

AVMATRIX®

12G-SDI/HDMI BIDIRECTIONAL CONVERTER

Built for true 4K60 performance, enabling seamless 12G-SDI and HDMI 2.0 conversion for next-generation professional video workflows.



Model No.:

SC2020-12G

Bidirectional Conversion

HDMI2.0 ↔ 12G-SDI



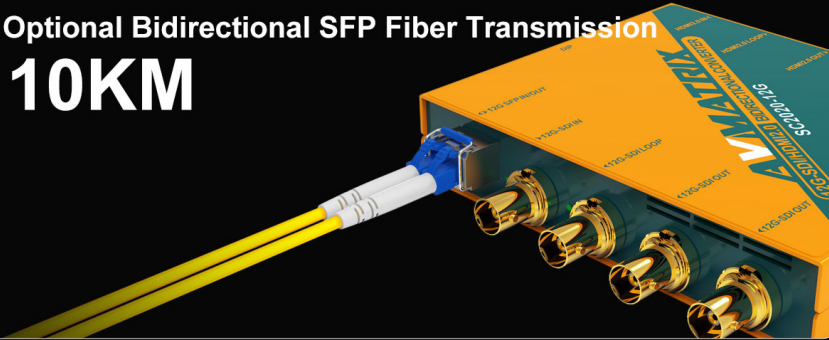
4K@60Hz Ultra-HD Resolution

4K60



Optional Bidirectional SFP Fiber Transmission

10KM



12G-SDI & HDMI 2.0 Input with Loop-Out



Multiple Color Spaces

RGB 4:4:4 (Full / Limited)

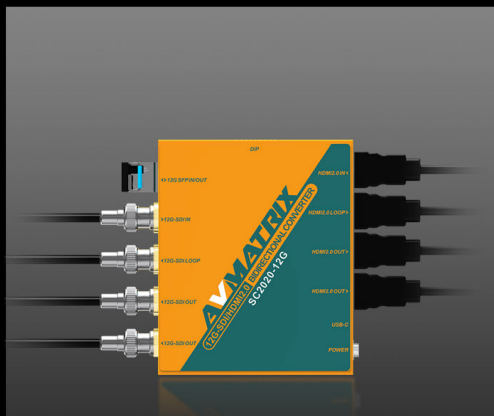
YCbCr 4:4:4

YCbCr 4:2:2

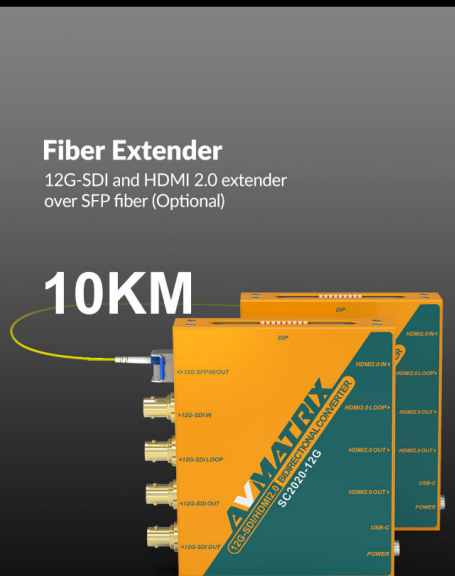
YCbCr 4:2:0

DIP Switches & PC Software Control





Video Converter
HDMI2.0/12G-SDI Signal Conversion



Fiber Extender
12G-SDI and HDMI 2.0 extender
over SFP fiber (Optional)



Video Splitter
1x2 12G-SDI and 4K HDMI Splitter

Multiple Operation Modes

All-in-One: Converter, Splitter, Fiber Extender

This all-in-one device integrates powerful functions including video conversion, signal distribution, and long-distance fiber extension in a single compact unit. It delivers versatile, end-to-end signal solutions to meet diverse requirements across professional AV, broadcast, and live production workflows.



12G-SDI/HDMI2.0 Bidirectional Conversion

Broadcast-Grade Multi-Input & Output Signal Processing

This converter delivers seamless bidirectional conversion between 12G-SDI and HDMI 2.0 signals. With flexible multi-input and multi-output configuration, including dual 12G-SDI outputs, dual HDMI 2.0 outputs, and independent SDI/HDMI loop-through, it enables versatile signal processing to meet diverse professional AV and broadcast requirements.



