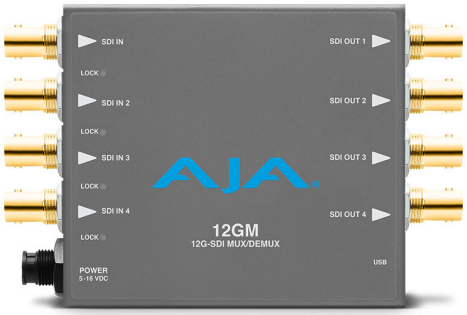

12GM

12GM is a compact SDI transport converter that enables 12G-SDI to quad link 3G-SDI and quad link 3G-SDI to 12G-SDI conversion. The muxer/demuxer supports 4K, UltraHD, 2K, HD and SD workflows and conversions from quad link SDI signals to single link SDI signals, and vice versa at 12G, 6G, 3G and 1.5G bit rates. Both Square Division (Quadrant) and Two Sample Interleave (2SI) input and output mappings are supported.

$1189 US MSRP

https://www.aja.com/products/12gm

Video Formats

- (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (4K) 4096x2160PsF 23.98, 24, 25, 29.97, 30
- (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (UltraHD) 3840x2160PsF 23.98, 24, 25, 29.97, 30
- (2K) 2048x1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (2K) 2048x1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1920x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1920x1080i 50, 59.94, 60
- (HD) 1280x720p 50, 59.94, 60
- (SD) 625i 50
- (SD) 525i 59.94
- YCbCr 4:2:2/4:4:4
- RGB 4:4:4, SMPTE or Full level
- 10 or 12-bit

Note: Raster and Frame Rate Dependent, please see 12GM Video Formats in the Download / Documents section of the website product page.

Video Input Digital

- 4x 12G-SDI BNC, SMPTE 259/292/372/424/2081/2082
- 4x 3 Gb SDI (Level A or B Dual Link)
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (4K) 4096x2160PsF* 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (Ultra HD) 3840x2160PsF* 23.98, 24, 25, 29.97, 30
- 4x 1.5 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30
  - (4K) 4096x2160PsF 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160PsF 23.98, 24, 25, 29.97, 30
- 2x 6 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 2x 3 Gb SDI (Level B Dual Stream)
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30
  - (4K) 4096x2160PsF 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160PsF 23.98, 24, 25, 29.97, 30
- 2x 1.5 Gb SDI (Dual Link HD-SDI), SMPTE-372
  - (HD) 1920x1080p 47.95, 48, 50, 59.94, 60
- 2x 1.5 Gb SDI (Dual Stream HD-SDI)
  - (HD) 2x 1920x1080p 23.98, 24, 25, 29.97, 30
- 1x 12 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 1x 6 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30
  - (2K) 2048x1080p 47.95, 48, 50, 59.94, 60
  - (HD) 1920x1080p 50, 59.94, 60
- 1x 3 Gb SDI (Level A or B Dual Link)
  - (2K) 2048x1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (2K) 2048x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080i 50, 59.94, 60
  - (HD) 1280x720p** 50, 59.94, 60
- 1x 3 Gb SDI (Level B Dual Stream)
  - (HD) 2x 1920x1080p 23.98, 24, 25, 29.97, 30
- 1x 1.5 Gb SDI
  - (2K) 2048x1080p 23.98, 24, 25, 29.97, 30
  - (2K) 2048x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080p 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080i 50, 59.94, 60
  - (HD) 1280x720p 50, 59.94, 60
- 1x 270 Mb SDI
  - (SD) 625i 50
  - (SD) 525i 59.94

*PsF is Level B Dual Link
**1280x720p is Level A Only

Video Output Digital

- 4x 12G-SDI BNC, SMPTE 259/292/372/424/2081/2082
- 4x 3 Gb SDI (Level A or B Dual Link)
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (4K) 4096x2160PsF* 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (Ultra HD) 3840x2160PsF* 23.98, 24, 25, 29.97, 30
- 4x 1.5 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30
  - (4K) 4096x2160PsF 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160PsF 23.98, 24, 25, 29.97, 30
- 2x 6 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 2x 3 Gb SDI (Level B Dual Stream)
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30
  - (4K) 4096x2160PsF 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160PsF 23.98, 24, 25, 29.97, 30
- 2x 1.5 Gb SDI (Dual Link HD-SDI), SMPTE-372
  - (HD) 1920x1080p 47.95, 48, 50, 59.94, 60
- 2x 1.5 Gb SDI (Dual Stream HD-SDI)
  - (2K) 2x 1920x1080p 23.98, 24, 25, 29.97, 30
  - (2K) 2x 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 2x 1920x1080p 23.98, 24, 25, 29.97, 30
  - (HD) 2x 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 2x 1280x720p 47.95, 48, 50, 59.94, 60
  - (HD) 2x 1920x1080i 47.95, 48, 50, 59.94, 60
- 1x 12 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 1x 6 Gb SDI
  - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30
  - (2K) 2048x1080p 47.95, 48, 50, 59.94, 60
  - (HD) 1920x1080p 50, 59.94, 60
- 1x 3 Gb SDI (Level A or B Dual Link)
  - (2K) 2048x1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
  - (2K) 2048x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080i 50, 59.94, 60
  - (HD) 1280x720p** 50, 59.94, 60
- 1x 3 Gb SDI (Level B Dual Stream)
  - (2K) 2x 1920x1080p 23.98, 24, 25, 29.97, 30
  - (2K) 2x 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 2x 1920x1080p 23.98, 24, 25, 29.97, 30
  - (HD) 2x 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 2x 1280x720p 47.95, 48, 50, 59.94, 60
  - (HD) 2x 1920x1080i 47.95, 48, 50, 59.94, 60
- 1x 1.5 Gb SDI
  - (2K) 2048x1080p 23.98, 24, 25, 29.97, 30
  - (2K) 2048x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080p 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920x1080i 50, 59.94, 60
  - (HD) 1280x720p 50, 59.94, 60
- 1x 270 Mb SDI
  - (SD) 625i 50
  - (SD) 525i 59.94

