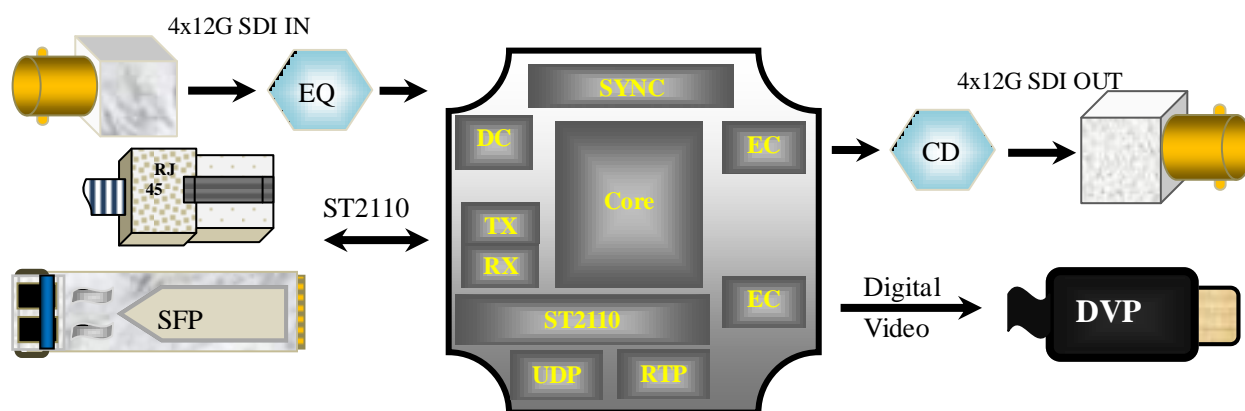## 40G ST2110/4x12G SDI BiDi uncompressed video converter

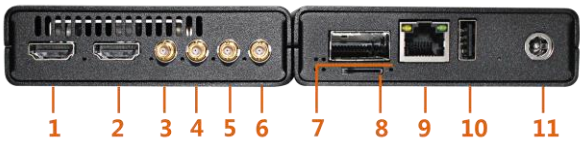## Product Introduction

产品介绍

40G ST2110/4x12G SDI Bidirectional uncompressed video converter supports five video capture channels and five video output channels, which can be captured and output to the 2110 IP playout system via an QSFP (40Gb Ethernet) port. It is specifically designed for processing extremely high-quality video. Equipped with multi-rate interfaces, the DM501 supports 720p, 1080i, 1080p, and 2160p video formats. The DM501 converter board features four bidirectional 12G-SDI ports, one HDMI RX port, one HDMI TX port, and one QSFP (40Gb Ethernet) port, with optional Power over Ethernet (PoE) support. Compatible with ST 2110-20/30/40 streaming formats, it offers uncompressed video transmission with ultra-low signal conversion latency, making it ideal for integration into live IP broadcast production environments. An optional license adds ST 2110 encoding and decoding for IP streaming, supporting up to 16 HD or 4 UHD channels per converter board. This provides an economical and reliable IP live production system for remote productions even when network bandwidth is limited.

Features

1. The network uses QSFP (40G).

For 10G applications, a dedicated QSFP-to-SFP adapter or a 40G-to-10G DAC cable can be used.

It is recommended to connect the QSFP interface directly to an external device, otherwise compatibility may be impaired.

2. The network management is 100M, with optional PoE power.

3. The USB and power connectors are removable, allowing the power supply to be connected using an internal connector.

4. Four bidirectional SDI ports are available, each suitable for your needs.

The SDI interface is Mini BNC, convertible to SMA/SMB or other internal connectors.

5. One HDMI input and one HDMI output are available, suitable for your needs.

The HDMI interface uses a standard connector and can be converted to a 20-pin FPC for convenient internal connections.

