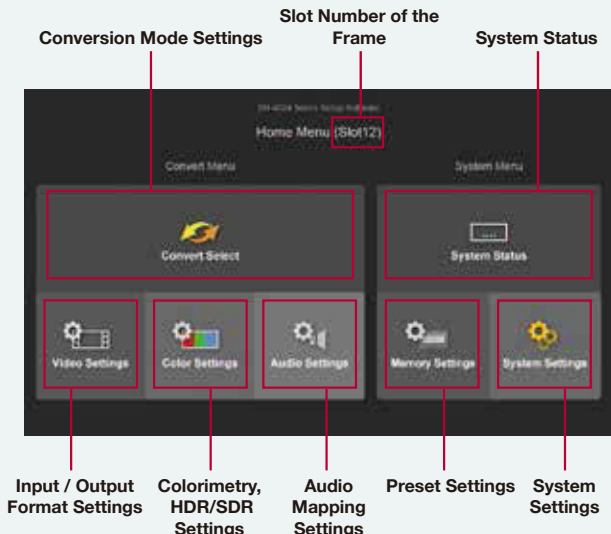
- 3G-SDI Level A ⇄ B Conversion
- 4K 2SI ⇄ SQD Conversion
- SR Live (Option)
- Low Latency Bypass Mode

- Audio Mapping Function Input / Output channel re-mapping, 5.1ch → Stereo downmix



Control Software

Each board can be controlled via web browser. Features are preset in settings. 1D and 3D LUT import or export and more available.



WonderLook Pro

Although WonderLook Pro was originally designed for IS-Mini, the SB-4024-A/4027 can also be controlled by WonderLook Pro. It has many useful features, including color correction and new LUT creation. Only WonderLook Pro corporate license can support SB-4024-A/4027 control.



WonderLook Pro is a registered trademark of WOWOW ENTERTAINMENT, INC.