Introduction

Focused on the growing small and compound application requirement, SMP100 is introduced to the market. SMP100 is architected to house three modules of various functional options to perform almost all the critical media application in a 1U chassis, including receiving, decoding, encoding, transcoding, scrambling and modulation. Industry standard interface, user-friendly operation UI and flexible upgrading strategy allow the platform being easily integrated into customer's existing network infrastructures. All that SMP100 provide enables the small and medium-sized DVB content providers enjoy a highly effective, flexible, reliable and cost-saving DVB solution.

Buy Now!

Features

- Powerful media data process capability-support up to 4 Gigabit data processing synchronously.
- 3 module slots - each can be selected from more than 18 different functional module choices to fulfill various media application.
- 1 U chassis, high density design, less cabling - easier configuration and space saving.
- User friendly Management UI - convenient to configure and monitor the equipment.
- Support PID remapping and EPG data insertion.

Max Media Processing Capability

- 16 ASI ports of multiplexing & 16 ASI-IP stream dual conversion
- 4 Gigabit IP input & output
- 12 inputs of DVB-S/S2, DVB-C or DVB-T receiving
- 6 SD/HD programs encoding (MPEG-2 or H.264)
- 1 Gigabit DVB-simulcrypt scrambling
- 24 channel QAM or 12 channel OFDM modulation
- 8 channel transmodulation(DVB-S2/S/C/T to QAM)

DMP/SMP Module

DVB-S2 receiver

DVB-C Receiver

DVB-T Receiver

ISDB-T Receiver

ASI Module

TSIP Module

CI Descrambler

DVB Scrambler

QAM/OFDM Module

IP QAM Module

MPEG2 AV Encoder

MPEG2 SDI/AV Encoder

H.264 SDI/AV SD Encoder

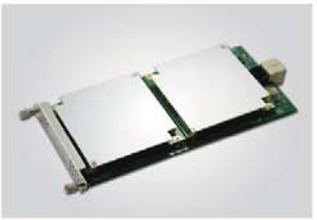
H.264 SDI/AV SD/HD Encoder

H.264 HDMI Encoder

MPEG2to4 Transcoder

MPEG4to2 Transcoder

H.264 SD/HD Decoder



Transcoder (Premium)

MPEG-2 / H.264 SDI/AV Encoder (Premium)

New and Premium Modules

TS/IP Module

The new TSIP is a high density, extremely flexible module for IP reception and transmission that can simplify the head-ends communication and the IPTV application, and the newly added fiber input and output offers easy connections to a fiber transmission device.

Main Features:

- 10/100/1000Based input/output interface (RJ45 & SFP)
- With backup output interface (RJ45 & SFP)
- Support UDP/RTP Multicast/Unicast reception or transmission.
- Supports processing up to 720 Mbps streaming

Receiving Modules - ISDB-T, ATSC

High sensitive and high interference rejection terrestrial receiver module, it is designed for receiving and demodulating 4 freguencies of ISDB-T signals for further processing.

Main Features:

- 4 x ISDB-T / ATSC receivers per module
- Input Frequency range: 48-862MHz
- Modulation: DQPSK / QPSK / 16QAM / 64 QAM/8VSB
- Carrier mode: 1K / 2K / 4K

QAM Module - IPQAM

High density module combines IP reception and QAM modulation, it supports to modulate the input transport streams over IP directly within a single board, and the high quality components will enhance the picture quality.

Main Features:

- Support UDP/RTP Multicast / Unicast reception from input interface (RJ45)
- Supports reception and processing streaming of up to 720Mbps.
- With 8 internal QAM modulators to modulate the input streaming and transmit that at 8 frequencies.

SDI/AV Encoder Module (Premium)

With lower encoding bit rate, and better video qualily, the new H.264 encoder is an ideal product for the OTT operators to improve the quality of picture at the subscriber device.

Main Features:

- Support encoding 2 MPEG-2 / H.264 SD channels
- Support 2 SD SDI or A/V inputs
- Works in two different Encoder Rate control modes: CBR & VBR
- Minimum encoding bit rate can be 200Kbps

Transcoder Module (Premium)

High density decoder & encoder, with lower encoding bit rate, and better video qualily, the new H.264 transcoder is an ideal product for the OTT operators to improve the quality of picture at the subscriber device.

