

NEP100-A IP Streamer



1U Chassis with 3 card slots



3U Chassis with 6 card slots

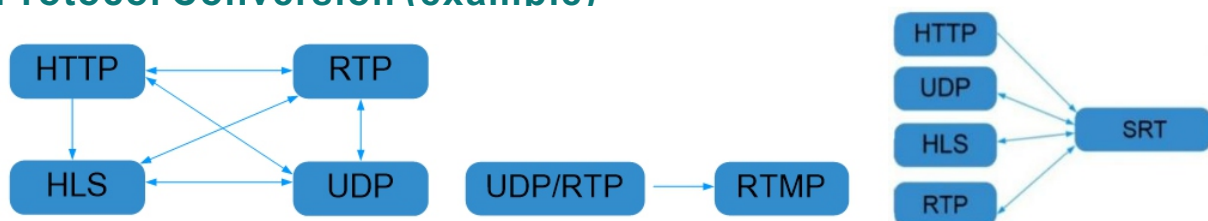
Product Overview

NEP100-A is a flexibly modularized 1U (or 3U) device with the features of Encoder/Receiver, IP Gateway and IPTV Server for the protocol-conversion application and IPTV-system application. It supports max 3 (or 6) pluggable streamer cards embedded, such as encoder card and tuner card to receive the HDMI signals and tuner signals etc. It can also convert the input IP streams from the embedded modules and Ethernet ports over SRT, HTTP,UDP, RTP, RTSP, HLS protocol and TS files into the output IP streams over SRT, HTTP,UDP, RTP, RTSP, HLS and RTMP protocol. It is also integrated with SOFTEL IPTV management software and Streamer cards to make it ideal in an IPTV system, such as hotel, hospital and community.

Features

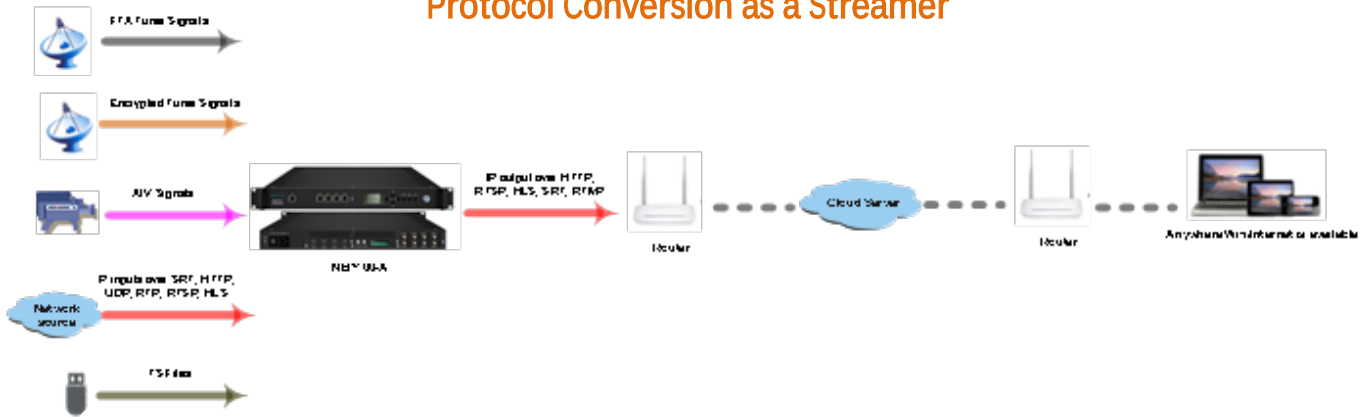
- ▶ Encoder/Receiver, IP Gateway and IPTV Server in one device
- ▶ 2 separate Web GUI, one for Cards and Gateway, the other for IPTV Server
- ▶ Support uploading TS files directly in Web GUI to broadcast your own channels
- ▶ Support inter-cut feature of a live program, a TS file and a picture
- ▶ Support IP anti-jitter feature for the external IP streams
- ▶ Support downloading SOFTEL IPTV APK directly in the Web GUI
- ▶ Multi-level password control for your system security
- ▶ LCD/Key button for Network-Setting checking
- ▶ Modularized design, max 3 (or 6) cards embedded, a flexible option as per the actual application

IP Protocol Conversion (example)



Application Example

Protocol Conversion as a Streamer



Specifications

Input	IP inputs thru ETH 1&2, GE ports over SRT,HTTP, UDP (SPTS), RTP(SPTS), RTSP (over UDP, payload: <u>mpeg TS</u>) and HLS		For 1U model
	IP inputs thru ETH 1-4 GE ports & 6-7 SFP+ ports over SRT,HTTP, UDP (SPTS), RTP(SPTS), RTSP (over UDP, payload: <u>mpeg TS</u>) and HLS		For 3U model
	TS files uploading through Web management		
	Encoder card and Tuner card etc (Please refer to the detailed card spec below)		
IP output	IP outputs thru ETH0, GE port over SRT, HTTP (Unicast), UDP(SPTS, Multicast) , RTP, RTSP, HLS and RTMP (Program source should be H.264 and AAC encoding)		
System	Channel switching time with SOFTEL' STB: HTTP (1-3s), HLS (0.4-0.7s)		
	It is closely related with the program <u>bitrate</u> and protocol type etc for Max program numbers involved in protocol conversion, and the actual application shall prevail with maximum 80% CPU utilization (Please refer to Test data for reference in the end of the spec)		
	It is closely related with the program <u>bitrate</u> and protocol type etc for Max affordable terminal numbers in IPTV application of the STB/Android TV installed with SOFTEL IPTV APK, and the actual application shall prevail with maximum 80% CPU utilization (Please refer to Test data for reference in the end of the spec)		
	IPTV Features: Live channel, VOD, Hotel intro, Dining, Hotel service, Scenery intro, APPS,Adding scrolling caption, welcome words, pictures, advertisement, video, music etc (the features are only applicable to IP out application in the STB/Android TV installed with SOFTEL IPTV APK)		
General	Demission (WxLxH)	482mm×464mm×44mm (1U model) 482mm×493mm×133mm (3U model)	
	Management	2 separate Web GUI (one for Cards and Gateway, the other for IPTV Server) through ETH3 (3U model through ETH5)	
	Temperature	0~45℃(operation), -20~80℃(storage)	
	Power Supply	AC100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz	

NEP100 Network Encoder Processor



Product Overview

NEP100 network encoder processor is an IP broadcasting device with multiple inputs (HDMI/SDI) which can convert the input programs into IP format and send to terminals through the internet/LAN. This 1-U chassis comes with 3 slots which allow loading different encoder modules with different interfaces and video formats.

Features

- ▶ Modular design, 1U chassis with 3 slots
- ▶ Support flexible combination of encoding modules, up to 12 HD programs inputs
- ▶ HDMI/SDI modules available, HEVC/MPEG4 video format for option
- ▶ 1 GE port with maximum 180Mbps data processing and output
- ▶ IP out over UDP(SPTS)(Unicast/Multicast), RTP(Unicast/Multicast), RTSP(Unicast), RTMP(Unicast), HTTP(Unicast), HLS(Unicast); RTMP only works under H.264 video format and AAC audio format RTSP/RTMP/HTTP/HLS support each ch video bitrate max: 8Mbps
- ▶ UDP/RTP support each ch video bitrate max: 12Mbps
- ▶ Support Web management, Upgrade via USB port

Equipment Specifications:

Dimension(W×L×H): 440mm×324mm×44mm
Approx weight: 6kg
Environment: 0~45℃(work); -20~80℃(Storage)
Power requirements: AC 110V±10%, 50/60Hz, AC 220±10%, 50/60Hz

SFT3228M-N 2/4/8/16/24 Multi-Channel Encoder



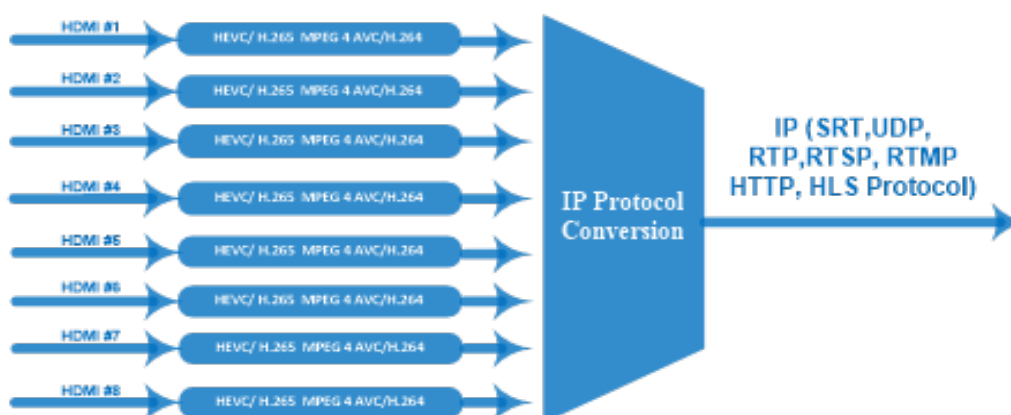
Product Overview

SOFTEL SFT3228M-N network encoder (Network Encoder Processor) is an encoding device for IP broadcasting. It is equipped with 2/4/8/16/24 HDMI channels input with H.264/H.265 video encoding and LC-AAC or HE-AAC audio encoding. The signals source could be from STB, PC, TV and etc. It can transfer the live program through the internet/LAN, and gives IP out over UDP (Unicast/Multicast), SRT, RTSP, RTMP, HTTP and HLS, and the output signals are to be received by PC, phone and other mobile terminals. SFT3228M-N lets you access your IP STB, PC or TV anywhere to watch your programs.

Features

- ▶ 2/4/8/16/24 HDMI input with 2/4/8/16/24 SPTS output (each encoder module, only support SPTS, NO MPTS), max 24 HDMI inputs
- ▶ HEVC/ H.265 , MPEG 4 AVC/H.264 video encoding format
- ▶ IP Output over UDP (Unicast/Multicast), SRT, RTSP, RTP, RTMP, HTTP and HLS
- ▶ Support AC3 Pass-through (developing)

Principle Chart (Each Encoder Module)



Technical specification

Input	2/4/8/16/24 HDMI inputs	
Video	Resolution	1920*1080_60P,1920*1080_50P;1920*1080_59.94P,1280*720_60p,1280*720_59.94P, 1280*720_50P
	Encoding	H.264/H.265
	Bit-rate	1~15Mbps each channel
	Rate Control	CBR/VBR
	GOP Structure	IP
Audio	Encoding	MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through
	MPEG-1 Layer 2 Bit-rate	48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	Sampling rate	32KHz,44.1KHz,48KHz
	Chroma	4:2:0
	Audio Gain	0-255 Adjustable
	LC-AAC Bit-rate	48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	HE-AAC Bit-rate	48/56/64/80/96/112/128 kbps
Stream output	IP out over UDP (Unicast/Multicast),SRT, RTP,RTSP, RTMP, HTTP, HLS (RJ45, 1000M) (8 HDMI inputs with 8 SPTS for each encoder board)	
System function	Network management(WEB)	
	Chinese and English language	
	Ethernet software upgrade	
Miscellaneous	Dimension(W×L×H)	482mm×328mm×44mm
	Environment	0~45°C(work) ; -20~80°C (Storage)
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz

SFT3228M-N V2 48-Channel Encoder



Product Overview

SOFTTEL SFT3228M-N 48-Channel Network Encoder is a 2-U encoding device for IP broadcasting. It is equipped with 48 HDMI-input channels with HEVC/H.265 and MPEG-4 AVC/H.264 video encoding and MPEG-1 Layer 2, LC-AAC, HE-AAC audio encoding and AC3 Pass through. It can transfer the live program through the internet/LAN and output IP streams over UDP (Unicast/Multicast), SRT, RTSP, RTMP, HTTP and HLS, and the output signals can be received by PC, phone and other mobile terminals. SFT3228M-N enables you to watch the programs via your IP STB, PC or TV anywhere.

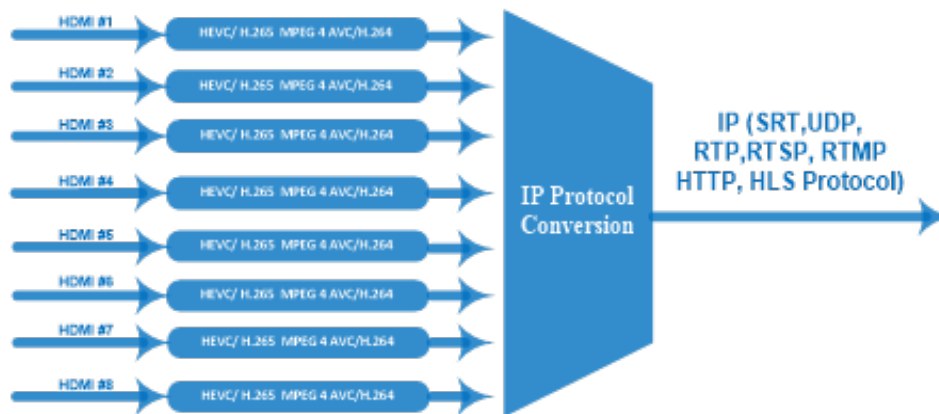
Features

- ▶ Support 48 HDMI inputs, with 48 SPTS output (each encoder module with 8 HDMI inputs and 1 DATA port, only supporting SPTS without “Null Packets”, Not MPTS), max 48 HDMI inputs from 6 encoder modules.
- ▶ HEVC/ H.265 , MPEG 4 AVC/H.264 video encoding format.
- ▶ MPEG1 Layer II, LC-AAC, HE-AAC audio encoding format and AC3 Pass Through, and audio gain adjustment
- ▶ Support QR code, LOGO, caption insertion (Language Supported: 中文, English, ไทย, اردو, русская, العربية, for more languages please consult us...)
- ▶ Support IP Output over UDP (Unicast/Multicast), SRT, RTSP, RTP, RTMP, HTTP and HLS

Major spec comparison

	SFT3228S-N	SFT3228M-N v1	SFT3228M-N v2
HDMI Channel	8/16/24	2/4/8/16/24	48
Video Format	H.264	H.264/H.265	H.264/H.265
Resolution	HD/SD	HD	HD/SD
OSD	Yes	No	Yes
Chassis	1-U	1-U	2-U

Principle Chart (Each Encoder Module)



Technical specification

Input	48 HDMI inputs		
Video	Resolution	input	1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720 x 576_50i, 720 x 480_60i
		Output	1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720 x 576_25P, 720 x 480_30P
	Encoding		HEVC/H.265 HD/SD; MPEG-4 AVC/H.264 HD/SD
	Bit-rate		1~13Mbps each channel
	Rate Control		CBR/VBR
	GOP Structure		IP...P (P Frame adjustment, without B Frame)
Audio	Encoding		MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through
	Sampling rate		32KHz, 48KHz, 44.1KHz
	Resolution		24-bit
	Audio Gain		0-255 Adjustable
	MPEG-1 Layer 2Bit-rate		48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	LC-AAC Bit-rate		48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	HE-AAC Bit-rate		48/56/64/80/96/112/128 kbps
Stream output	IP out over UDP (Unicast/Multicast),SRT, RTP,RTSP, RTMP, HTTP, HLS (RJ45, 1000M) (8 HDMI inputs with 8 SPTS for each encoder board)		
System function	Network management(WEB)		
	Chinese and English language		
	Ethernet software upgrade		
Miscellaneous	Dimension(W×L×H)	482mm×328mm×88mm	
	Environment	0~45℃(work); -20~80℃ (Storage)	
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz	

SFT3228S Multi-Channel Encoder



Product Overview

SFT3228S Multi-Channel encoder is a professional HD/SD audio & video encoding device. It has 8/16/24 HDMI inputs for option. Every 8 HDMI ports share one encoder module with each module supporting 1MPTS and 8SPTS output. Its high integration and cost effective design makes the device widely used in varieties of digital distribution systems such as cable TV digital head-end, digital TV broadcasting etc.