12G-SDI/ HDMI 2.0 Input & Loop-out

4K Signal Monitoring & Distribution

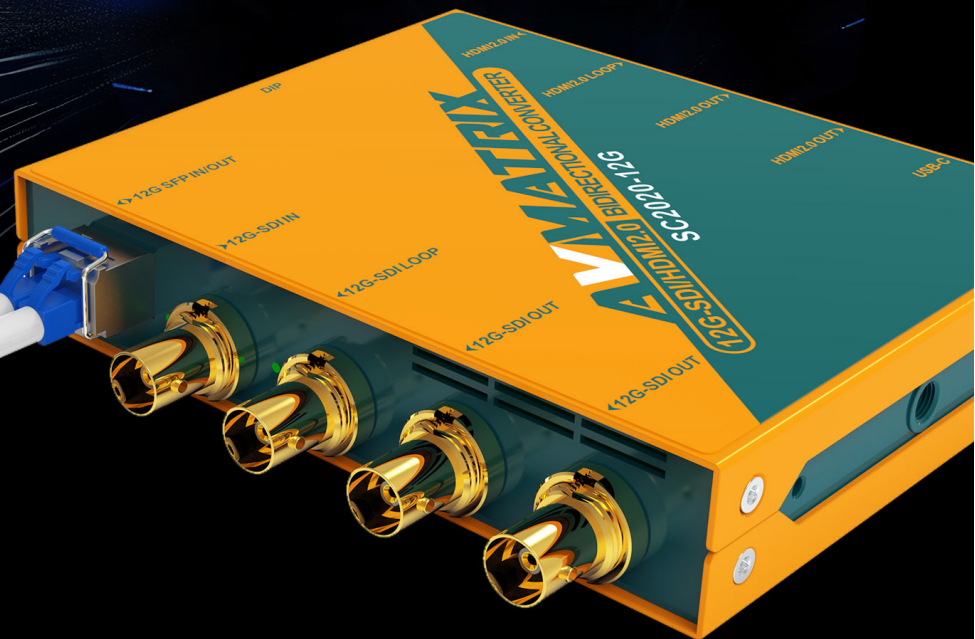
Featuring 12G-SDI and HDMI 2.0 inputs with seamless loop-through, this converter enables reliable 4K signal pass-through to secondary displays. With two simultaneous 12G-SDI/HDMI 2.0 outputs, it delivers flexible multi-monitor monitoring for professional broadcast, film, and live production environments.

10KM

Long-Distance SDI/HDMI Fiber Transmission

Optional Bidirectional SFP Module Support

Equipped with an optional SFP fiber interface, this converter supports stable, uncompressed long-haul fiber transmission up to 10km over 1310nm single-mode LC simplex fiber. It delivers reliable 12G-SDI signal extension supporting resolutions up to 4K@60Hz (2160p60) for professional broadcast and live production workflows.



A green sports car, possibly a Porsche Carrera GT, is shown from a front-facing perspective, driving on a racetrack at night. The car's headlights are on, and it is surrounded by motion blur and smoke. In the background, there are stadium lights and a large, semi-transparent rectangular frame. Inside this frame, the text '4K 60Hz' is displayed in a large, bold, sans-serif font. The '4K' is on the top line, and '60Hz' is on the bottom line, with the car positioned between the two lines of text.

4K 60Hz

Uncompressed 4K@60Hz Resolution

True Ultra-HD Visual Clarity

This converter supports up to 4K@60Hz resolution, delivering uncompressed, lossless ultra-high-definition signal transmission for pristine picture quality. It ensures the ultimate visual experience across professional broadcast, live production and high-end display applications.



Effortless Operation, Swift Control

DIP Switches & PC Software Control

This converter features tool-free DIP switch adjustment for quick, on-site configuration, ideal for fast setting changes in outdoor and field applications. It also supports remote control and firmware upgrades via USB-C connection to a PC, delivering flexible operation and seamless software updates for long-term usability.

Multiple Color Space Support

Wide RGB & YCbCr Format Compatibility

This converter supports a full range of professional color space formats, including RGB 4:4:4 (Full/Limited), YCbCr 4:4:4, YCbCr 4:2:2, and YCbCr 4:2:0. All color formats can be easily selected via DIP switches, ensuring accurate color reproduction and seamless compatibility with professional broadcast and AV systems.



Full RGB 4 : 4 : 4

Limited RGB 4 : 4 : 4

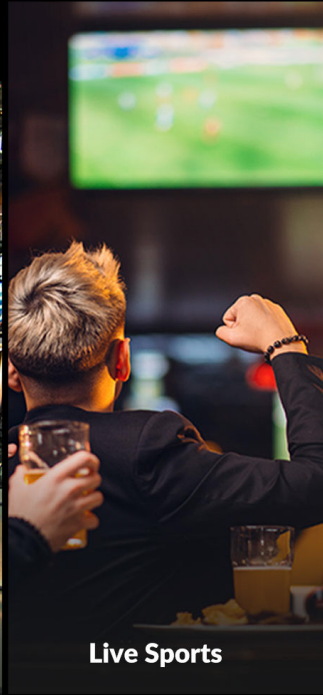
YCbCr 4 : 4 : 4

YCbCr 4 : 2 : 2

YCbCr 4 : 2 : 0



Broadcast



Live Sports



Education



Church



Healthcare

Widespread Application

Universal Industry Solution

The converter can be widely used in various field events, such as live broadcast, virtual studio, education, conference, and so on.

Specifications

CONNECTIONS	
Video Input	HDMI2.0 ×1, 12G-SDI/12G Fiber×1 (Select 1 of 2)
Video Output	HDMI2.0 Loop ×1, HDMI2.0 ×2, SDI Loop ×1, 12G-SDI ×2, 12G Fiber ×1
USB	USB Type-C×1 (Upgrade, PC software Control)
Resolution Support	Up to 4K60 (2160p, 1080p, 1080i, 720p, NTSC, PAL)
HDMI Color Space	Full RGB 4:4:4, Limited RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Power Supply	DC 12V ×1
Wide Voltage Range	DC 5-24V
Power Consumption	15W
Dimension (LWD)	104×125.5×24.5mm
Weight	Net: 590g; Gross: 888g
Temperature	Operating: -20~60℃, Storage: -30~70℃
Warranty	3 years

Accessories



12V 2A Power Adapter



SFP Module (Optional)



Bracket (Optional)



USB A-C Cable (Optional)