Main Features:

- Support transcoding 2 HD or 4 SD channels to MPEG2 or H.264 SD format
- Full decode and re-encode
- Support multiaudio and teletext pass through
- Works in two different Encoder Rate control modes: CBR & VBR
- The minimum encoding bit rate can be 200Kbps

DVB- S/S2 Receiver

Inputs :	4×RF input, 75ohm
Frequency Range:	950 ~ 2150 MHz
Constellation:	QPSK, 8PSK,
FEC Mode:	1/2, 2/3, 3/4, 5/6, 7/8 (DVB-S) 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (DVB-S2)
Signal level:	-65dBm ~ -25 dBm
Symbol Rate:	QPSK: 1 ~ 45 Ms/s 8PSK: 1~31.5 Ms/s
Per RF input bitrate:	up to 150Mbps
Standard:	ETS300421, ETS302307

DVB-C Receiver

Inputs:	2×input (each handles two RFs) 2 X Loop out, 75ohm
Frequency Range:	48 ~ 862 MHz
QAM Mode :	16/32/64/128/256 QAM
FEC Mode:	Annex A/C or Annex B (optional)
Signal Level:	32dBuV ~ 100 dBuV
Symbol Rate:	1.0 ~ 6.9 Mbauds
Per RF input bitrate up to 55Mbps	
Standard:	ETS300429

DVB-T/ISDB-T Module

Inputs:	4×RF input, 75ohm
Frequency Range:	48 ~ 862MHz
Constellation:	QPSK, 16QAM, 64QAM (DVB-T), DQPSK QPSK, 16QAM, 64QAM (ISDB-T)
FEC modes:	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval:	1/4, 1/8, 1/16, 1/32
OFDM spectrum:	2K and 8K FFT (DVB-T), 1K,2K, 4K FFT (ISDB-T)
Signal Level:	-80 ~ -20 dBm
Channel Bandwidth:	6/7/8MHz (DVB-T), 6MHz (ISDB-T)
Per RF input bitrate:	Up to 31.67Mbps (DVB-T) Up to 23.4Mbps (ISDB-T)
Standard:	ETS300744 ,ISDB-T,ISDB-Tb

ASI Module

Inputs/Outputs:	4×ASI, BNC 75Ω
TS Max Bit Rate:	up to 150 Mbps (each ASI)
Packet type:	188/204 Bytes
Standard:	EN50083-9

TSIP Module

Connector:	2×10/100/1000Base-T, RJ-45 2×1000Base-X,SFP
Package format:	RTP/UDP
Traffic type:	unicast or multicast
Per module:	up to 720Mbps (72Mbps per stream)

CI Module

Connector:	PCMCIA Dual CI slots
CA module:	Multicrypt/Simulcrypt, Hot Plug
CAS support:	Conax, Irdeto, Viaccess, Nagravision Novel-SuperTV, CTI, DV-Crypt , Verimatrix & etc.
Input & Output Bitrate:	Max. 100Mbps (Need to work with supported CAM)
Standard:	EN50221

DVB Scrambler

Max TS streams:	12 streams
Max Bitrate:	60 Mbps per stream
Per module:	up to 720Mbps
EMM Bitrate:	3Mbps
CA Support:	Compatible with most leading CA systems
Simulcrypt Scrambling:	4 CA systems simultaneously
Encryption:	DVB EMM and ECM data insertion
PCR-restamping	

QAM Module

Outputs:	1 connector for 8×RF (F-type female) 1 connector for monitor output (F-type female)
Standard:	ITU-T J.83 Annex A/C, Annex B
QAM constellations:	16/32/64/128/256QAM
Symbol Rate:	1.0 ~ 6.9 MBauds
Output level:	1 connector for 8×RF (F-type female) 1 connector for monitor output (F-type female)
Output Frequency Range:	48 ~ 862 MHz
Output Frequency step size:	50kHz

OFDM Module

Outputs:	1 connector for 4×RF (F-type female)
Transmission mode:	2K, 8K
Guard Interval:	1/4, 1/8, 1/16, 1/32
Constellation :	QPSK, 16-QAM, 64-QAM
FEC:	1/2, 2/3, 3/4, 5/6, 7/8
Output level:	90~112 dBuV (Four adjacent channels)
Output Frequency Range:	48 ~ 862 MHz
Output frequency step size :	50kHz

IP QAM Module

Connector:	1×1000Base-T,RJ45 (TS/IP input) 1x100Base-T, RJ45 (Management) 1 connector for 8×RF (F-type female) 1 connector for monitor output (F-type female)
Package format:	RTP/UDP
Traffic type:	unicast or multicast
Per module:	up to 720Mbps (72Mbps per stream)
Standard:	ITU-T J.83 Annex A/C, Annex B
QAM constellations:	16/32/64/128/256QAM
Symbol Rate:	1.0 ~ 6.9 Ms/s
Output level:	90~106 dBuV (Eight adjacent channels) 90~112 dBuV (Four adjacent channels) 90~115 dBuV (One channel only)
Output Frequency Range:	48 ~ 862 MHz

MPEG2 AV Encoder

Inputs:	2×CVBS 2×Audio inputs (balanced and unbalanced)
Encoding Format:	
Video	MPEG-2 4:2:0 MP@ML
Audio	MPEG-1 Layer-I
Video Standard:	PAL and NTSC
Video Resolution:	576i, 480i;
Aspect Ratio:	4:3, 16:9
Audio Sampling frequency	32KHz, 44.1KHz , 48KHz
Audio mode:	Stereo, dual mono, Single mono
Encoding bitrate:	
Video:	CBR & VBR, 2.0~15.0 Mbps
Audio:	32~384Kbps