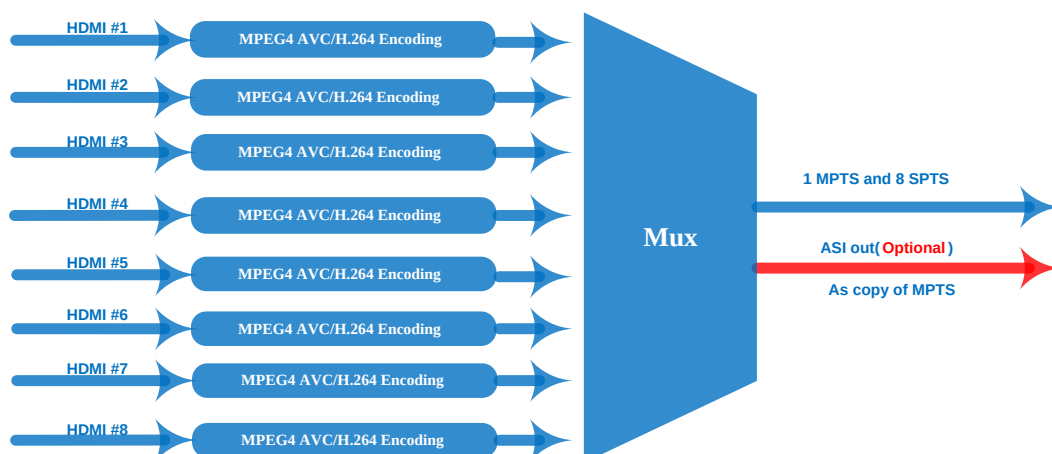
Features

- ▶ 8 HDMI inputs with 8 SPTS and 1 MPTS output (each encoder module), max 24 HDMI inputs
- ▶ MPEG4 AVC/H.264 video encoding format
- ▶ MPEG1 Layer II, LC-AAC, HE-AAC audio encoding format and AC3 Pass Through, and audio gain adjustment
- ▶ IP output over UDP and RTP/RTSP protocol; 1 ASI out as mirror of MPTS (Optional)
- ▶ Control via web management, and easy updates via web

Order Information

	SFT3228S-8	SFT3228S-16	SFT3228S-24
8 HDMI Inputs with 8 SPTS and 1 MPTS out (1 encoder board+1NMS port+1 DATA Port)	●		
16 HDMI Inputs with 16 SPTS or 2 MPTS out (2 encoder boards+2 NMS ports+2 DATA Ports)		●	
24 HDMI Inputs with 24 SPTS or 3 MPTS out((3 encoder boards+3 NMS ports+ 3 DATA Ports))			●

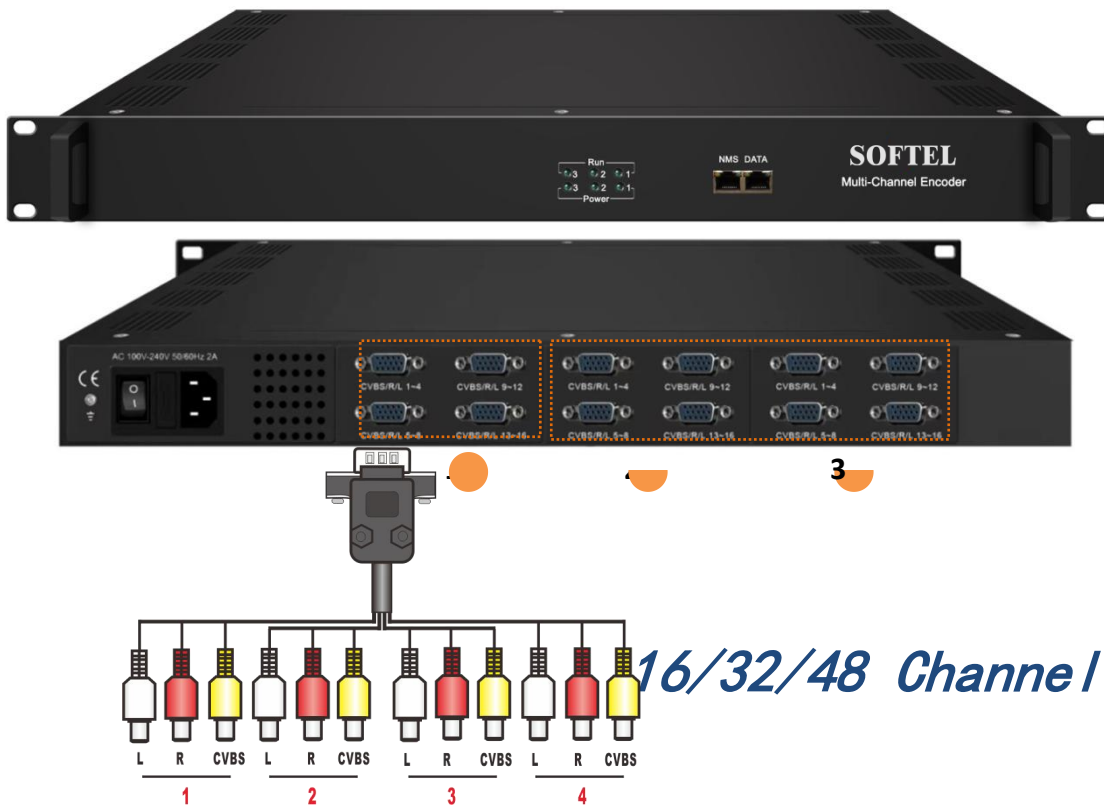
Principle Chart (Each Encoder Module)



Technical specification

Input	8/16/24 HDMI inputs		
Video	Resolution	input	1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720 x 576_50i, 720 x 480_60i
		Output	1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720 x 576_25P, 720 x 480_30P
	Encoding		MPEG-4 AVC/H.264
	Bit-rate		1~13Mbps each channel
	Rate Control		CBR/VBR
	GOP Structure		IP...P (P Frame adjustment, without B Frame)
Audio	Encoding		MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through
	Sampling rate		48KHz
	Resolution		24-bit
	Audio Gain		0-255 Adjustable
	MPEG-1 Layer 2 Bit-rate		48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	LC-AAC Bit-rate		48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
	HE-AAC Bit-rate		48/56/64/80/96/112/128 kbps
Stream output	IP output through DATA (GE) over UDP and RTP/RTSP protocol (8 HDMI inputs with 8 SPTS and 1MPTS output for each encoder board) 1 ASI out as mirror of MPTS (Optional as order)		
System function	Network management(WEB)		
	Chinese and English language		
	Ethernet software upgrade		
Miscellaneous	Dimension (W×L×H)	482mm×328mm×44mm	
	Environment	0~45℃(work); -20~80℃ (Storage)	
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz	

SFT3226SA Multi-Channel Encoder



Product Overview

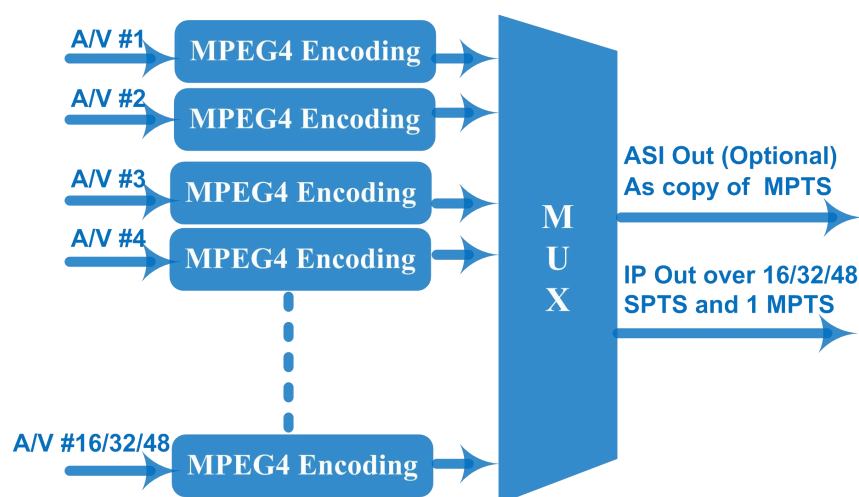
SOFTEL SFT3226SA multi-channel encoder is our newest professional SD audio & video encoding and multiplexing device with powerful functionality. It adopts the slot structure with one device supporting maximum 3 SFT3226SA modules. Each module can support 16 channels and work standalone. It is equipped with 16/32/48 CVBS channels input. It can multiplex the 16/32/48 encoded TS to generate a MPTS and 16/32/48 SPTS output through GE output port and one MPTS output through 1 ASI output ports.

In conclusion, its high integration and cost-effective design make this device widely used in variety of digital distribution systems such as CATV digital head-end, satellite and terrestrial digital TV, etc.

Features

- ▶ 16/32/48×CVBS video inputs with MPEG4 AVC/H.264 Video encoding
- ▶ Supports PAL (PAL-B,D,G,H,I) and NTSC (NTSC-M,J) SD video formats
- ▶ Support MPEG1 Layer II Audio encoding and support audio gain adjustment
- ▶ Support 1 MPTS out through 1 ASI output ports (optional)
- ▶ Support IP output over UDP and RTP
- ▶ Support Null PKT Filter(only for MPTS, SPTS output without Null PKT)
- ▶ Support Logo, Caption, QR code insertion
- ▶ Real-time effective encoding output bit-rate monitoring
- ▶ Control via web management, and easy updates via web
- ▶ Modular design, 1U chassis support up to 3 modules

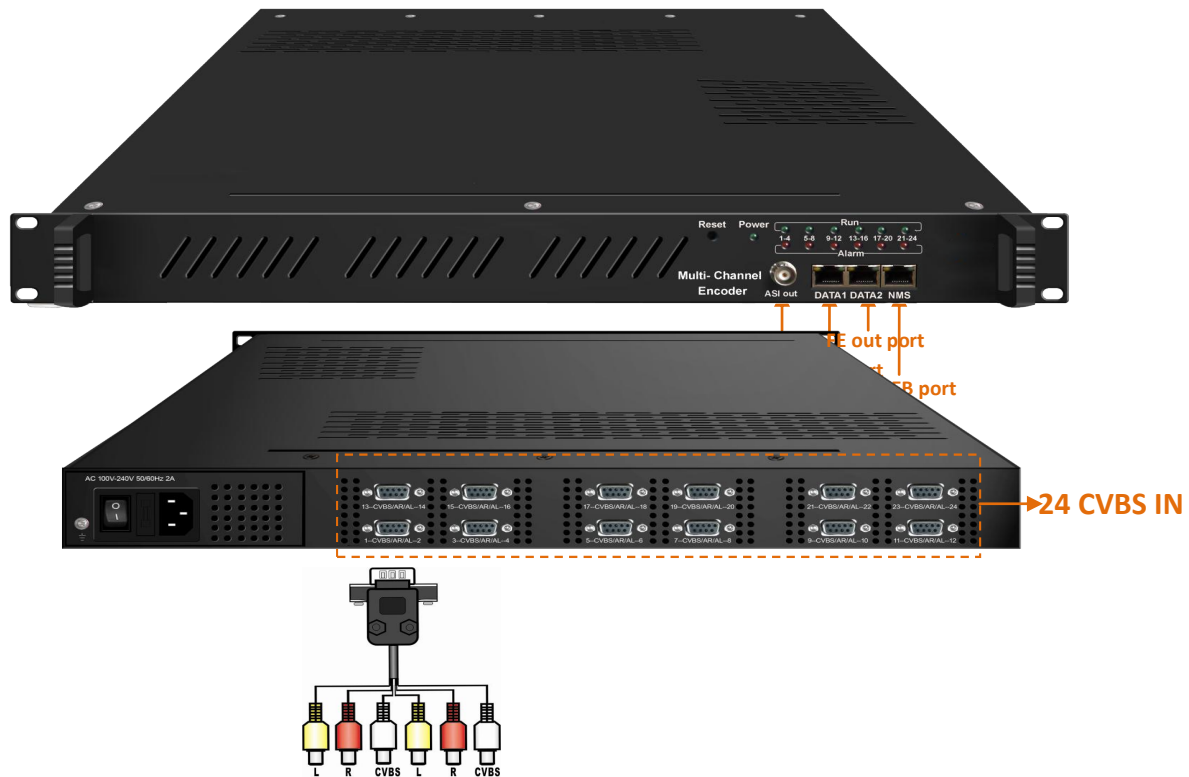
Principle Chart (per daughter module)



Specification

Input	16/32/48 CVBS inputs , DB15-To-RCA interface	
Video	Resolution	720×576i (PAL-B,D,G,H,I), 720×480i (NTSC-M,J)
	Encoding	MPEG4 AVC/H.264(HP/MP/BP)
	Bit-rate	1Mbps~66Mbps each channel
	Rate Control	CBR/VBR
	GOP Structure	IPP (P frame is adjustable)
	Aspect Ratio	4:3; 16:9
Audio	Encoding	MPEG-1 Layer 2
	Sampling rate	48KHz
	Resolution	24-bit
	Audio Gain	0-255 adjustable
	Bit-rate	64/128/192/224/256/320/384Kbps each channel
Stream output	IP (1*MPTS and 16*SPTS for one module) output over UDP and RTP, 1000 Base-T Ethernet interface (Multicast and unicast)	
	1 MPTS output through 1 ASI output ports, BNC interface (Optional)	
System function	Network management (WEB)	
	English language	
	Ethernet software upgrade	
Miscellaneous	Dimension(W×L×H)	482mm×328mm×44mm
	Environment	0~45℃(work); -20~80℃ (Storage)
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz

SFT3542K Multi-Channel Encoder



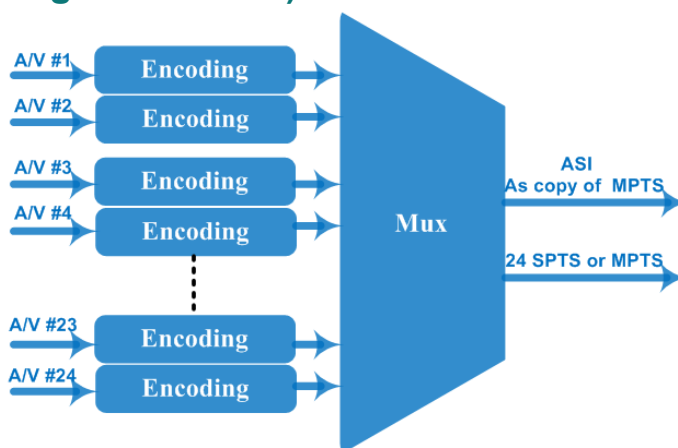
Product Overview

SFT3542K (SFT3542KA) Multi-Channel Encoder is a professional audio & video encoding and multiplexing device. It supports to convert 8/12/24 CVBS video inputs to MPTS or SPTS IP output. To meet customers' various requirements, it is also equipped with 1 ASI output as copy of MPTS. In conclusion, its high integrated and cost effective design makes the device widely used in varieties of digital distribution systems such as cable TV digital head-end, satellite digital TV broadcasting etc.

