

GSE Series Digital Video Transmitter with Embedded Audio



The GSE series digital video optical transmitter delivers the SDI signal with embedded audio. The Video input can be CVBS or YUV or YC or SDI signal, the Audio input can be analog audio or AES/EBU digital audio. GSE optical transmitter outputs the standard SDI with embedded audio in both coaxial cable and fiber interface.

The input analog video is converted as SDI signal after A/D conversion, while the input analog audio is converted as digital audio after A/D conversion. The audio signals are then embedded in the SDI signal, where the audio embedded location can be set in any one of the four layers of SDI. By means of GSE cascading, GSE optical transmitter can embed maximum 16 analog audios and 8 AES/EBU digital audios.

Working with Greatway GSU optical receiver, GSE optical link offers both the high quality analog and digital video/audio no matter whether the input is analog or digital signal. Working with Greatway CSVR optical receiver, GSE optical link offers the SDI with embedded audio signal.

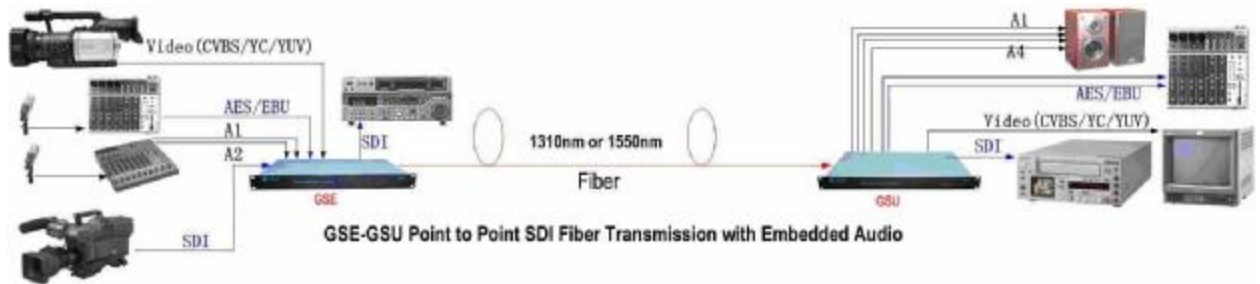
Features:

- | CVBS/YUV/YC and SDI Inputs Available
- | SDI Digital Video Input meets 4:2:2 SMPTE259M/ITU-601 (270Mbps)
- | 4 Analog Audios, 2 AES/EBU Digital Audio and 2 RS232 control data inputs available, embedded in SDI output in accordance with SMPTE272M standard
- | Maximum embedded 16 analog audios and 8 AES/EBU digital audios
- | 2 Local SDI Outputs for 250m cable transmission (BELDEN8281)
- | Built-in Cable Equalizer on the SDI signal input
- | The Audio Transmission is normal in the absence of Video
- | Wide Video AGC Dynamic Range accepts 0.6V~1.6V Input Video
- | GSE+GSU (or CBMR) Fiber Transmission Distance Up To 120Km
- | System Topology can be point to point or point to multi points
- | Optical Transmitter or Optical Receiver can work with any other optical products meeting

SMPTE297M and SMPTE272M

- Front Panel Input Video, Video Standard, Input Video and Power Supply LED Status
- Auto Negotiating NTSC (525/60) and PAL (625/50)
- Support SMPTE RP165 EDH Standard

Applications



Specifications:

Optical Link Performance

Video		Audio	
Output Level	1 V _{P-P}	Output (Balanced)	Maximum 22 V _{P-P} (+20 dBm)
Video SNR	>71dB	Audio SNR	>85 dB (Unweighted)
DG	< 1%	Audio Distortion	<0.2 %
DP	1°	Bandwidth	20Hz~20 KHz @-0.5 dB
Flatness	±0.2dB to 5.75MHz	Isolation Between Channels	>90 dB @ 1KHz >90 dB @20KHz
Lum Non-linearity	<1%		
Lum/Chr Delay	<10ns	Audio Channel	4
Lum/Chr Gain	<1%		
Impedance	75Ω	Impedance	40Ω
Connector	BNC	Connector	XLR

Note:

1. The link consists of GSE transmitter and GSU receiver; the specification is tested at CVBS Video Input/Output and 4 embedded Audios.
2. When the video is YC or YUV, the video SNR>72dB
3. When the video input is SDI signal and the output is either CVBS or YC or YUV, the video SNR>73dB.
4. DG and DP data does not apply to 330 lines test.

GSE Transmitter Specifications:

Analog Audio Input		AES/EBU Digital Audio Input	
Input Channel	4	Input Channel	2
Input Level	-20dBFS	Input Level	0.2~7.0V _{P-P}
Bandwidth	20Hz~20 KHz	AES Frequency	32KHz~108KHz (20/24bit)
Impedance	600Ω	Impedance	110Ω
Connector	XLR	Connector	Balanced
Analog Video Input		SDI Digital Video Input	
Input Channel	1	Input Channel	1
Video Standard	CVBS or YC or YUV	SDI Standard	4:2:2 SMPTE259M (270Mbps)
Input Level	0.6~1.6V _{P-P}	Input Level	>380 mV _{P-P}
		Return Loss	>16 dB (270MHz)
		Cable Equalization	>250m(270Mbps) (BELDEN8281)
Impedance	75Ω	Impedance	75Ω
Connector	BNC	Connector	BNC
SDI Digital Video Local Output			
Output Port	2	Rise/Down Time	<0.8 nS
SDI Standard	4:2:2 SMPTE259M (270Mbps)	Impedance	75Ω
Output Level	800 mV _{P-P} ±10%	Connector	BNC
Maximum Jitter	< 0.2UI (270Mbps)		
Optical Parameter			
Wavelength	1310nm or CWDM	Fiber Distance	20/40/60/80/100Km
Output Power	-12dBm~3 dBm	Optic Connector	FC/PC or Requested
RS232	2 Ports, ≤10kbit/s Each		
Power Supply	AC 90~265V 50/60Hz ≤20W		
Dimension	19" 1U (430×230×43 mm)		

Ordering Information:

GSE-AB-C (SDI Digital Video Optical Transmitter with Embedded Audio)

AB: Fiber distance 20-20Km, 40-40Km, 60-60Km, 80-80Km, 100-100Km+

C: Optional CWDM wavelengths