6. ST2110 encoding capabilities:

Supports up to 4 channels of 4K60 (8-bit) main streams

or 3 channels of 4K60 (10-bit) + 1 channel of 4K30 10-bit main streams. Supports 2 channels of 4K60 (10-bit) main stream + secondary stream

Supports 1 channel of 4K60 (10-bit) main stream + backup stream

Supports 2 channels of 4K50 (10-bit) main stream + backup stream

7. ST2110 decoding capabilities:

Supports up to 2 channels of 4K60 (10-bit), with selectable 1-channel main/backup stream switching

Or 4 channels of 4K30 (10-bit)

Or 8 channels of 1080p60 (10-bit)
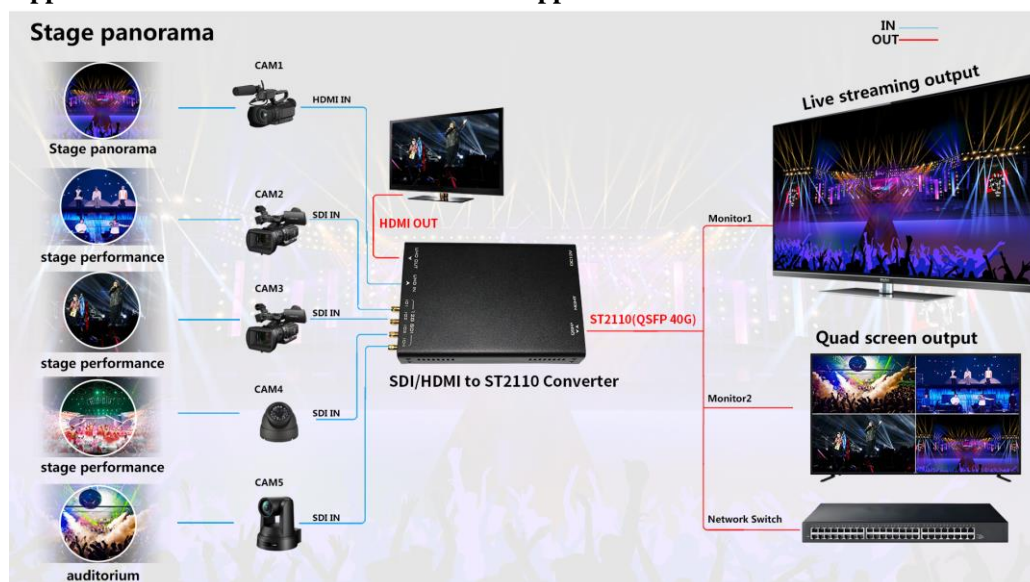
Or 16 channels of 1080p30 (10-bit)

Interfaces

No.	Interface	Function
1	HDMI	HDMI OUT
2	HDMI	HDMI IN
3	SDI IN/OUT 1	12G-SDI I/O
4	SDI IN/OUT 2	12G-SDI I/O
5	SDI IN/OUT 3	12G-SDI I/O
6	SDI IN/OUT 4	12G-SDI I/O
7	TF card slot	Firmware Upgrade
8	QSFP	40G/4x10G
9	RJ45	Network management, 100M, optional POE power supply
10	USB	Firmware Upgrade
11	Power supply	DC 12V

Parameter

Product Name	40G ST2110/4x12G SDI BiDi uncompressed video converter	
Video Format	HD video formats	720p50、720p59.94、720p60、1080i50、1080i59.94、1080i60、1080p23.98、1080p24、1080p25、1080p29.97、1080p30、1080p50、1080p59.94、1080p60
	Ultra HD video formats	2160p23.98、2160p24、2160p25、2160p29.97、2160p30、2160p47.95、2160p48、2160p50、2160p59.94、2160p60
	SDI standards	SMPTE 292M、SMPTE296M、SMPTE 424M、SMPTE425M A-level、SMPTE2081/2082
	Audio Sampling	Sampling rate 48kHz , 24bit
	Color accuracy	8bit、10bit YUV 4:2:2
	Color Space	REC 601、REC 709、REC 2020
IP Video Standards	SMPTE 2110-20(Uncompressed video)	IGMP v2/v3
	SMPTE 2110-21(Traffic Shaping)	Sending : Narrow Receiving : Narrow、Wide Synchronous、Asynchronous
	SMPTE 2110-30（PCM）	Sampling rate 48kHz , 24bit
	NMOS IS-04 Discovery and Registration	v1.3.2 Through mDNS/DNS-SD P2P
	NMOS IS-05 Connection Management	v1.1.2
	NMOS BCP-002-01	Natural grouping
	NMOS BCP-004-01	Receiver Function
Software	With own software	Web control
General parameters	Power Supply	DC 12V
	Size	140x90x25mm
	Weight	0.3Kg
	Operating Temperature	0℃~50℃ No condensation
	Storage Temperature	-20℃~75℃
	Operating Humidity	20%~70%RH