Features

- ▶ 8/12 CVBS video inputs with 8/12 SPTS and 1 MPTS output through Data 1 or Data 2
- ▶ 24×CVBS video inputs with 24 SPTS or 1 MPTS output through Data 1 or Data 2
- ▶ Supports PAL and NTSC SD video formats, MPEG-2 Video encoding
- ▶ Support MPEG1 Layer II, AC3 (2.0) Audio encoding and support audio gain adjustment
- ▶ Support 1 ASI output as copy of MPTS
- ▶ Support CC (closed caption)
- ▶ Support QR Code, Caption, Logo insertion----SFT3542KA
- ▶ support "Null PKT Filter" function
- ▶ Support PID Remapping/PCR accurate adjusting/PSI/SI editing and inserting
- ▶ Real-time effective encoding output bit-rate monitoring
- ▶ Control via web management, and easy updates via web

Principle Chart (per daughter module)



Specification

Input	8/12/24CVBS inputs , RCA interface	
Video	Resolution	720×480_60i, 544×480_60i, 352×480_60i 352×240_60i, 320×240_60i, 176×240_60i, 176×120_60i
		720×576_50i, 704×576_50i, 640×576_50i, 352×288_50i, 320×288_50i, 176×288_50i, 176×144_50i
	Encoding	MPEG-2
	Bit-rate	0.5Mbps~8Mbps each channel
	Rate Control	CBR/VBR
	GOP Structure	GOP_0_B, GOP_1_B, GOP_2_B, GOP_3_B
	Advanced Pretreatment	De-interlacing, noise reduction
Audio	Encoding	MPEG-1 Layer 2, AC3(2.0)
	Sampling rate	48KHz
	Resolution	24-bit
	Bit-rate	64Kbps, 128Kbps, 192kbps, 256kbps, 320kbps, 384kbps each channel
Multiplexing	Function	PID remapping (automatically or manually)
		Accurate PCR adjusting
		Generate PSI/ SI table automatically
Stream output	1 ASI as copy of MPTS	
	IP (MPTS/SPTS) output over UDP/RTP/RTSP	
	8/12 CVBS inputs with 8/12 SPTS and 1 MPTS output	
	24×CVBS inputs with 24 SPTS or 1 MPTS output	
System function	Network management (WEB)	
	Chinese and English language	
	Ethernet software upgrade	
Miscellaneous	Dimension(W×L×H)	482mm×410mm×44mm
	Environment	0~45℃(work); -20~80℃ (Storage)
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz

SFT3508B V3 16/24 Tuner to IP Gateway



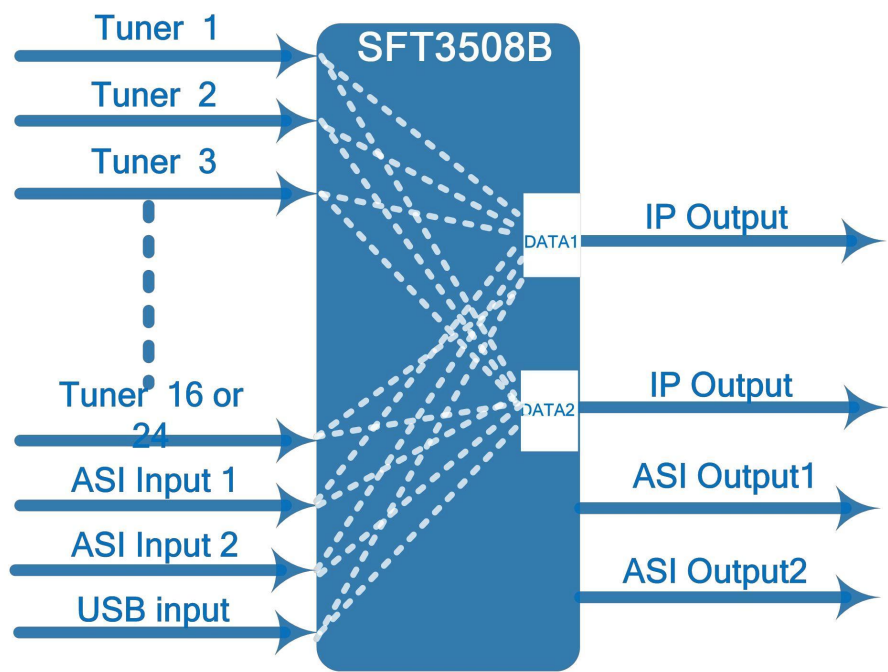
Product Overview

SFT3508B Tuner to IP Gateway is a head-end interface-conversion device which supports MPTS (Bypass) output and SPTS output switchable in Web GUI. It supports 24 MPTS output(24 FTA tuner inputs)+3 MPTS output(2 ASI inputs and 1 USB input) or 1024 SPTS output over UDP and RTP/RTSP protocol. It is integrated with tuner demodulation (or ASI input) and gateway function, which can demodulate the signal from 24 FTA tuners into IP package, or directly convert the TS from ASI inputs or USB input into IP package, then output the IP package through different IP address and ports. BISS function is also embedded to descramble the programs from tuner inputs

Features

- ▶ Support 24 or 16 FTA DVB- S/S2/S2X or DVB-C/T/T2/ISDB-T Multi-Mode Switchable tuner inputs, 2 ASI inputs, 1USB input(TS file Playing, FTA 32, USB 2.0)
- ▶ Support BISS descrambling for tuner inputs
- ▶ Support DisEqc function
- ▶ 24 MPTS output+3 MPTS output(2 ASI inputs and 1 USB port) or 1024 SPTS output (MPTS and SPTS output switchable in Web GUI)
- ▶ 2 DATA output ports (IP address and port number of DATA1 and DATA2 are different), up to 900Mbps---SPTS
- ▶ 2 independent DATA output ports, DATA1 (512 SPTS output) + DATA2 (512 SPTS output)
- ▶ MPTS is pass-through mode, the first 12 tuner-input signals will be outputted from DATA 1, the rest 12 tuner-input signals will be outputted from DATA 2; The 2 ASI-input signals and 1 USB-input signal can be chosen to output via DATA 1 or DATA 2
- ▶ ASI out is useless in SPTS out mode, and ASI out can be the bypass output of one of the 27 input signals(24 tuner inputs, 2 ASI inputs and 1 USB port) in MPTS out mode, ASI out 1 and ASI out 2 are mirror ports to output the same one TS
- ▶ Support PID filtering, re-mapping (Only for SPTS output)
- ▶ Support “Null PKT Filter” function (Only for MPTS output)
- ▶ Support Web operation, reboot in Web GUI after firmware upgrading

Working Principle



Specification

BISS Descrambling	Mode 1, Mode E	
Output	1024 SPTS IP output over UDP and RTP/RTSP protocol through DATA1 and DATA2 port (IP address and port number of DATA1 and DATA2 are different) , Unicast and Multicast	
	27 MPTS IP output (for Tuner/ASI/USB bypass) over UDP and RTP/RTSP protocol through DATA1 and DATA2 port, Unicast and Multicast	
	2 ASI outputs(MPTS out mode only, mirror ports to output the same one TS)	
System	Web based management	
	Ethernet software upgrade	
Miscellaneous	Dimension	482mm×270mm×44mm (W×L×H)
	Environment	0~45℃(work); -20~80℃ (Storage)
	Power requirements	100~240VAC, 50/60Hz

Input		24 tuners inputs +2 ASI inputs +1 USB inputs	
Satellite	DVB-S	Frequency In	950~2150MHz
		Symbol rate	0.5~45Msps
		Signal Strength	- 65- -25dBm
		FEC	1/2, 2/3, 3/4, 5/6, 7/8
		Constellation	QPSK
		Max input bitrate	≤125 Mbps
	DVB-S2	Frequency In	950~2150MHz
		Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 32APSK: 0.5~34Msps;
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
		Constellation	QPSK, 8PSK, 16APSK, 32APSK
		Max input bitrate	≤125 Mbps
	DVB-S2X	Frequency In	950~2150MHz
		Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 8APSK: 0.5~40Msps 32APSK: 0.5~34Msps
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36 , 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 2/3-L, 32/45, 11/15, 7/9
		Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK
		Max input bitrate	≤125 Mbps
Multi-Mode Switchable Tuner Inputs	DVB-C	Standard	J.83A(DVB-C), J.83B, J.83C
		Frequency In	50~960MHz
		Constellation	16/32/64/128/256 QAM
	DVB-T/T2	Frequency In	50~960MHz
		Bandwidth	6/7/8 M bandwidth
	ISDB-T	Frequency In	50~960MHz

SFT3308T V2 8in1 (or 16in1) DVB-T modulator



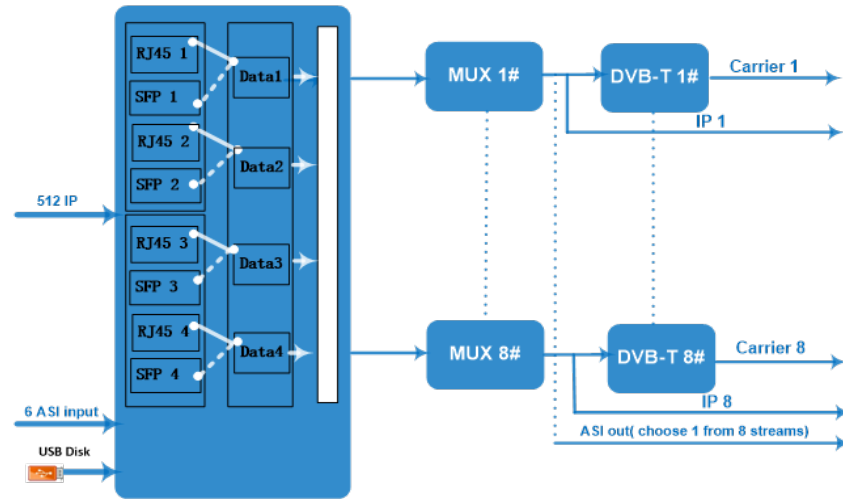
Product Overview

SFT3308T (V2) 8in1 (or 16in1) DVB-T modulator is an all-in-one device developed by SOFTEL. It supports maximum 512(or 1024) IP input through the 4 GE/SFP port and also 6 ASI input. After multiplexing 8(or 16) and DVB-T modulating, it gives 8(or 16) non-adjacent carriers (50MHz~960MHz), 2 ASI output and 8 or 16 IP (MPTS) output as mirror of carriers. The device is characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation DTV broadcasting system.

Features

- ▶ 4 GE/SFP ports (max 512/1024 IP in):
Data1 is bi-directional port, max 512 IP in, 8 IP out (for 8 DVB-T out version)
Data1 is bi-directional ports, max 1024 IP in, 16 IP out (for 16 DVB-T out version)
Data2&3&4 ports only for input
- ▶ Supports accurate PCR adjusting
- ▶ Max 840Mbps for each input
- ▶ Supports PID remapping and PSI/SI editing
- ▶ Supports up to 256 PIDs remapping per channel
- ▶ Supports 6 ASI input and 2 ASI output
- ▶ Support 8 (or 16) multiplexed TS over UDP/RTP/RTSP output
- ▶ 8(or 16) DVB-T non-adjacent carriers output, compliant to ETSI EN300 744 standard
- ▶ Supports RS(204,188) encoding
- ▶ Support Web-based Network management

Working Principle



Specification

Input	Input	8 DVB-T carriers: Max 512 IP input through Date1-Date4 100/1000M Ethernet Port (or SFP interface optional). Each Data port can input max 512 IP. 16 DVB-T carriers: Max 1024 IP input through Date1-Date4 100/1000M Ethernet Port (or SFP interface optional). Each Data port can input max 1024 IP. 6 ASI input, BNC interface
	Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3
	Transmission Rate	Max 840Mbps for each input channel
Mux	Input Channel	512(or 1024)
	Output Channel	8 (or 16)
	Max PIDs	256 per channel
	Functions	PID remapping(auto/manually optional) PCR accurate adjusting PSI/SI table automatically generating
Modulation Parameters	Channel	8(or 16)
	Modulation Standard	ETSI EN300 744
	Constellation	QPSK/16QAM/64QAM
	Bandwidth	6/7/8 MHz
	Trans mode	2K/4K/8K
	FEC	1/2,2/3,3/4,5/6,7/8
RF Output	Interface	F typed output port for 8(or 16) non-adjacent carriers
	RF Range	50~960MHz, 1kHz stepping
	Output Level	-20~+10dbm(for all carriers), 0.5db stepping
	MER	≥ 40dB
	ACL	-55 dBc
TS output	8 (or 16) IP output over UDP/RTP/RTSP, unicast/multicast, Data1 100/1000M Ethernet Ports	
	2 ASI output, one as mirror	
System	Web-based Network management	
General	Demission	420mm×440mm×44.5mm (W×L×H)
	Temperature	0~45°C(operation), -20~80°C(storage)
	Power Supply	AC100V±10%, 50/60Hz or AC 220V±10%,50/60Hz

SFT3306I V2 8in1 (or 16in1) ISDB-T modulator



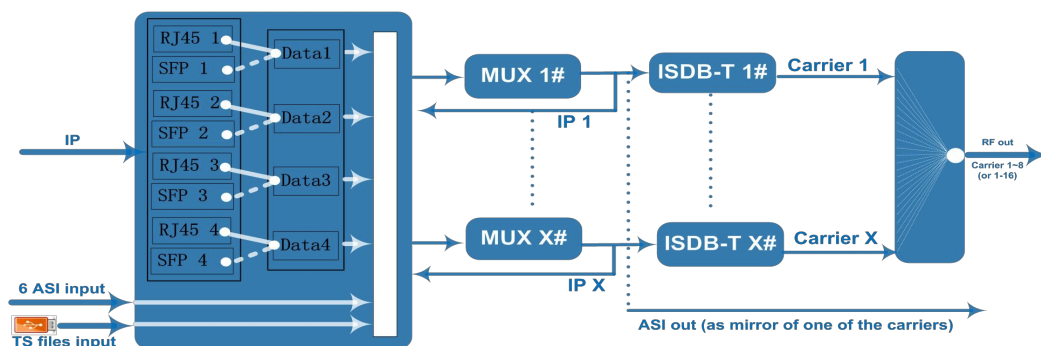
Product Overview

SFT3306I ISDB-T modulator is the latest generational Mux-modulating device developed by SOFTEL. It converts IP streams to 8 (or 16) ISDB-T non adjacent carriers output through the RF interface. The device is also characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation DTV broadcasting system.