*PsF is Level B Dual Link
**1280x720p is Level A Only

Supported Conversions and Functions

- Quad 3G-SDI Level A to Single 12G-SDI
- Quad 3G-SDI Level B Dual Link to Single 12G-SDI
- Quad 3G-SDI Level A to Dual 6G-SDI
- Quad 3G-SDI Level B Dual Link to Dual 6G-SDI
- Quad 3G-SDI Level A to Quad 3G-SDI Level B Dual Link
- Quad 3G-SDI Level B Dual Link to Quad 3G-SDI Level A
- Quad 1.5G-SDI to Single 6G-SDI
- Dual 6G-SDI to Single 12G-SDI
- Dual 6G-SDI to Quad 3G-SDI Level A
- Dual 6G-SDI to Quad 3G-SDI Level B Dual Link
- Dual 3G-SDI Level A to Single 6G-SDI
- Dual 3G-SDI Level B Dual Stream to Single 6G-SDI
- Dual Link 1.5G-SDI to Single 3G-SDI Level A
- Dual Link 1.5G-SDI to Single 3G-SDI Level B Dual Link
- Dual Stream 1.5G-SDI to Single 3G-SDI Level B Dual Stream
- Single 12G-SDI to Quad 3G-SDI Level A
- Single 12G-SDI to Quad 3G-SDI Level B Dual Link
- Single 12G-SDI to Dual 6G-SDI
- Single 6G-SDI to Dual 3G-SDI Level A
- Single 6G-SDI to Dual 3G-SDI Level B Dual Stream
- Single 6G-SDI to Quad 1.5G-SDI
- Single 3G-SDI Level A to Dual Link 1.5G-SDI
- Single 3G-SDI Level B Dual Link to Dual Link 1.5G-SDI
- Single 3G-SDI Level B Dual Stream to Dual Stream 1.5G-SDI
- Two Sample Interleave (2SI) to Square Division (Quadrant) pixel mapping
- Square Division (Quadrant) to Two Sample Interleave (2SI) pixel mapping
- HDR VPID pass-through or override for Colorimetry and Transfer Characteristic
- Pass-through of Single Link 12G, 6G, 3G, 1.5G, and 270M SDI video
- Distribution Amplifier support
  - Single Link Outputs duplicated on outputs 2, 3, and 4
  - Dual Link Outputs duplicated on outputs 3, and 4
- Input signal diagnostics
- Input timing analyzer for Quad/Dual link signals

Cable Equalization

(Belden 1694A coax)

- 12 Gbps, 70m
- 6 Gbps, 100m
- 3 Gbps, 140m
- 1.5 Gbps, 200m
- 270 Mbps, 300m

Audio Input/Output Digital

- Passes SDI embedded audio, 24-bit, up to 16-channels

User Interface

- USB port used with supplied cable and Mini-Config software application to configure the device and access diagnostics via macOS or Windows.

Size (w x d x h)

- 5.76" x 4.02" x 0.90" (146.31 × 102.11 × 22.86 mm)

Weight

- 0.6 lb (0.3 kg)

Power

- 5-16 VDC regulated, 12 watts, power supply required, included with purchase

- AC Adapter: 100-240VAC, 50/60 Hz, universal input

Environment

- Safe Operating Temperature: 0 to 40 C (32 to 104 F)*
- Safe Storage Temperature (Power OFF): -40 to 60 C (-40 to 140 F)
- Operating Relative Humidity: 10-90% noncondensing
- Operating Altitude: <3,000 meters (<10,000 feet)

*12GM uses approximately 12 watts of power and convection cooling. It will be very warm to the touch, which is normal. When installing the unit, mount in a location where it has access to air for proper cooling. Do not stack the 12GM with other Mini-Converters.