Application

Application 1：SDI/HDMI to ST2110 PTP application

ST2110 encoding capabilities:

Supports up to 4 channels of 4K60 (8-bit) main streams

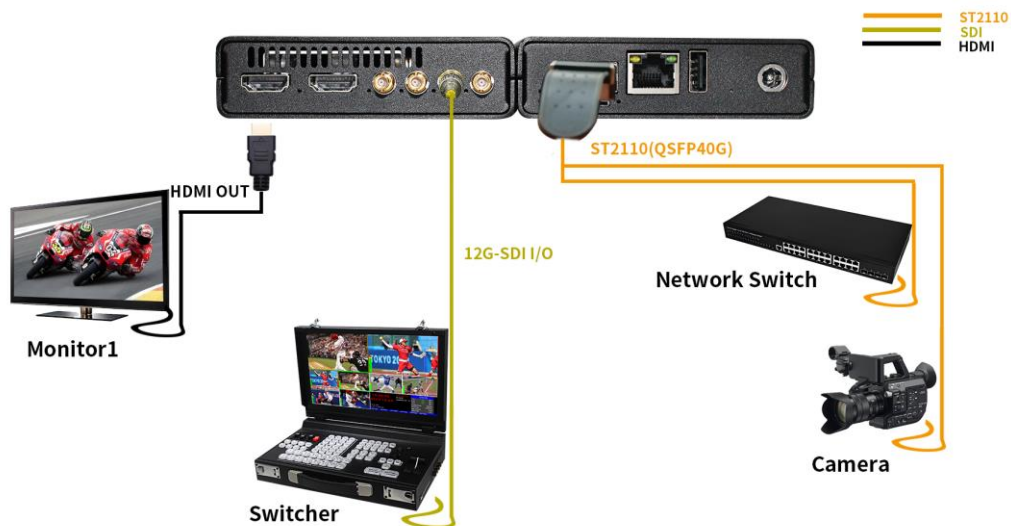or 3 channels of 4K60 (10-bit) + 1 channel of 4K30 10-bit main streams.

or Supports 2 channels of 4K60 (10-bit) main stream + secondary stream

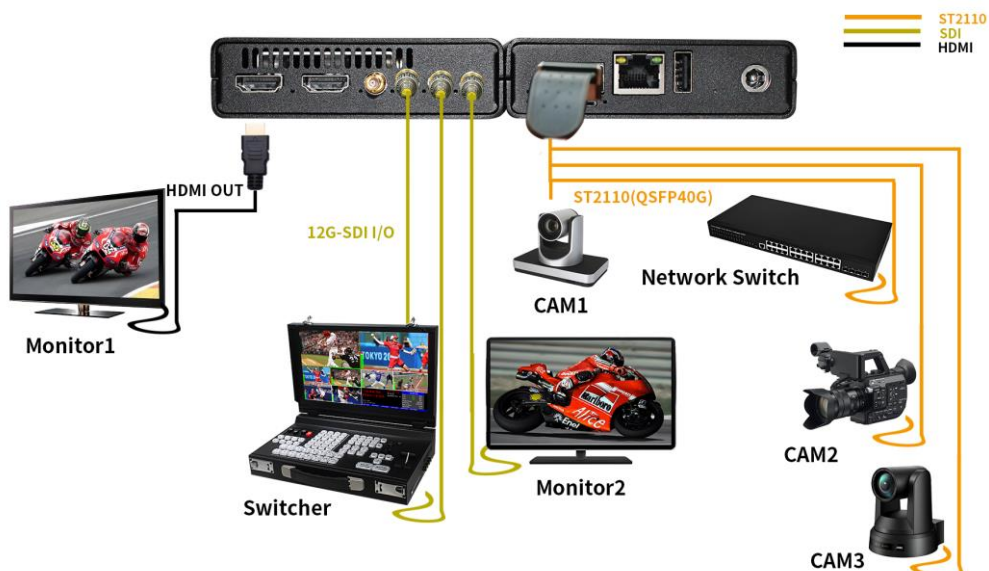or Supports 1 channel of 4K60 (10-bit) main stream + backup stream