Features

- ▶ GE/SFP port alternative, with Data1 bi-directional for data in/out, and Data2-4 one-way for data in
- ▶ Supports 6 ASI input and 2 ASI output as mirror, TS file input through USB disk
- ▶ Support 8 (or 16) multiplexed TS over UDP/RTP/RTSP output
- ▶ Max 840Mbps for each GE input
- ▶ Supports accurate PCR adjusting
- ▶ Supports CA filtering, PID remapping and PSI/SI editing
- ▶ Supports up to 256 PIDS remapping per channel
- ▶ 8 (or 16) non-adjacent carriers output, compliant to ISDB-Tb (ARIB STD-B31)
- ▶ Support Web-based Network management

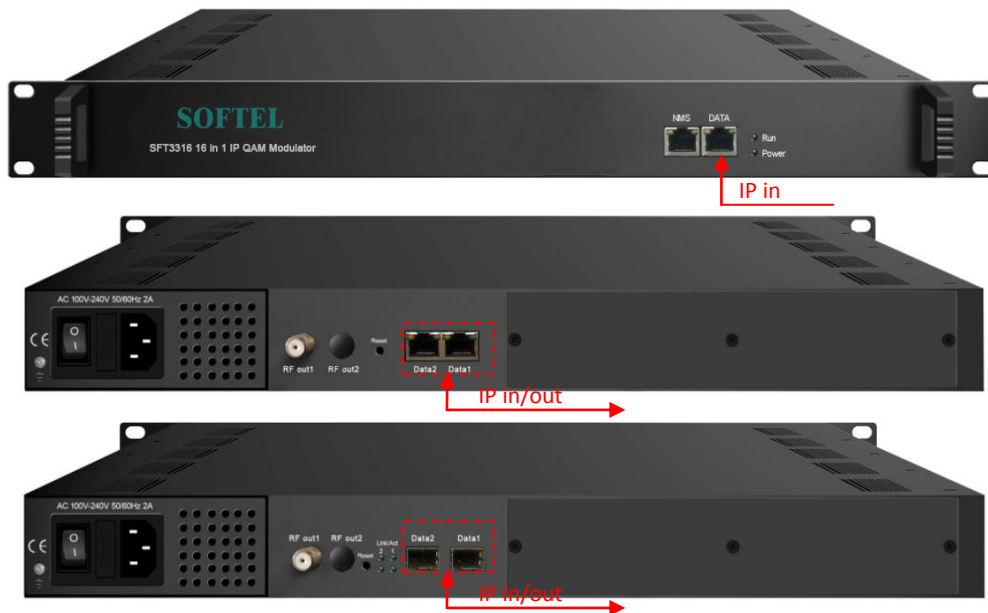
Working Principle



Specification

Input	Input	Max 512 (or 1024) IP input through 100/1000M Ethernet Port (SFP interface optional) over UDP/RTP, unicast and multicast, IGMP V2/V3, Max 840Mbps for each GE input
		6 ASI input, BNC interface - for V2 only
		TS file input through USB disk - for V2 only
Mux	Input Channel	512 (or 1024)
	Output Channel	8 (or 16)
	Max PIDs	256 per channel
	Functions	PID remapping (auto/manually optional)
		PCR accurate adjusting
		PSI/SI table automatically generating
Modulation Parameters	Standard	ARIB STD-B31
	Bandwidth	6M
	Constellation	QPSK, 16QAM, 64QAM
	Guard Interval	1/32, 1/16, 1/8, 1/4
	Transmission Mode	2K, 4K, 8K
	Code rate	1/2, 2/3, 3/4, 5/6, 7/8
	MER	≥40dB
	RF frequency	50~960MHz, 1KHz step
	RF output level	-20dBm~+10dBm(87~117dbμV), 0.1dB stepping
	Output Channel	8 (or 16) non-adjacent carriers output
RF Output	Interface	1 F type port, 75Ω impedance
	ACLR	-50 dBc
TS output	8 (or 16) IP output over UDP/RTP/RTSP, unicast/multicast	
	100/1000M Ethernet Ports	
	2 ASI output, one as mirror - for V2 only	
System	Web-based NMS management; LCD+Keyboard management - for V2 only	
General	Demission	480mm×327mm×44.5mm (WxLxH)
	Weight	5.5kg
	Temperature	0~45℃(operation), -20~80℃ (storage)
	Power Supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz

SFT3316 16in1 IP QAM modulator



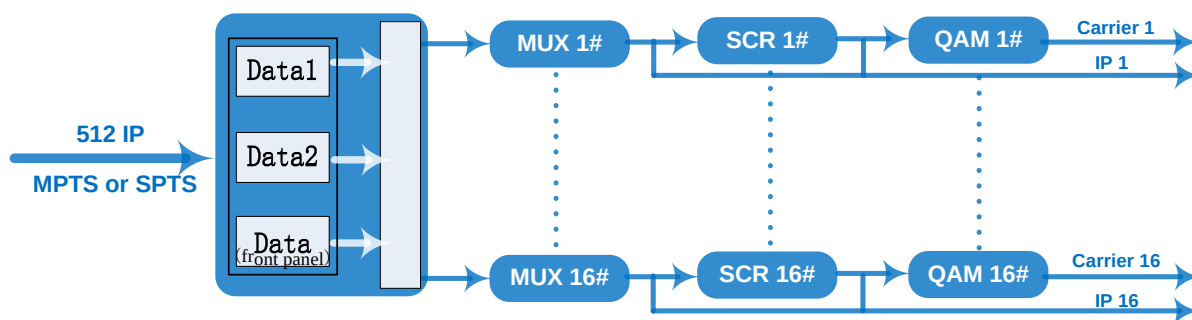
Product Overview

SFT3316 16 in 1 IP QAM modulator is the latest generational Mux-scrambling-modulating all-in-one device developed by SOFTEL. It has 16 multiplexing channels, 16 scrambling channels and 16 QAM (DVB-C) modulating channels, and supports maximum 512 IP input through the 3 GE ports and 16 non-adjacent carriers (50MHz~960MHz) output through the RF output interface. The device is also characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation CATV broadcasting system.

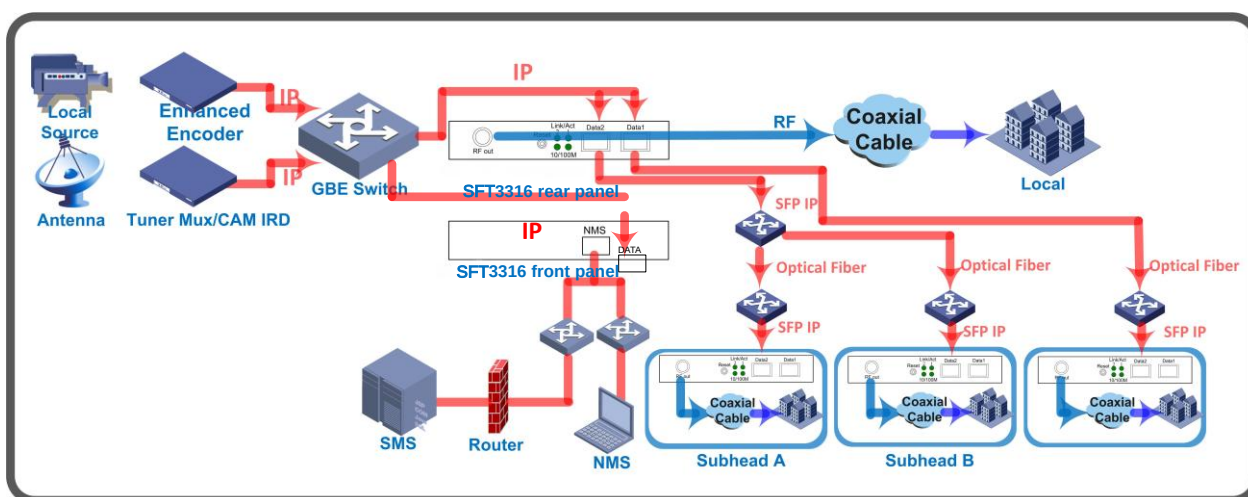
Features

- ▶ 3 GE ports (max 512 IP in):
Data1 & Data2 bi-directional ports, max 512 IP in, 16 IP out
Data port (located on front panel), max 128 IP in
- ▶ Max 840Mbps for each GE input
- ▶ Support accurate PCR adjusting
- ▶ Support CA filtering, PID remapping and PSI/SI editing
- ▶ Supports up to 180 PIDS remapping per channel
- ▶ Support DVB general scrambling system (ETR289), simulcrypt standards ETSI 101 197 and ETSI 103 197
- ▶ Support 16 IP output through Data1 & Data2 over UDP/RTP/RTSP
- ▶ 16 non-adjacent QAM carriers output, compliant to DVB-C (EN 300 429) and ITU-T J.83 A/B
- ▶ Support RS (204,188) encoding
- ▶ Support Web-based Network management

Working Principle



System Connection Sample (IP Based)

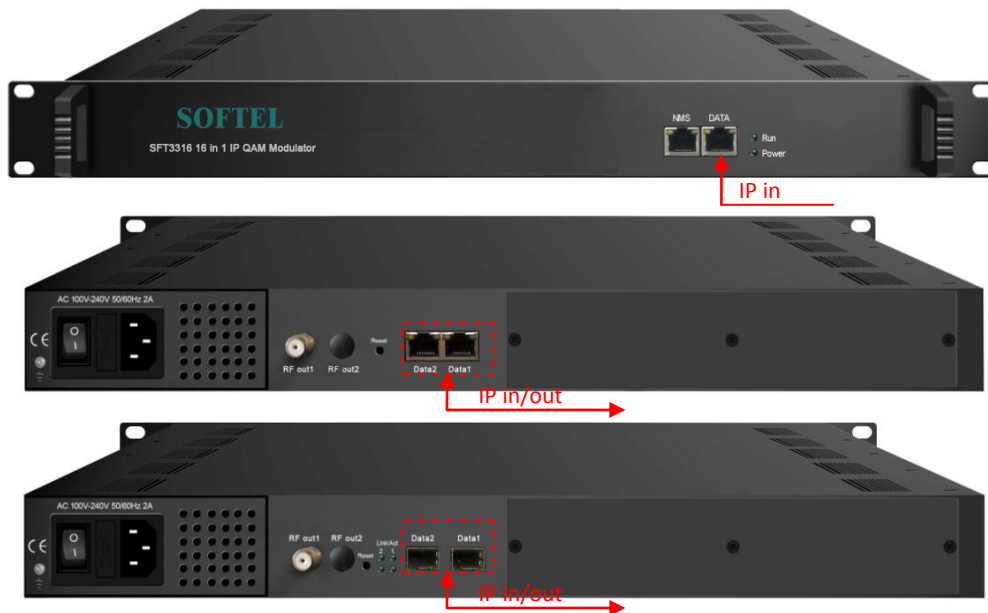


Specification

Input	Input	Max 512 IP input through 3 (front-panel Data port, Data 1 and Data 2) 100/1000M Ethernet Port (SFP interface optional). Each Data1 or Data 2 port can input max 512 IP, while front-panel Data port can input max 128 IP
	Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3
	Transmission Rate	Max 840Mbps for each GE input
Mux	Input Channel	512
	Output Channel	16
	Max PIDs	180 per channel
	Functions	PID remapping(auto/manually optional) PCR accurate adjusting PSI/SI table automatically generating

Scrambling Parameters	Max simulcrypt CA	4	
	Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197	
	Connection	Local/remote connection	
Modulation Parameters	DVB-C Modulator Section	J.83A	Constellation : 16/32/64/128/256QAM
			Bandwidth :8M
		J.83B	Constellation : 64QAM/ 256QAM
			Bandwidth :6M
	QAM Channel	16 non-adjacent carrier	
	Modulation Standard	EN300 429/ITU-T J.83A/B(DVB-C)	
	Symbol Rate	5.0~7.0Msps, 1ksps stepping	
	FEC	RS (204, 188)	
RF Output	Interface	1 F typed output port for 16 carriers, 75Ω impedance	
	RF Range	50~960MHz, 1kHz stepping	
	Output Level	-20dBm~+10dBm(87~117dbμV), 0.1dB stepping	
	MER	≥ 40dB	
TS output	16 IP output over UDP/RTP/RTSP, unicast/multicast, 2 (Data1& Data2) 100/1000M Ethernet Ports		
System	Network management software (NMS) supporting		
General	Demission	420mm×440mm×44.5mm (WxLxH)	
	Temperature	0~45℃(operation), -20~80℃(storage)	
	Power Supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz	

SFT3332 (V2) 16in1 (or 32in1) IP QAM modulator



Product Overview

SFT3332 (V2) 16in1 (or 32in1) DVB-C modulator is an all-in-one device developed by SOFTEL. It supports maximum 1024 IP input through the 4 GE/SFP port and also 6 ASI input. After multiplexing, scrambling 16(or 32) and DVB-C modulating, it gives 16(or 32) non-adjacent carriers (50MHz~960MHz), 2 ASI output and 16 or 32 IP (MPTS) output as mirror of carriers. The device is characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation DTV broadcasting system.

Features

- ▶ 4 GE ports (max 1024 IP in):
Data1 & Data2 bi-directional ports, max 1024 IP in, 16/32 IP out
Data2&3&4 port only for input
- ▶ Max 840Mbps for each GE input
- ▶ Support accurate PCR adjusting
- ▶ Support CA filtering, PID remapping and PSI/SI editing
- ▶ Supports up to 256 PIDS remapping per channel
- ▶ Support 6 ASI input and 2 ASI output
- ▶ Support 16(or 32) multiplexed TS over UDP/RTP/RTSP output
- ▶ 16 (or 32) DVB-C non-adjacent carriers output, compliant to DVB-C (EN 300 429) and ITU-T J.83 A/B
- ▶ Support RS (204,188) encoding
- ▶ Support Web-based Network management

Specification

Input	Input	16/32 DVB-C carriers: Max 1024 IP input through Date1-Date4 100/1000M Ethernet Port (or SFP interface optional). Each Data port can input max 1024 IP.	
		6 ASI input, BNC interface	
	Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3	
	Transmission Rate	Max 840Mbps for each GE input	
Mux	Input Channel	1024	
	Output Channel	16/32	
	Max PIDs	256 per channel	
	Functions	PID remapping(auto/manually optional)	
		PCR accurate adjusting	
		PSI/SI table automatically generating	
Scrambling Parameters	Max simulscrypt CA	6	
	Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197	
	Connection	Local/remote connection	
Modulation Parameters	DVB-C Modulator Section	J.83A	Constellation : 16/32/64/128/256QAM
			Bandwidth :8M
		J.83B	Constellation : 64QAM/ 256QAM
			Bandwidth :6M
	QAM Channel	16/32 non-adjacent carrier	
	Modulation Standard	EN300 429/ITU-T J.83A/B(DVB-C)	
	Symbol Rate	5.0~7.0Msps, 1ksps stepping	
	Constellation	16, 32, 64 , 128, 256QAM	
	FEC	RS (204, 188)	
RF Output	Interface	1 F typed output port for 16/32 carriers, 75Ω	
	RF Range	50~960MHz, 1kHz stepping	
	Output Level	-20dBm~-+10dBm(87~117dbμV), 0.1dB stepping	
	MER	≥ 40dB	
TS output	16/32 IP output over UDP/RTP/RTSP, unicast/multicast, Data1 100/1000M Ethernet Ports		
	2 ASI output, one as mirror		
System	Network management software (NMS) supporting		
General	Demission	420mm×440mm×44.5mm (W×L×H)	
	Temperature	0~45°C(operation), -20~80°C(storage)	
	Power Supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz	

SFT3364 64 in1 IP QAM modulator



Product Overview

SFT3364 64 in 1 IP QAM modulator is a Multiplexing-scrambling-modulating all-in-one device developed by SOFTEL. It has 64 multiplexing channels, 64 scrambling channels and 64 QAM (DVB-C) modulating channels, and supports maximum 512 IP inputs through 6 dataports and 64 non-adjacent carriers (50MHz~960MHz) output through 2 RF output interfaces. The device is characterized with dual RF output ports which broaden the bandwidth for QAMcarriers.

