



# SDI01A-12G Datasheet

## Benefits

- Convert 12G SDI to HDMI  
4K@60Hz 4:4:4
- Bridge Between  
Professional Broadcasting  
and Consumer Use  
Monitors

## Features

- 12G-SDI to 4K HDMI 2.0
- Support HDR10, LPCM 7.1
- SDI Backward Compatible
- HDMI Up/Down Scaling for  
fix resolution output
- Audio Embed
- Audio Extract



## Product Highlights

SDI01A-12G is the most suitable device to convert your professional raw audio and video 12G SDI signal to lossless HDMI signal for post process and display.

## 12G SDI to HDMI

Convert from 12G SDI 4:4:4 YCbCr 12-bit (SMPTE 2082-10 Mode 1) to 4K 4:4:4 HDMI signal.

## Backward Compatibility

Support SDI signal from 12G-SDI (SMPTE 2082-10 Mode 1) down to 1.5G-SDI (2048x1080 4:2:2 YCbCr 10Bit SMPTE 292)

## Up/Down Scaling

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HDMI output signal can be converted to a fix resolution such as 1080P or 4K30Hz. IT opens up the possibilities to display any SDI signal on any resolution HDMI Screen.

## Audio Embedded

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Audio source can be selected from any of the SDI audio groups(not by individual channel).

## Audio Extracted

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Audio can be extracted from 2 channel XLR/ 6.5 mm phone jack.

## Technical Specifications

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### Input and Output Interface:



#### SDI Input:

- Coax/Optical

#### SDI Loop out:

- Coax/Optical:

#### Audio Input:

- SDI 8 Channel by Group selection
- 2 CH XLR / RCA / 6.5mm phone jack/ AES

#### Audio Output (simultaneously):

- HDMI
- 2 Channel XLR / 6.5 mm phone jack/ AES

#### Micro USB:

- Firmware update
- System setting
- HDMI audio mapping

#### Mechanical Dip Switch:

- Select audio interface
- Select HDMI resolution
- HDCP On / off

### Supported SDI format:

#### SMPT E 2082-10 Mode 1 (12G-SDI)

Resolution	Signal Format	Sampling Structure	Pixel Depth	Audio Format	Frame Rate
4096 x 2160	4:4:4	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:4:4	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:4:4:4	YCbCrA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
4096 x 2160	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p
4096 x 2160	4:2:2	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:4:4	RGB	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:4:4	RGB	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:4:4:4	RGBA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:4:4	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:4:4	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:4:4:4	YCbCrA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
3840 x 2160	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p
3840 x 2160	4:2:2	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:4:4	RGB	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:4:4	RGB	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:4:4:4	RGBA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10

#### SMPT E 2081-10 Mode 1 (6G-SDI)

Resolution	Signal Format	Sampling Structure	Pixel Depth	Audio Format	Frame Rate
4096 x 2160	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
4096 x 2160	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p
3840 x 2160	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p, HLG, HDR 10
3840 x 2160	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p

### SMPT E 2081-10 Mode 2 (6G-SDI)

Resolution	Signal Format	Sampling Structure	Pixel Depth	Audio Format	Frame Rate
2048 x 1080	4:4:4	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:4:4	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:4:4:4	YCbCrA	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:2:2	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:4:4	RGB	12-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:4:4	RGB	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:4:4:4	RGBA	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:4:4	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:4:4	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:4:4:4	YCbCrA	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:2:2	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:4:4	RGB	12-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:4:4	RGB	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:4:4:4	RGBA	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10

### SMPT E 425-1 3GA & 3GB (3G-SDI)

Resolution	Signal Format	Sampling Structure	Pixel Depth	Audio Format	Frame Rate
2048 x 1080	4:4:4	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:4:4	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:4:4:4	YCbCrA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
2048 x 1080	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p
2048 x 1080	4:2:2	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:4:4	RGB	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:4:4	RGB	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:4:4:4	RGBA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:4:4	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:4:4	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:4:4:4	YCbCrA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p,HLG,HDR10
1920 x 1080	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,48p,47.95p
1920 x 1080	4:2:2	YCbCr	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:4:4	RGB	12-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:4:4	RGB	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:4:4:4	RGBA	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG

### SMPTE 425-1 3GB-DS (3G-SDI)

Resolution	Signal Format	Sampling Structure	Pixel Depth	Audio Format	Frame Rate
1280 x 720	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,30p,29.97p,25p,24p,23.98p,HLG,HDR10
1280 x 720	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,30p,29.97p,25p,24p,23.98p

### SMPTE 292 (1.5G-SDI)

Resolution	Signal Format	Sampling Structure	Pixel Depth	Audio Format	Frame Rate
2048 x 1080	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
2048 x 1080	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i
1920 x 1080	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i,HLG
1920 x 1080	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	30p, 29.94p, 25p, 24p, 23.98p,30psf,29.97psf,25psf,24psf,23.98psf,60i,59.94i,50i,48i,47.95i
1280 x 720	4:2:2	YCbCr	10-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,30p,29.97p,25p,24p,23.98p,HLG,HDR10
1280 x 720	4:2:2	YCbCr	8-Bit	48KHz, 24-Bit, 8-Channel	60p,59.94p,50p,30p,29.97p,25p,24p,23.98p

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