or Supports 2 channels of 4K50 (10-bit) main stream + backup stream

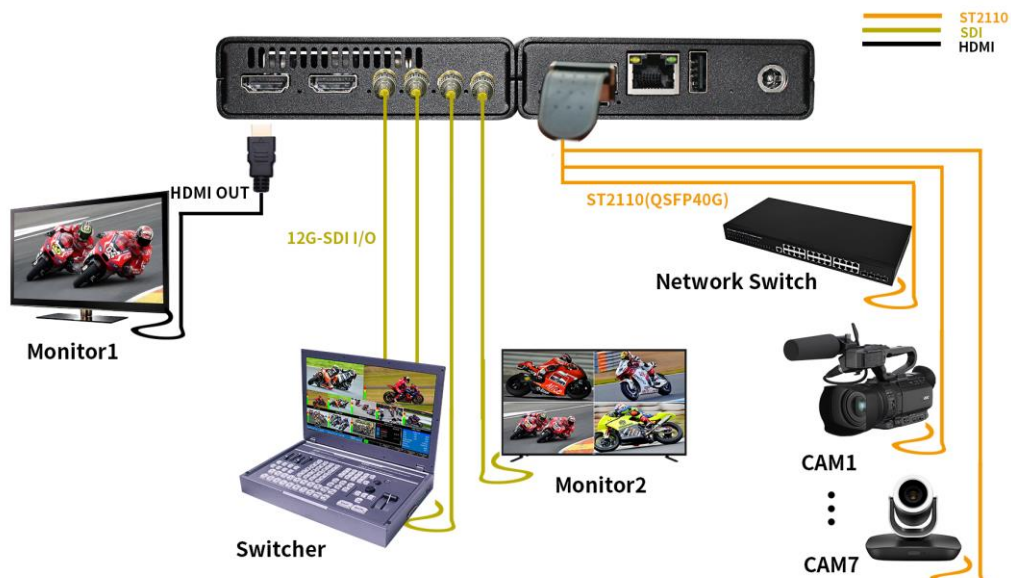**Application 2：ST2110 to SDI/HDMI PTP application**

Supports up to 2 channels of 4K60 (10bit), and can select 1 channel main/backup stream switching
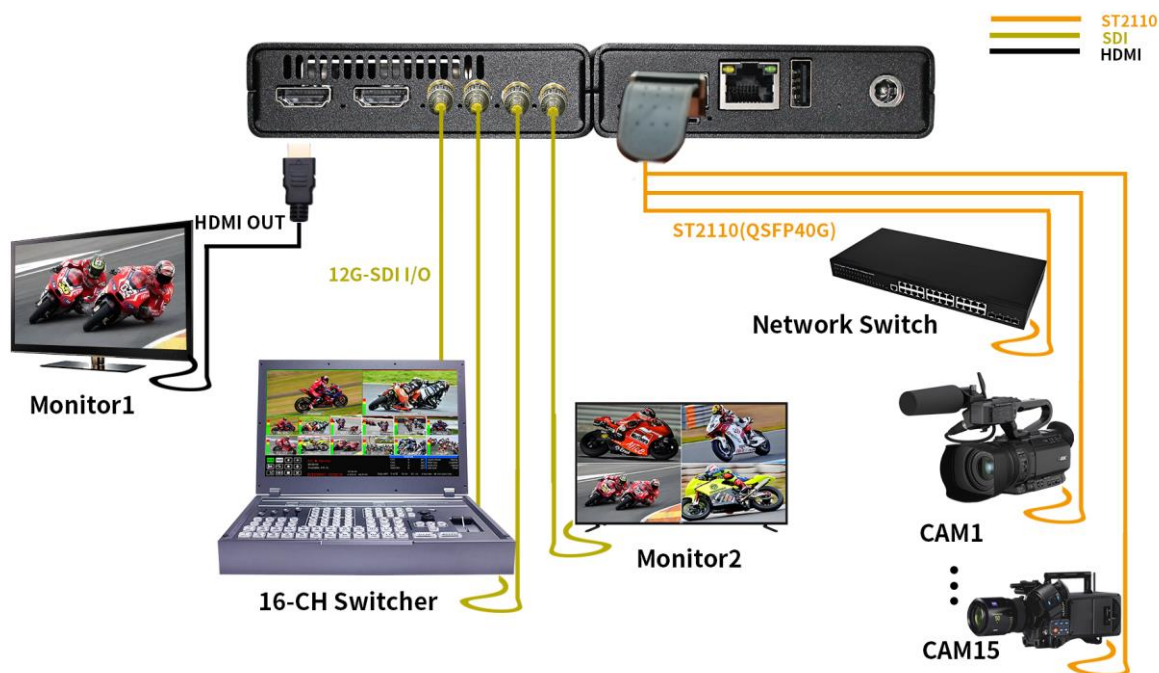