Features

- ▶ 6 GE inputs (4*RJ45, 2*SFP)
- ▶ Supports up to 512 IP inputs over UDP/RTP
- ▶ Max 840Mbps and 512 IP inputs for each GE input
- ▶ Supports multiplexing with accurate PCR adjusting, CAPID filtering, PID remapping and PSI/SI editing
- ▶ Supports up to 256 PID remapping per channel
- ▶ Support DVB general scrambling system (ETR289), simulcrypt standards ETSI 101 197 and ETSI 103 197
- ▶ Support 64 multiplexed or scrambled IP outputs over UDP/RTP/RTSP
- ▶ 64 non-adjacent QAM carriers output from 2 RF interfaces, compliant to DVB-C (EN 300 429) and ITU-T J. 83 A/B/C
- ▶ Supports RS (204,188) encoding
- ▶ Support Web-based Network management

Specification

Input	Input	Max 512 IP inputs from 6*100/1000M Ethernet Port (4*RJ45, 2*SFP)	
	Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMPV2/V3	
	Transmission Rate	Max 840Mbps for each GE input	
Mux	Input Channel	512	
	Output Channel	64	
	Max PIDs	256 per channel	
	Functions	PID remapping(auto/manually optional)	
		PCR accurate adjusting	
		PSI/SI table automatically generating	
Scrambling Parameters	Max simulscrypt CA	6	
	Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197	
	Connection	Local/remote connection	
Modulation Parameters	Modulation Standard	EN300 429/ITU-T J.83A/B/C	
	Constellation	J.83A	Constellation :16/32/64/128/256QAM
			Bandwidth :8M
		J.83B/C	Constellation :64/256QAM
			Bandwidth :6M
	QAM Channel	64 non-adjacent carriers, 384Mbps bandwidth for each RF interface	
	Symbol Rate	5.0~7.0Msps, 1ksps stepping. 5057Ksps (J.83B, 64QAM) ; 5361Ksps (J.83B, 256QAM)	
	Constellation	16, 32, 64 , 128, 256QAM	
FEC	RS (204, 188)		
RF Output	Interface	2 F type output ports for 64 carriers, 75Ω	
	RF Range	50~960MHz, 1kHz stepping	
	Output Level	-20dBm~-+10dBm(87~117dbμV), 0.1dB stepping	
	MER	≥ 40dB	
TS output	64 IP output over UDP/RTP/RTSP, unicast/multicast, 4*100/1000M Ethernet Ports (each port for 16 IP outputs)		
System	Web-based Network management		
General	Demission	420mm×440mm×44.5mm (W×L×H)	
	Temperature	0~45°C(operation), -20~80°C(storage)	
	Power Supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz	

SFT3394T V3 24 or 16 in 1 Tuner to DVB-T modulator



Product Overview

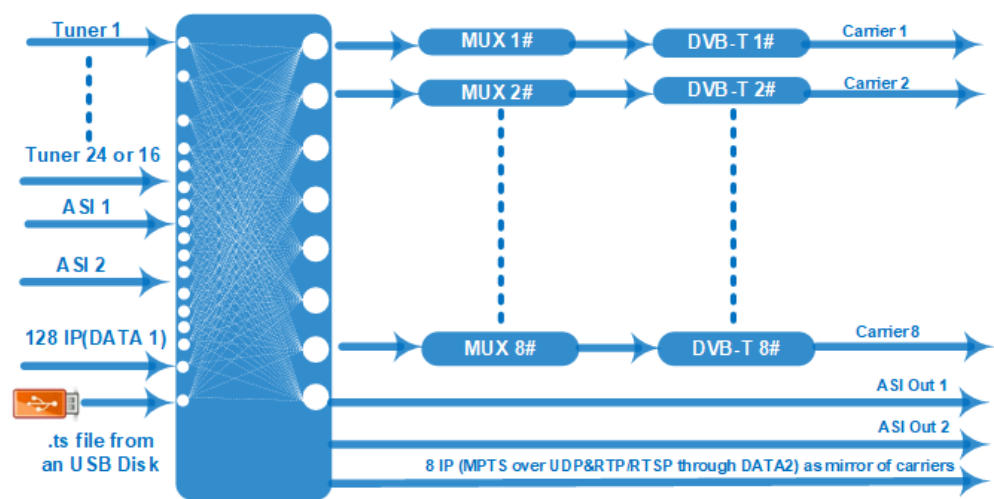
SFT3394T V3 is a high performance and cost-effective DVB-T modulator designed by SOFTEL. It supports 24 or 16 FTA tuners input, maximum 128 IP inputs through DATA1 and 2 TS inputs for re-mux through 2 ASI input ports. After demodulating, multiplexing and DVB-T modulating, it outputs 8 non-adjacent carriers and 8 IP (MPTS) as mirror of carriers through DATA2.

SFT3394T is also characterized with high integrated level, high performance and low cost. This is very adaptable to a new generation broadcasting system.

Features

- ▶ 24 (or 16) FTA DVB-S/S2/S2X or DVB-C/T/T2/ISDB-T Multi-Mode switchable tuner inputs with loop out + 2 ASI inputs+128 IP inputs thru DATA 1 over UDP and RTP protocol, and TS files input by playing ts via an USB disk (FAT 32, USB 2.0)
- ▶ 8 DVB-T non-adjacent carriers output, within 192MHz bandwidth
- ▶ 8 IP (MPTS) outputs over UDP and RTP/RTSP thru DATA 2, as mirror of the carriers
- ▶ 2 TS outputs thru ASI out 1 and ASI out 2, as mirror of the 2 chosen carriers
- ▶ Support 8 groups multiplexing+8 groups DVB-T modulating
- ▶ Excellent RF output performance index, MER40db
- ▶ Support accurate PCR adjusting
- ▶ Support PSI/SI editing and inserting
- ▶ Support Web management, Updates via web
- ▶ Reboot in Web after firmware upgrading

Working Principle



Specification

Input	24 or 16 FTA DVB-S/-S2/-S2X or DVB-C/T/T2/ISDB-T Multi-Mode switchable tuner inputs			
	128 IP inputs over UDP and RTP protocol			
	2 ASI inputs, BNC interface			
	TS files input by playing ts via the USB disk (FAT 32, USB 2.0)			
	Tuner Option 1	DVB-S	Frequency In	950~2150MHz
			Symbol rate	0.5~45Msps
			Signal Strength	- 65~-25dBm
			FEC	1/2, 2/3, 3/4, 5/6, 7/8
			Constellation	QPSK
			Max input bitrate	≤120 Mbps
		DVB-S2	Frequency In	950~2150MHz
			Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 32APSK: 0.5~40Msps;
			FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6,8 /9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
			Constellation	QPSK, 8PSK, 16APSK, 32APSK
			Max input bitrate	≤120 Mbps
			Frequency In	950-2150MHz
			Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 8APSK/32APSK: 0.5~40Msps

		DVB-S2X	FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6,8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9,9/10, 1/2-L, 8/15-L, 5/9-L, 26/45,3/5, 3/5-L, 28/45, 23/36 , 2/3-L,25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10,2/3-L, 32/45, 11/15, 7/9	
				Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK
				Max input bitrate	≤120 Mbps
	Tuner Option 2	DVB-C	Standard	J.83A(DVB-C), J.83B, J.83C	
			Frequency In	50~960MHz	
			Constellation	16/32/64/128/256 QAM	
		DVB-T/T2	Frequency In	50~960MHz	
			Bandwidth	6/7/8 M bandwidth	
		ISDB-T	Frequency In	50~960MHz	
	Multiplexing	Maximum PID Remapping		256 output per channel	
Function		PID remapping (automatically or manually)/CA Filter			
		A/V PID filtering			
		Accurate PCR adjusting			
		Generate PSI/SI table automatically			
Modulation	Standard		EN300 744		
	FFT		2K 4K 8K		
	Bandwidth		6M, 7M, 8M		
	Constellation		QPSK, 16QAM, 64QAM		
	Guard interval		1/4, 1/8, 1/16, 1/32		
	FEC		1/2, 2/3, 3/4, 5/6, 7/8		
	MER		≥40 dB		
	RF out		8 non-adjacent carrier output within 192MHz bandwidth		
	RF frequency		50~960MHz		
	RF output level		-20~+3dBm, 0.1dB step		
Stream out	8 DVB-T carriers output (F type interface)				
	8 IP (MPTS) output over UDP and RTP/RTSP (DATA2, as mirror of carriers)				
	2 ASI outputs (2 TS as mirror)				
System	Network management (WEB)				
	Chinese and English language				
	Ethernet software upgrade				
General	Dimension(W*D*H)		482mm×270mm×44mm		
	Temperature		0~45℃(Operation) ; -20~80℃(Storage)		
	Power		AC 100V±1050/60Hz; AC 220V±10%, 50/60HZ		

SFT3394C V3 24 or 16 in 1 Mux scrambling QAM modulator



Product Overview

SFT3394C v3 is a high performance and cost-effective QAM modulator designed by SOFTEL. It supports 24 or 16 DVB-S2 FTA tuner input, maximum 128 IP inputs through DATA1 and 2 TS inputs for re-mux through 2 ASI inputs port. After demodulating, multiplexing and QAM modulating, it outputs 16 non-adjacent carriers and 16 IP (MPTS) through DATA2. Two kinds of software for order option, BISS descrambling version(no scrambler feature) or Scrambler version(no BISS descrambling feature).

SFT3394C v3 is also characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation CATV broadcasting system.

Features

- ▶ 24 (or 16) DVB-S/S2/S2X FTA Tuner inputs with loop out + 2 ASI inputs+128 IP inputs thru DATA 1 over UDP and RTP protocol, and TS files input by playing via an USB disk (FAT 32)
- ▶ BISS descrambling, max 64 BISS Keys per output channel (optional)
- ▶ 16 DVB-C non-adjacent carriers output, within 192MHz bandwidth
- ▶ 16 IP (MPTS) outputs over UDP and RTP/RTSP, as mirror of the carriers
- ▶ 2 TS outputs thru ASI out 1 and ASI out 2, as mirror of the 2 chosen carriers
- ▶ Support 16 groups multiplexing+16 groups scrambling(optional) +16 groups QAM modulating
- ▶ Excellent RF output performance index, MER40db
- ▶ Support accurate PCR adjusting
- ▶ Support PSI/SI editing and inserting
- ▶ Support Web management, Updates via web

Specification

Input	24 or 16 DVB-S/S2/S2X FTA Tuner inputs as per order			
	128 IP inputs through DATA1 over UDP and RTP protocol			
	2 ASI inputs, BNC interface			
	TS files input by playing via the USB disk (FAT 32)			
	Tuner	DVB-S	Frequency In	950~2150MHz
			Symbol rate	0.5~45Msps
			Signal Strength	- 65~-25dBm
			FEC	1/2, 2/3, 3/4, 5/6, 7/8
			Constellation	QPSK
			Max input bitrate	≤129 Mbps
		DVB-S2	Frequency In	950~2150MHz
			Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 32APSK: 0.5~40Msps;
			FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
			Constellation	QPSK, 8PSK, 16APSK, 32APSK
Max input bitrate			≤129 Mbps	
DVB-S2X		Frequency In	950~2150MHz	
		Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 8APSK/32APSK: 0.5~40Msps	
	FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36 , 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 2/3-L, 32/45, 11/15, 7/9		
	Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK		
	Max input bitrate	≤129 Mbps		
Multiplexing	Max PID Remapping		256 outputs per channel	
	Function	PID remapping (automatically or manually)		
		Accurate PCR adjusting		
		Generate PSI/SI table automatically		
Scrambling Parameters (optional)	Max simulcrypt CA		4	
	Scramble Standard		ETR289, ETSI 101 197, ETSI 103 197	
	Connection		Local/remote connection	
Modulation	QAM Channel		16 non-adjacent carriers output	
	Standard		EN300 429/ITU-T J.83A/B	
	MER		≥40db	
	RF frequency		50~960MHz, 1KHz step	
	RF output level		-20~+10dbm(87~107 dbμV),0.1db step	
	Symbol Rate		5.0Msps~7.0Msps, 1ksps stepping	
			J.83A J.83B	
	Constellation		16/32/64/128/256QAM 64/256 QAM	
	Bandwidth		8M 6M	
Stream out	16 RF output (F type interface)			
	16 IP (MPTS) output over UDP and RTP/RTSP (thru DATA 2), 2 ASI outputs(2 TS as mirror)			
System	Network management (WEB)			
	Chinese and English language			
	Ethernet software upgrade			
General	Dimension (W*D*H)		482mm×270mm×44mm	
	Temperature		0~45°C(Operation) ; -20~80°C(Storage)	
	Power		AC 100V±1050/60Hz; AC 220V±10%. 50/60HZ	

SFT3402E DVB-S2 modulator



Product Overview

SOFTEL SFT3402E is a high-performance modulator developed according to DVB-S2 (EN302307) standard which is the standard of second generation of the European broadband satellite telecommunication. It is to convert the input satellite signal and/or ASI and IP streams into digital DVB-S/S2 RF output.

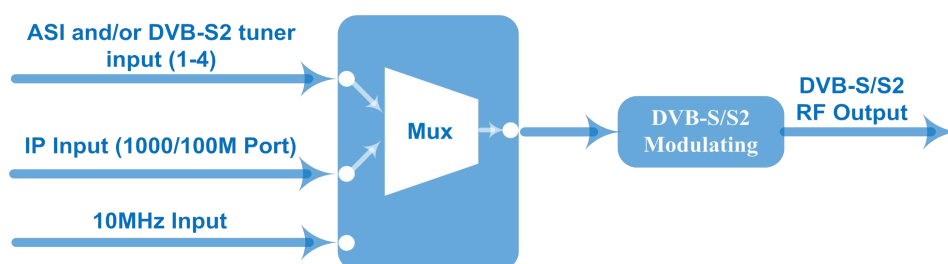
BISS scrambling mode is inserted to this DVB-S2 modulator, which helps to safely distribute your programs. It is easy to reach local and remote control with Web-server NMS software and LCD in the front panel.

With its high cost-effective design, SOFTEL SFT3402E DVB-S2 modulator is widely used for broadcasting, interactive services, news gathering and other broadband satellite applications.