Supports 4-channel 4K30 (10-bit)

Supports 8-channel 1080P60 (10-bit)
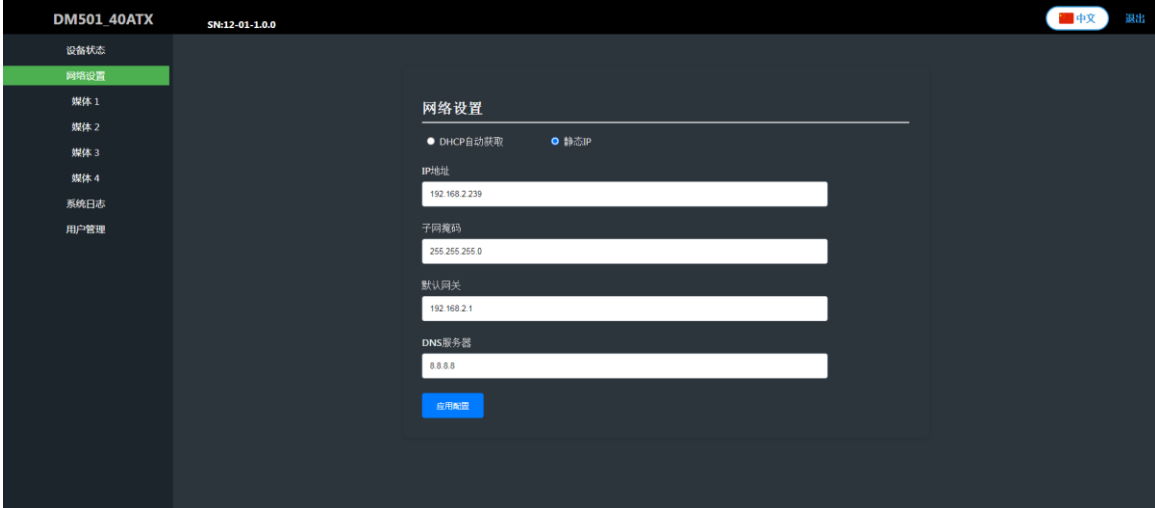
Supports 16-channel 1080P30(10bit)

Application 3：Switch network connection application

Switch network applications, this solution has high system integration, simple installation and construction, easy operation, and flexible functions. The Devicewell ST2110 converter is designed specifically for high-quality video transmission, supporting 10 bit video processing and accurately restoring every pixel of the original SDI signal, ensuring broadcast grade image quality from the source to the terminal.

Introduction to Web Interface

DM501_40ATX
SN:12-01-1.0.0

中文 退出

设备状态
网络设置
媒体 1
媒体 2
媒体 3
媒体 4
系统日志
用户管理

源地址

	源地址	源端口	源MAC地址	
视频	192.168.4.91	50022	00-90-56-08-82-0c	应用配置
音频	0.0.0.0	0	00-00-00-00-00-00	应用配置

目的地址

	目的地址	目的端口	目的MAC地址	
视频	239.26.3.91	50022	00-00-5e-1a-02-5b	应用配置
音频	0.0.0.0	0	00-00-00-00-00-00	应用配置

DM501_40ATX
SN:12-01-1.0.0

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源地址

	源地址	源端口	源MAC地址	
视频	192.168.5.91	50024	00-90-56-08-82-0c	应用配置
音频	0.0.0.0	0	00-00-00-00-00-00	应用配置

目的地址

	目的地址	目的端口	目的MAC地址	
视频	239.26.4.91	50024	00-00-5e-1a-02-5b	应用配置
音频	0.0.0.0	0	00-00-00-00-00-00	应用配置

DM501_40ATX
SN:12-01-1.0.0

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	源地址	源端口	源MAC地址	
视频	192.168.6.91	50026	00-90-56-08-82-0c	应用配置
音频	0.0.0.0	0	00-00-00-00-00-00	应用配置

目的地址

	目的地址	目的端口	目的MAC地址	
视频	239.26.5.91	50026	00-00-5e-1a-02-5b	应用配置
音频	0.0.0.0	0	00-00-00-00-00-00	应用配置