Features

- ▶ Fully complying with DVB-S2 (EN302307) and DVB-S (EN300421) standard
- ▶ ASI and/or DVB-S2 inputs for re-mux or pass through (4 ports for ASI and S2 tuner input combination)
- ▶ Support IP (1000/100M) signal input for re-mux or pass through
- ▶ Support Multiplexing and PSI/SI edit
- ▶ QPSK, 8 PSK, 16 APSK, 32 APSK Constellations
- ▶ Support RF CID setting (Optional as per order)
- ▶ Constant temperature crystal oscillator, as high as 0.1ppm stability
- ▶ Support coupling 10MHz clock output through RF output port
- ▶ Support 24V power output through RF output port
- ▶ Support BISS scrambling
- ▶ Support SFNTS transmission
- ▶ Output frequency range: 950~2150MHz, 10KHz stepping
- ▶ Support local and remote control with Web-server NMS

Principle Chart



Specification

IP Input	1*IP Input (RJ45, 1000/100M TS Over UDP)		
ASI Input	Supporting both188/204 Byte Packet TS Input		
	1-4 ASI Inputs (Connector: BNC, Impedance 75Ω)		
Tuner Input (0-4 inputs optional)	DVB-S	Input Frequency	950~2150MHz
		Symbol rate	0.5~45Msps
		Signal Strength	- 65- -25dBm
		FEC	1/2, 2/3, 3/4, 5/6, 7/8
		Constellation	QPSK
		Max input bitrate	≤160 Mbps
	DVB-S2	Input Frequency	950~2150MHz
		Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 32APSK: 0.5~40Msps
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
		Constellation	QPSK, 8PSK, 16APSK, 32APSK
		Max input bitrate	≤160 Mbps
		DVB-S2X	Input Frequency
	Symbol rate		QPSK/8PSK /16APSK :0.5~45 Msps 8APSK/32APSK: 0.5~40Msps
	FEC		QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L,8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36 ,2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9
	Constellation		QPSK/8PSK/8APSK/16APSK/32APSK
	Max input bitrate		≤160 Mbps
Multiplexing	Maximum PID Remapping		128 input per channel
	Function	PID remapping (automatically or manually)	
		Accurate PCR adjusting	
		Edit PSI/SI tables (PAT/PMT/SDT/CAT/NIT)	
10MHz Reference Clock	1*External 10MHz Input (BNC Interface); 1*Inner 10MHz Reference clock		

RF Output	RF Range: 950 ~ 2150 MHz, 10KHz stepping		
	Output Level Attenuation: -26 ~ 0 dBm, 0.5dBm Stepping		
	MER≥40dB		
	Connector: N type, Impedance 50Ω; N to F adapter		
Channel Coding and Modulation	Standard	DVB-S	DVB-S2
	Outer coding	RS Coding	BCH Coding
	Inner coding	Convolution	LDPC Coding
	Constellation	QPSK	QPSK, 8PSK, 16APSK, 32APSK
	FEC/ Convolution Rate	1/2, 2/3, 3/4, 5/6, 7/8	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
	Roll-off Factor	0.2, 0.25, 0.35	0.2, 0.25, 0.35
	Symbol Rate	0.05~45Msps	0.05~40Msps (32APSK); 0.05~45 Msps (16APSK/8PSK/QPSK)
BISS Scramble	Mode 0, mode 1, mode E		
System	Web-server NMS		
	Language: English		
	Ethernet software upgrade		
	24V power output through RF output port		
Miscellaneous	Dimension	482mm×410mm×44mm	
	Temperature	0~45℃(operation), -20~80℃ (storage)	
	Power	100-240VAC±10%, 50Hz-60Hz	

SFT7107 IP to DVB-T2 modulator



Product Overview

The SFT7107 is SOFTEL' s second generation IP to RF modulator, which supports MPTS and SPTS IP inputs with the protocols over UDP and RTP. This modulator comes with one Gigabit IP input port and outputs DVB-T2 RF frequencies in 4 or 8. It is extremely easy to use thanks to the built-in intuitive WEB interface.

Features

- ▶ Receives 256 IP address (SPTS/MPTS) over UDP or RTP
- ▶ Supports Unicast, Multicast and IGMP V2/V3
- ▶ Supports CA PID filtering, remapping and PSI/SI editing
- ▶ Supports up to 512 PIDs with PID remapping in manual or auto
- ▶ Offers 8 DVB-T2 output channels
- ▶ Easy configuration with built-in Web UI

Specification

IP INPUT	Input Connector		1*100/1000Mbps port
	Transport Protocol		UDP, RTP
	MAX Input IP Address		256 channels
	Input Transport Stream		MPTS and SPTS
	Addressing		Unicast and Multicast
	IGMP Version		IGMP v2 and v3
RF OUTPUT	Output	Output Connector	1* RF female 75Ω
		Output Carrier	4 or 8 agial channel optional
		Output Range	50 ~ 999.999MHz
		Output Level	≥ 45dBmV
		Out-band Rejection	≥ 60dB
		MER	Typical 38 dB
	DVB-T2	Bandwidth	1.7M,6M,7M,8M,10M
		L1 Constellation	BPSK,QPSK,16QAM,64QAM
		Guard Interval	1/4, 1/8, 1/16, 1/32,1/128
		FFT	1k,2k,4k,8k,16k
		Pilot Pattern	PP1 ~ PP8
		Ti Nti	Disable, 1 , 2 , 3
		ISSY	Disable,Short, Long
		Extend Carrier	YES
		Delete Null Packet	YES
		VBR Coding	YES
	PLP	FEC Block Length	16200,64800
		PLP Constellation	QPSK,16QAM,64QAM,256QA M
		Code Rate	1/2, 3/5,2/3,3/4,4/5,5/6
		Constellation Rotation	YES
		Input TS HEM	YES
		Time Interval	YES
MULTIPLEXING	Table Supported		PSI/SI
	PID Processing		Pass-through, Remapping, Filtering
	Dynamic PID Feature		Yes
GENERAL	Input Voltage		90 ~264VAC, DC 12V 5A
	Power Consumption		57.48W
	Rack Space		1RU
	Dimension (WxHxD)		482*44*260mm
	Net Weight		2.35 KG
	Language		中文/ English

SFT7117 HDMI to DVB-T2 modulator



Product Overview

The SFT7117 is a digital modulator designed with 8 HDMI input connectors. After encoding and multiplexing, the device will modulate the signals into DVB-T2 standard. Thanks to its IP input port in the front panel, it can take in the IP signal and output in RF signal as well to make full use of the bandwidth.

Features

- ▶ 256 IP (SPTS/MPTS) input over UDP or RTP
- ▶ Video encoding in H.264 and audio encoding in MPEG and AAC.
- ▶ Supports all major resolutions from 480i through 1080p60
- ▶ Supports CA PID filtering, remapping and PSI/SI editing
- ▶ Offers 4 or 8 continuous output channels with 4 channels in a row
- ▶ Easy configuration with built-in Web UI

Specification

IP INPUT	Input Connector		1*100/1000Mbps port
	Transport Protocol		UDP, RTP
	MAX Input IP Address		256 channels
	Input Transport Stream		MPTS and SPTS
	Addressing		Unicast and Multicast
	IGMP Version		IGMP v2 and v3
HDMI INPUT	Input Connector		HDMI 1.4 *8
	VIDEO	Encoding	H.264
		Input Resolution	1920*1080_60P/_50P
			1920*1080_60i/_50i
			1280*720_60P/_50P
	AUDIO	Encoding	MPEG 1 Lay II, AAC
		Sample Rate	32 / 44.1 / 48 KHz
		Bit Rate	384 kbps
RF OUTPUT	Output	Output Connector	1* RF female 75Ω
		Output Carrier	4 or 8 agial channel optional
		Output Range	50 ~ 999.999MHz
		Output Level	≥ 45dBmV
		Out-band Rejection	≥ 60dB
		MER	Typical 38 dB
	DVB-T2	Bandwidth	1.7M,6M,7M,8M,10M
		L1 Constellation	BPSK,QPSK,16QAM,64QAM
		Guard Interval	1/4, 1/8, 1/16, 1/32,1/128
		FFT	1k,2k,4k,8k,16k
		Pilot Pattern	PP1 ~ PP8
		Ti Nti	Disable, 1 , 2 , 3
		ISSY	Disable,Short, Long
		Extend Carrier	YES
		Delete Null Packet	YES
		VBR Coding	YES
	PLP	FEC Block Length	16200,64800
		PLP Constellation	QPSK,16QAM,64QAM,256QA M
		Code Rate	1/2, 3/5,2/3,3/4,4/5,5/6
		Constellation Rotation	YES
		Input TS HEM	YES
		Time Interval	YES
MULTIPLEXING	Table Supported		PSI/SI
	PID Processing		Pass-through, Remapping, Filtering
	Dynamic PID Feature		Yes
GENERAL	Input Voltage		90 ~264VAC, DC 12V 5A
	Power Consumption		57.48W
	Rack Space		1RU
	Dimension (WxHxD)		482*44*260mm
	Net Weight		2.35 KG
	Language		中文/ English

SFT3536S V2 Encoder modulator



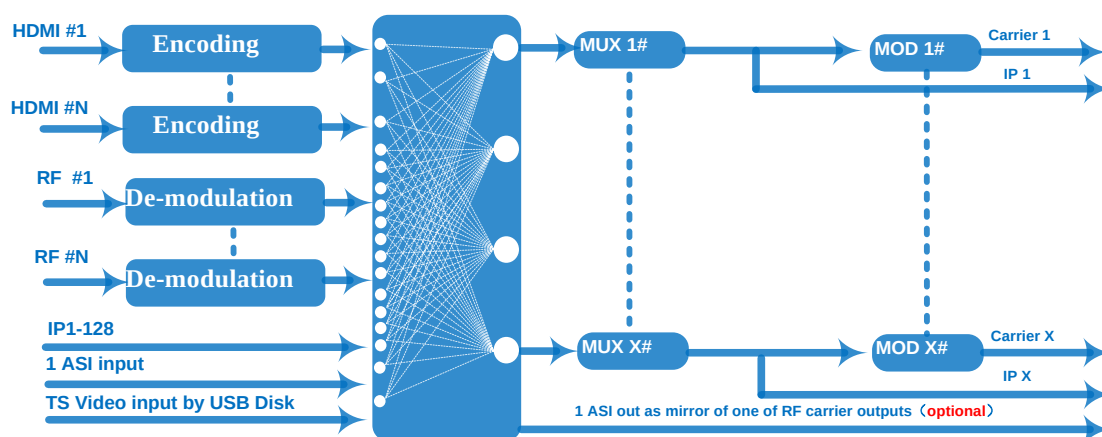
Product Overview

SFT3536S (V2) is a professional and high integration device which includes encoding (and de-modulation), multiplexing, and modulation functions in one case. It supports 8/16/24 HDMI (or HDMI plus tuner mix input) inputs, 1 ASI input, 1 USB player input and 128 IP inputs via the GE port, and output by multiple DVB-C (or DVB-T/ATSC/ISDB-T optional) carrier channels. It also supports MPTS output as mirror of carrier s through the GE port and 1 ASI out as mirror of one of the carriers. This full function device makes it ideal fo r a small CATV head end system, and it' s a smart choice for hotel TV system, entertainment system in spor ts bar, hospital, apartment ...

Features

- ▶ 8/16/24 HDMI (or HDMI plus DVB-S/S2/S2X/C/T/(T)/ISDB-T tuner) inputs,
- ▶ HEVC/H.265, MPEG-4 AVC/H.264 Video encoding
- ▶ 1 ASI input for re-mux
- ▶ 1 USB Player (Insert the USB Flash drive with "xxx.ts" videos in SFT536S and play back the content in an easy way; file system FAT 32)
- ▶ 128 IP input over UDP and RTP via GE port
- ▶ Each carrier out channel process maximum 32 IP from the GE port (UDP&RTP protocol)
- ▶ MPEG1 Layer II, LC-AAC and HE-AAC Audio encoding, AC3 Pass Through and audio gain adjustment
- ▶ Support 16/32ch DVB-C RF out (8ch/16ch DVB-T, 16/32chATSC, or 16ch ISDB-T out fo r option, as per o rder)
- ▶ Support 1 ASI out as mirror of one of RF output carriers---Optional
- ▶ Support IP MPTS or SPTS output over UDP, RTP/RTSP
- ▶ Support PID remapping/ accurate PCR adjusting/PSI/SI editing and inserting
- ▶ Control via web management, and easy updates via web

PrincipleChart

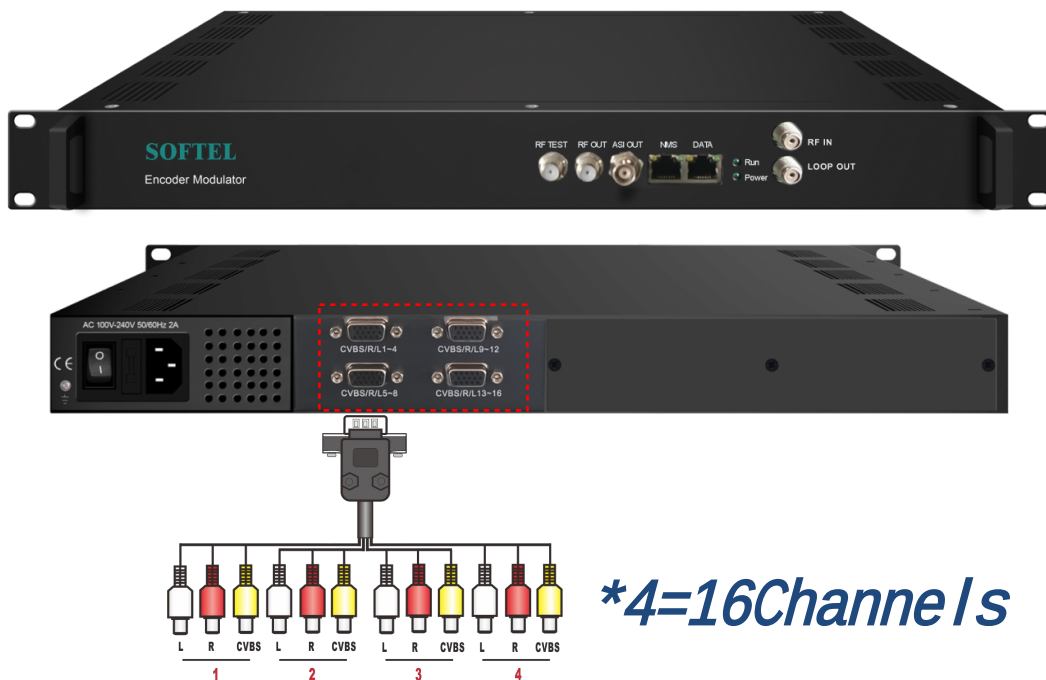


Specification

Input		8/16/24 HDMI inputs for option (or HDMI and different Tuner mix input, details pls check below order guide) 1 ASI in for re-mux 1 USB Player input for re-mux (" xxx.ts " video) 128 IP input over UDP and RTP, GE port, RJ45	
Video (HDMI Input)	Resolution	Input	1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720×576_50i, 720×480_60i,
		Output	1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720×576_25P, 720×480_30P,
	Encoding	HEVC/H.265, MPEG-4 AVC/H.264	
	Bit-rate	1Mbps~13Mbps each channel	
	Rate Control	CBR/VBR	
	GOP Structure	IP...P (P Frame adjustment, without B Frame)	
Audio (HDMI Input)	Encoding	MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through	
	Sampling rate	48KHz	
	Resolution	24-bit	
	Audio Gain	0-255 Adjustable	
	MPEG-1 Layer 2 Bit-rate	48/56/64/80/96/112/128/160/192/224/256/320/384 kbps	
	LC-AAC Bit-rate	48/56/64/80/96/112/128/160/192/224/256/320/384 kbps	
Tuner Section	DVB-S	Input Frequency	950-2150MHz
		Symbol Rate	0.5~45 Msps
		Constellation	QPSK
		FEC	1/2, 2/3, 3/4, 5/6, 7/8
	DVB-S2	Input Frequency	950-2150MHz
		Symbol Rate	QPSK/8PSK/16APSK: 0.5~45 Msps 32APSK:0.5~40 Msps
		Constellation	QPSK/8PSK/16APSK/32APSK
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9
		Max input bitrate per tuner	≤170 Mbps
	DVB-S2X	Symbol Rate	QPSK/8PSK/16APSK: 0.5~45 Msps; 8APSK/32APSK: 0.5~40 Msps
		Constellation	QPSK/8PSK/16APSK/8APSK/32APSK
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20

			8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10, 23/36, 25/36, 13/18 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10,1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9		
		Max input	≤170dBμV		
	Signal Strength	-65 ~ -25dBm			
Multiplexing	Maximum PID Remapping	256 input per channel			
	Function	PID remapping (automatically or manually)			
		Accurate PCR adjusting			
Generate PSI/ SI table automatically					
Modulation	DVB-C	QAM Channel	16/32 non-adjacent carriers output (maximum bandwidth 192MHz)		
		Standard	EN300 429/ITU-T J.83A/B		
		MER	≥40db		
		RF frequency	50~960MHz, 1KHz step		
		RF output level	-20~+3dbm, 0.1db step		
		Symbol Rate	5.0Msps~7.0Msps, 1ksps stepping		
			J.83A	J.83B	
		Constellation	16/32/64/128/256QAM		
		Bandwidth	8M	6M	
	DVB-T	Standard	EN300744		
		FFT mode	2K,4K, 8K		
		Bandwidth	6M, 7M, 8M		
		Constellation	QPSK, 16QAM, 64QAM		
		Guard Interval	1/4, 1/8, 1/16, 1/32		
		FEC	1/2, 2/3, 3/4, 5/6, 7/8		
		MER	≥42 dB		
		RF frequency	50~960MHz, 1KHz step		
		RF out	8 (or 16) non-adjacent carriers output (maximum bandwidth 192MHz)		
		RF output level	-28~ -3dBm, 0.1db step		
		ATSC	Standard	ATSCA/53	
	Bandwidth		6M		
	Constellation		8VSB		
	FEC		RS(208 188)+Trellis		
	MER		≥40dB		
	ACL		-55 dBc		
	RF frequency		50~960MHz, 1KHz step		
	RF out		16/32 non-adjacent carriers output (maximum bandwidth 192MHz)		
				(maximum bandwidth 192MHz)	
		RF output level	-20~+3dbm (for all carriers), 0.5db stepping		
		ISDB-T	Standard	ARIB STD-B31	
			Bandwidth	6M	
			Constellation	QPSK, 16QAM, 64QAM	
			Guard Interval	1/32, 1/16, 1/8, 1/4	
Transmission Mode			2K, 4K, 8K		
Code rate			1/2, 2/3, 3/4, 5/6, 7/8		
MER			≥40dB		
RF frequency			50~960MHz, 1KHz step		
RF out			16 non-adjacent carriers output (maximum bandwidth 192MHz)		
RF output level			-20dBm~+3dBm, 0.1dB stepping		
Miscellaneous		Dimension (W×L×H)	482mm×328mm×44mm		
	Environment	0~45°C(work) ; -20~80°C (Storage)			
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz			

SFT3526SA Encoder modulator



Product Overview

SFT3526SA is a high performance and cost-effective encoder modulator designed by SOFTEL. It supports 16 CVBS input with MPEG4 AVC/H.264 Video encoding and 4ch DVB-C/T non-adjacent carrier outputs with multiplexing (and scrambling in DVB-C out version) included. It also supports up to 128 IP input for re-mux and IP (4MPTS) output through Data port as mirror of carriers. SFT3526SA is also characterized with high integrated level, high performance and low cost. This is very adaptable to newly generation CATV broadcasting system.

Features

- ▶ 16 CVBS input with MPEG4 AVC/H.264 Video encoding
- ▶ 128 IP input for re-mux over UDP and RTP (1DVB-C tuner input for re-mux optional)
- ▶ Support MPEG1 Layer II Audio encoding and support audio gain adjustment Support PID remapping/ PSI/SI editing and inserting
- ▶ Support 4*Mux-SCR-DVB-C output, or 4*Mux-DVB-T output
- ▶ Support 4*MPTS IP over UDP and RTP output, 1*ASI output (optional)
- ▶ Support IP Null PKT filter
- ▶ Real-time effective encoding output bit-rate monitoring
- ▶ Control via web management, and easy updates via web

Specification

Input	16 CVBS inputs , DB15-To-RCA interface 128 IP (100/1000M)input over UDP and RTP protocol 1DVB-C tuner input for re-mux (optional)			
Video	Resolution	720×576i (PAL-B, D, G, H, I), 720×480i (NTSC-M, J)		
	Encoding	MPEG4 AVC/H.264(HP/MP/BP)		
	Bit-rate	1Mbps~5Mbps each channel		
	Rate Control	CBR/VBR		
	GOP Structure	IPP (P frame is adjustable)		
Audio	Encoding	MPEG-1 Layer 2		
	Sampling rate	48KHz		
	Resolution	24-bit		
	Audio Gain	0-255 adjustable		
	Bit-rate	64/128/192/224/256/320/384Kbps each channel		
Modulation	DVB-C	4* DVB-C non-adjacent carriers Standard: EN300 429/ITU-T J.83A/B MER: ≥40dB RF frequency: 50~960MHz, 1KHz step RF out level: -20~+3dBm (87~110 dBμV), 0.1dB step Symbol Rate: 5.0Msps~7.0Msps, 1ksps step		
			J.83A	J.83B
		Constellation	16/32/64/128/256QAM	64/256 QAM
		Bandwidth	8M	6M
	DVB-T	Standard	EN300744	
		FFT mode	2K, 4K, 8K	
		Bandwidth	6M, 7M, 8M	
		Constellation	QPSK, 16QAM, 64QAM	
		Guard Interval	1/4, 1/8, 1/16, 1/32	
		FEC	1/2, 2/3, 3/4, 5/6, 7/8	
		MER	≥40dB	
		RF frequency	50~960MHz, 1KHz step	
		RF out	4*COFDM DVB-T non-adjacent carriers	
		RF out level	-20~+3 dBm (87~110 dBμV), 0.1dB step	
	Scrambling (for DVB-C out version)	Max simulcrypt CA	4	
		Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197	
		Connection	Local/remote connection	
Stream output	IP (4*MPTS) output as mirror of 4 carriers over UDP and RTP, 100/1000 Base-T Ethernet interface (Multicast/unicast) 1*ASI output (optional)			
System function	Network management (WEB)			
	Ethernet software upgrade			
Miscellaneous	Dimension(W×L×H)	482mm×328mm×44mm		
	Environment	0~45℃(work); -20~80℃ (Storage)		
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz		

SFT2500C 16in1/32in1/48in1/64in1 IP to Analog modulator

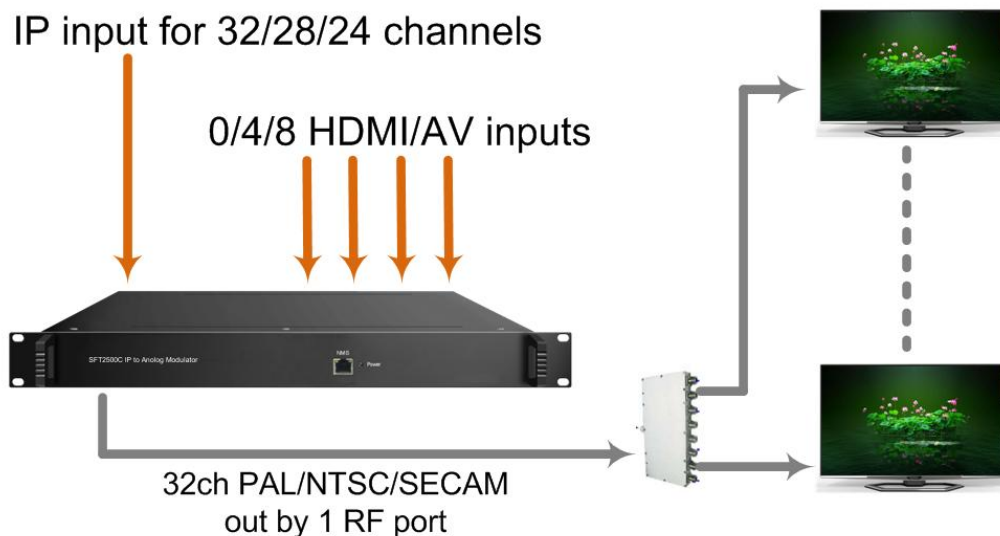


1U Chassis for 16 in 1 & 32 in 1



2U Chassis for 48 in 1 & 64 in 1

System Construction Illustration



Features

- ▶ Support to convert 32 (or 16/48/64) IP channels (or 4 HDMI/AV+28 IP channels, or 8 HDMI/AV+24 IP channels) to analog RF out
- ▶ Support CC/Subtitle/Teletext
- ▶ Support BISS De-scrambling
- ▶ Support program info modify, multiple audio select
- ▶ 2 (or 4) GE ports for IP MPTS/SPTS input, Max 840Mbps for each GE input
- ▶ Support HEVC/H.265, H.264/AVC, MPEG-2 TS Decoding
- ▶ 32 (or 16/48/64) standard PAL or NTSC or SECAM TV programs output via 32 (or 16/48/64) non-adjacent or adjacent carriers output within 400MHz
- ▶ Redundancy power supply for option
- ▶ Compact body, Freight saving
- ▶ Support Web-based Network management

Specification

Input	Interface/rate	32 (or 16/48/64) IP (or 4 HDMI/AV+28 IP, or 8 HDMI/AV+24 IP) input 2 /4 GE ports (max 64 IP input) Max 840Mbps for each GE input
	Stream	UDP, UDP / RTP, 1-7 packets (SPTS/MPTS)
	Transport Protocol	UDP/RTP, unicast and multicast, IGMP V2/V3
	Packet Length	188 / 204 Bytes
Decoding Parameters	Video format	HEVC/H.265, H.264/AVC, MPEG-2
	Audio format	MPEG-1/2 Layer 1/2, (HE-)AAC, AC3
	Audio channels	Mono L, Mono R, Mono L+R A2 Dual Mono (L, R), A2 Stereo NICAM Dual Mono (L, R), NICAM Stereo (Note: when applying dual audio, one TV program with dual audio will occupy 2 frequencies, which means the total output channels will reduce respectively.)
	Data	CC, Teletext, Subtitles, DVB Subtitling
	Resolutions	HEVC/H.265: 1080@60P, 1080@60I, 1080@50P, 1080@50I, 720@60P, 720@50P H.264/AVC: 1080@60I, 1080@50P, 1080@50I, 1080@30P, 1080@25P, 720@60P, 720@50P, 576@50I, 480@60I MPEG2: 1080@60I, 1080@50I, 720@60P, 720@50P, 576@50I, 480@60I
Modulation Parameters	Aspect ratio	4:3
	Number of channels	32 (or 16/48/64) non-adjacent or adjacent carriers output
	Connectors	75 Ω , F-jack
	Frequency range	43.25 – 951.252MHz
	Output Bandwidth	400MHz
	Output level	-5 ~ 2dBm (102 ~ 109dB μ V)
	Return loss	$\geq$ 14dB
	Spurious frequency dist.	$\geq$ 60dB
	Residual carrier accuracy	1%
	TV standard	PAL B/G/D/K/M/N/I, NTSC M, SECAM
	Video-signal to noise ratio	$\geq$ 60dB
	Carrier to noise ratio	$\geq$ 60dB (when single carrier on) $\geq$ 55.5dB (when all 32 carriers on)
Network Interface	Management	1 x 100 Base-T Ethernet (RJ 45)
	Data	2 x 1000 Base-T Ethernet (RJ 45)
Others	Image resolution output	480i/576i
	OSD	Logo : JPG, BMP, PNG Caption : support multiple languages, scrolling direction and speed customized
	Output volume adjustment	0 - 100 %
General	Demission	483mm×330mm×44.5mm (1U) 483mm×330mm×88mm (2U)
	Temperature	0~45°C(operation), -20~80°C(storage)
	Power Supply	AC100V±10%, AC 220V±10%, 50/60Hz Redundancy power supply (Optional)

SFT8200 32\48\64 Channel IP to Analog modulator



Product Overview

SFT8200 is a high density IP to analog RF platform that carries 32/48/64 free adjacent channels in a 2U box. Browser based user interface facilitate system setup and maintenance efficiency. This outstanding headend system consume much less power then other competitors, eventually reduce operating cost and extend life cycle.

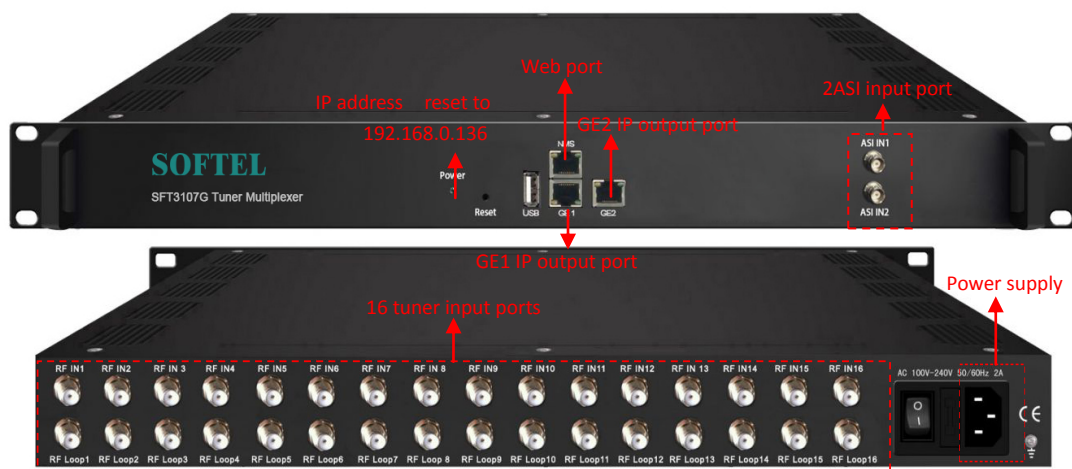
Features

- ▶ System provides 1 GE input ports for both MPTS and SPTS video streams
- ▶ Receive up to 256 IP streams and output up to 32/48/64 channels in NTSC or PAL standard
- ▶ Easy configuration and software upgrade by built-in Web UI
- ▶ Support running text and logo insertion
- ▶ Support BISS decryption as an option
- ▶ Support multi sound tracks and subtitles selection

Specification

GbE INPUT	Input Connector	1 x RJ45
	Transport Protocol	UDP, RTP
	Addressing	Unicast, Multicast
	MPEG Transport	SPTS, MPTS
TS DECODING	Video Resolutions	Up to 1080P
	Video Form	MPEG1/2/4; H.264; H.265; AVS; AVS+; VC1
	Additional capabilities	Teletext; BISS decrypt
	Multi-sound track	Support
	MAX decoding stream	64 channels
	Audio Form	MPEG-1 Layer I/II/III; WMA, AAC, AC3
	Aspect Ratio Control	4:3(Letterbox&PanScan); 16:9
	Multi language subtitle	Support
RF OUTPUT	Connector	F female connector
	Number of RF channels	Max 64 agile modulated channels
	Supported Standard	NTSC, PAL BG/DI/DK
	STD,HRC and IRC	Support
	Output Frequency	48 ~ 860 MHz
	Out-band Rejection	≥ 60dB
	Flatness	-2dB per carrier
	Return Loss	12 dB (min)
	Output Level	≥ 53dBmV combined
	Adjust Range	20dB per 32CHs 10dB per 1CH
	Audio Output Format	MONO
	Audio Level Adjust Range	0 ~ 100%
	RF Test Point	-20dB Relative to output
	Differential Gain	≤ 5%
	Group Delay Response	≤ 100nS
	2K Factor	≤ 2%
GENERAL	Management	NMS
	Language	English
	Power Supply	AC 90~264V
	Consumption	<240W
	Weight	8.5KG
	Dimension	484*435*89 (MM)

SFT3107G Tuner Multiplexer



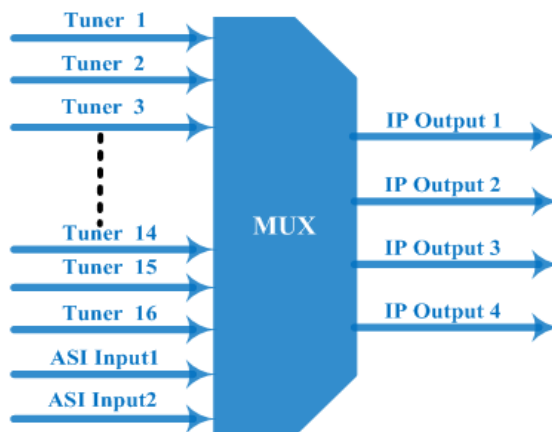
Product Overview

SFT3107GTuner Input Multiplexer is the latest demodulation and multiplexing device for digital TV broadcasting head-end system with TS output through IP port. It can multiplex up to 16 channels Tuner and 2 ASI input to IP (MPTS). This multiplexer has the functions of supporting auto-generation of PSI/SI information, PID re-mapping, and service filtering. BISS function embedded will carefully descramble tuner input programs. In conclusion, its high integration and cost effective design make this device widely used in the CATV Broadcasting system.

Features

- ▶ Support 16 FTADVB-S/S2/S2X(DVB-C, DVB-T/(T), ISDB-T,ATSC optional) input, 2ASI input
- ▶ Support BISS descrambling, and each channel bit rate cannot exceed 80Mbps
- ▶ Support DisEqc function
- ▶ 4IP output (MPTS) over UDP, RTP/RTSP protocol
- ▶ 2 GE mirrored output, up to 850Mbps
- ▶ Support PID filtering, re-mapping
- ▶ Support PSI/SI rebuilding and editing

Working Principle



Specification

Input	16 tuners input, (DVB-C, DVB-T/(T), ISDBT, S/S2/S2X, ATSC optional), F type 2 ASI input, BNC interface				
Tuner Section		DVB-C	Input Frequency	30 ~1000 MHz	
			Standard	J.83A(DVB-C), J.83B, J.83C	
			Constellation	16/32/64/128/256 QAM	
		DVB-T/ (T)	Input Frequency	30 ~ 1000 MHz	
			Bandwidth	6/7/8 M	
	Version 1	DVB-S	Input Frequency	950~2150MHz	
			Symbol rate	1~45 Msps	
			FEC	1/2, 2/3, 3/4, 5/6, 7/8	
			Constellation	QPSK	
			Signal Strength	- 65~ -25dBm	
			Max input bitrate	≤120 Mbps	
		DVB-S2	Input Frequency	950~2150MHz	
			Symbol rate	1~45 Msps	
			FEC	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10	
			Constellation	QPSK, 8PSK	
			Max input bitrate	≤120 Mbps	
	Version 2 (New)	DVB-S	Input Frequency	950~2150MHz	
			Symbol rate	0.5~45Msps	
			Signal Strength	- 65- -25dBm	
			FEC	1/2, 2/3, 3/4, 5/6, 7/8	
			Constellation	QPSK	
			Max input bitrate	≤120 Mbps	
		DVB-S2	Input Frequency	950~2150MHz	
			Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 32APSK: 0.5~40Msps;	
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10		
			Constellation	QPSK, 8PSK, 16APSK, 32APSK	
				Max input bitrate	≤120 Mbps
		DVB-S2X	Input Frequency	950~2150MHz	
			Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 8APSK/32APSK: 0.5~40Msps	
			FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36 , 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9	
	Constellation		QPSK, 8PSK, 8APSK, 16APSK, 32APSK		
	Max input bitrate		≤120 Mbps		
		ISDB-T	Input Frequency	30~1000MHz	
		ATSC	Input Frequency	50 MHz~960MHz	
			Bandwidth	6M	
			Constellation	8VSB	
	Re-multiplex		PID re-mapping		
			PCR accurate adjusting		
		Automatic generating PSI/SI table			
PID		Output range	0x0000—0x1FFF		
		PID transparent	Any PID transparent and mapping achievable		
		Amount of output PID per input	128		
BISS descrambling		Mode 1, Mode E (Up to 850Mbps) (descramble individual program)			
Output System		4 IP (MPTS) output over UDP and RTP/RTSP protocol through GE1 and GE2 port, Unicast and Multicast			
		Remote management	Web-server Management		
		Language	English		
		Upgrade	USB, web management		
Miscellaneous		Dimension	482mm×410mm×44mm (W×L×H)		
		Approx weight	3.5kg		
		Environment	0~45°C(work) ; -20~80°C (Storage)		
		Power requirements	100~240VAC, 50/60Hz		
		Power consumption	20W		

SFT3248 8-in-1 Transcoder



Product Overview

SFT3248 is a professional bidirectional trans-coder to convert video between H.264 and MPEG-2 format and also to trans-code between HD and SD programs simultaneously. It is equipped with 6 tuner inputs to receive channels directly from satellite, or ASI/IP inputs to receive digital channels. After trans-coding, it outputs MPTS & SPTS through the DATA port or ASI port.

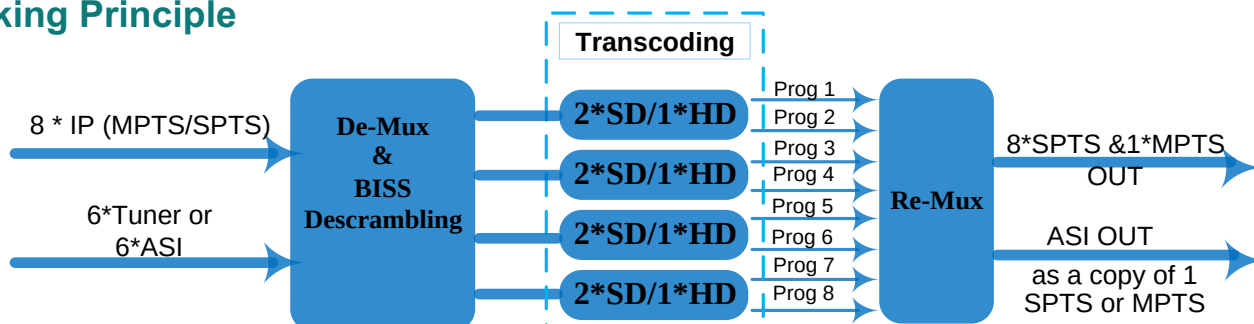
This trans-coder supports advanced re-multiplexing and can effectively provide operators with real-time code rate switch and optimize the video with its high performance. BISS function is now embedded to descramble your tuner input programs and CC function as well to transport your closed caption (or teletext).

It can be easily managed through web NMS system, and has become an ideal solution for operator to provide high quality video trans-coding.

Features

- ▶ Support 8*IP (SPTS/MPTS) input plus 6*tuners (or 6*ASI) input
- ▶ Support 8*SPTS & 1*MPTS (UDP/RTP/RTSP) output; 1 ASI (MPTS) output
- ▶ Video Trans-coding: MPEG-2 SD/HD and H.264 SD/HD any-to-any
- ▶ Audio Trans-coding: AAC, MP2 and AC3 (Optional) any-to-any or pass-through.
- ▶ Support maximal 8 SD or 4 HD programs trans-coding
- ▶ Support maximal 8 channel audio trans-coding
- ▶ Support HD and SD resolutions
- ▶ Support CBR and VBR rate control
- ▶ Support CC (closed caption)
- ▶ Support BISS descrambling
- ▶ Support IP out with null packet filtered
- ▶ Advanced re-multiplexing
- ▶ LCD & Key board local control; web NMS management

Working Principle



Specification

Stream In	MPTS/SPTS over UDP/RTP, 1000M Base-T Ethernet Interface/ SFP interface	
	6 * (DVB-S/S2/C/T/ISDB-T/ATSC) Tuners; 6 * ASI (optional)	
BISS Descramble	Maximum 8 programs	
Video	Resolution	1920x1080P, 1920x1080i, 1280x720P, 720x576i, 720x480i 480x576, 544x576, 640x576, 704x576
	Trans-coding	4*MPEG2 HD → 4*MPEG2/H.264 HD ; 4*MPEG2 HD → 4*MPEG2/H.264 SD ; 8 *MPEG2 SD → 8 *MPEG2/H.264 SD
		4* H.264 HD → 4*MPEG2/H.264 HD ; 4* H.264 HD → 4*MPEG2/H.264 SD ; 8* H.264 SD → 8 *MPEG2/H.264 SD
	Rate Control	CBR/VBR
Audio	Trans-coding	MPEG-1 Layer 2, AAC and AC3(Optional) any-to-any or pass through
	Sampling rate	48KHz
	Bit Rate	64Kbps-384Kbps
Stream Out	8*SPTS & 1*MPTS over UDP/RTP/RTSP, 1000M Base-T Ethernet Interface (UDP/RTP uni-cast / multicast) /SFP interface	
	1*ASI (as a copy of one of the 8 SPTS or the MPTS) output, BNC interface	
System Function	LCD & Key board control; web NMS management	
	Ethernet software upgrade	
General	Dimensions	430mm×405mm×45mm(WxDxH)
	Approx weight	4.8 Kg
	Temperature range	0~45℃(Operation), -20~80℃(Storage)
	Power requirements	AC 110V±10%, 50/60Hz or AC 220V±10%,50/60Hz
	Power consumption	20W

SFT3585 Multi-Channel CI-Receiver

DVB-C/T/ISDB-T, DVB-S/S2/S2X or ATSC RF ASI/IP



Each Demodulation Module = 2 or 4 *RF/Loop out + 2*CAM + 2*Smartcard

Product Overview

SFT3585 Multi-Channel CI Receiver is a SOFTEL' s new design which integrates demodulation and de-scrambler in one case to convert RF signals into TS output after re-mux. It is a 1-U case which supports Max 2 demodulation modules. The 2 C AMs/CIs accompanied in each demodulation module can decrypt programs inputting from encrypted RF, ASI and IP. The C AM requires NO unsightly external power cords, cables, or additional remote control device.

BISS function is also embedded to descramble programs from any input.To meet customers' various requirements, Each demodulation module of SFT3585 is also equipped with 1 ASI in and 16 IP inputs for re-mux, and output 1 MPTS and 16 SPTS with 1 ASI out port and 1 data port.

Features

- ▶ 2 or 4 Tuner (DVB-C/T/ISDB-T switchable or DVB-S/S2/S2X or ATSC optional) inputs for each demodulation module
- ▶ 1 ASI & 16 IP (UDP/RTP) inputs for re-mux
- ▶ One CAM can decrypt multiple programs from Tuners/ASI/IP
- ▶ Support BISS descrambling
- ▶ IP (1 MPTS & 16 SPTS) over UDP and RTP output; ASI out for MPTS
- ▶ Support maximum 256 PID mapping
- ▶ Remote control and Firmware, web NMS management
- ▶ Updates via web
- ▶ Best quality and breakthrough price

Order Guide

Please specify both **Demodulation module** and **Tuner Input** options when you place order:

Demodulation Module	Option 1	1*Demodulation module, 2 CAM/CI Slots
	Option 2	2*Demodulation modules, 4 CAM/CI Slots
Tuner Input (per demodulation module)	Option 1	2*DVB-S/S2/S2X tuner
	Option 2	2*DVB-C/T/ISDB-T tuner
	Option 3	2*ATSC tuner
	Option 4	4*DVB-S/S2/S2X tuner
	Option 5	4*DVB-C/T/ISDB-T tuner
	Option 6	4*ATSC tuner
	Option 7	2*DVB-S/S2/S2X tuner + 2*DVB-C/T/ISDB-T tuner
	Option 8	2*DVB-S/S2/S2X tuner + 2* ATSC tuner
	Option 9	2*DVB-C/T/ISDB-T tuner + 2*ATSC tuner

Specification

Input(per demodulation module)	2 or 4* tuner inputs (DVB-C/T/ISDB-T switchable or DVB-S/S2/S2X or ATSC optional), F type 1*ASI input for re-mux, BNC interface 16*IP input for re-mux (UDP/RTP)				
Tuner Section	Multi-mode tuners switchable (New)	DVB-C	Input Frequency	60 ~890 MHz	
			Standard	J.83A, J.83C	J.83B
			Constellation	16/32/64/128/256 QAM	64/256 QAM
		DVB-T	Input Frequency	60 ~890 MHz	
			Bandwidth	6/7/8 M	
		ISDB-T	Input Frequency	60 ~890 MHz	
			DVB-S	Input Frequency	950~2150MHz
		Symbol rate		0.5~45Msps	
		Signal Strength		- 65- -25dBm	
	FEC	1/2, 2/3, 3/4, 5/6, 7/8			
	Constellation	QPSK			
	Max input bitrate	≤170 Mbps			
	DVB-S2	Input Frequency		950~2150MHz	
		Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 32APSK: 0.5~40Msps;		
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10		
		Constellation	QPSK, 8PSK, 16APSK, 32APSK		
		Max input bitrate	≤170 Mbps		
		DVB-S2X	Input Frequency	950~2150MHz	
			Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 8APSK: 0.5~40Msps 32APSK: 0.5~40Msps	
	FEC		QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9		
	Constellation		QPSK, 8PSK, 8APSK, 16APSK, 32APSK		
	Max input bitrate		≤170 Mbps		
	ATSC	ATSC	Input Frequency	54-858MHz	
			Bandwidth	6 M	
			Constellation	8 VSB	
Descrambling		CAM/CI Quantity	2 (per demodulation module)		
		BISS Mode	Mode 1, Mode E		
Output (per demodulation module)		1*MPTS & 16*SPTS over UDP, RTP. 1000 Base-T Ethernet interface (unicast / multicast) 1×ASI mirrored out of MPTS, BNC interface			
System	Remote management		Web-server Management		
	Language		English		
	Upgrade		web management		
Miscellaneous	Dimension		482*300*44mm (W×L×H)		
	Environment		0~45°C(work) ; -20~80°C (Storage)		
	Power requirements		100~240VAC, 50/60Hz		
	Power consumption		15W		