H.264 SDI/AV SD/HD Encoder

Inputs:	2×CVBS/SDI(BNC) 2×Audio inputs (balanced and unbalanced)
Encoding Format:	
Video:	HD: MPEG-4 AVC / H.264 4:2:0 HP@L4 SD: MPEG-4 AVC / H.264 4:2:0 MP@L3
Audio:	MPEG-1 Layer II, AAC(optional)
Video Standard:	PAL and NTSC
Video Resolution:	1080i, 720p, 576i, 480i
Aspect Ratio:	4:3, 16:9
Audio Sampling frequency	32KHz, 44.1KHz , 48KHz
Audio mode:	Stereo, Dual mono, Single mono
Encoding bitrate:	
Video	CBR & VBR, 1.0~20.0 Mbps
Audio	32~384Kbps

MPEG2 SDI/AV Encoder

Inputs:	2×CVBS/SDI(BNC) 2×Audio inputs (balanced and unbalanced)
Encoding Format:	
Video:	MPEG-2 4:2:0 MP@ML
Audio:	MPEG-1 Layer II
Video Standard:	PAL and NTSC
Video Resolution:	576i, 480i;
Aspect Ratio:	4:3, 16:9;
Audio Sampling frequency:	32KHz, 44.1KHz , 48KHz
Audio mode:	Stereo, dual channel, mono
Encoding bitrate:	
Video:	CBR & VBR, 2.0~15.0 Mbps
Audio:	32~384Kbps

H.264 SDI/AV SD Encoder

Inputs:	2×SDI/CVBS(BNC) 2×Audio inputs (balanced and unbalanced)
Encoding Format:	
Video:	MPEG-4 AVC / H.264 4:2:0 MP@L3
Audio:	MPEG-1 Layer II, AAC(optional)
Video Standard:	PAL and NTSC
Video Resolution:	576i, 480i;
Aspect Ratio:	4:3, 16:9;
Audio Sampling frequency:	32KHz, 44.1KHz , 48KHz
Audio mode:	Stereo, joint stereo, dual channel, mono
Encoding bitrate:	
Video:	CBR & VBR, 1.0~20.0 Mbps
Audio:	32~384Kbps

H.264 HDMI Encoder

Inputs:	2×HDMI
Encoding Format:	
Video:	HD: MPEG-4 AVC / H.264 4:2:0 HP@L4 SD: MPEG-4 AVC / H.264 4:2:0 MP@L3
Audio:	MPEG-1 Layer II, AAC (optional)
Video resolution:	1080i, 720p, 576i, 480i
Audio Sampling frequency:	32KHz, 44.1KHz , 48KHz
Audio mode:	Stereo, joint stereo, dual channel, mono
Encoding bitrate:	
Video:	CBR & VBR, 1.0~20.0 Mbps
Audio:	32~384Kbps

MPEG-2 / H.264 SDI/AV Encoder (Premium)

Inputs:	2×SDI/CVBS(BNC) 2×Audio inputs (balanced and unbalanced)
Encoding Format	
Video	MPEG-2 4:2:0 MP@MLMPEG-4 AVC / H.264 4:2:0 MP@L3
Audio	MPEG-1 Layer II, AAC
Video resolution	576i, 480i
Audio Sampling frequency :	32KHz, 44.1KHz , 48KHz
Audio mode :	Stereo, dual Mono, single Mono
Encoding bitrate	
Video :	CBR & VBR H.264 0.2~9 Mbps MPEG-2 1.5~15 Mbps
Audio :	96~384Kbps

MPEG4to2 Transcoder

Processing channels:	4× channels
Transcoding format:	
Video	MPEG-2 4:2:0 MP@ML
Audio	MPEG-1 Layer-II
Video Standard:	PAL and NTSC
Video resolution:	576i, 480i;
Aspect Ratio:	4:3, 16:9
Encoding Bitrate:	
Video	CBR & VBR, 2.0~15.0 Mbps
Audio	32~384Kbps

MPEG2 to 4 Transcoder

Process channels:	4×channels
Transcoding format:	
Video	MPEG-4 AVC / H.264 4:2:0 MP@L4
Audio	MPEG-1 Layer- II
Video Standard:	PAL and NTSC
Video resolution:	1080i, 720p, 576i, 480i;
Encoding bitrate:	
Video	CBR & VBR, 1.0~20.0 Mbps
Audio	32~384Kbps

Transcoder (premium)

Processing channels	4× Channels
Transcoding format	
Video	MPEG-4 AVC / H.264, MPEG-2
Audio	MPEG-1 Layer II, AAC
Video Standard	PAL and NTSC
Video Resolution	576i, 480i
Encoding bitrate	
Video	CBR & VBR, H.264 0.2~9Mbps, MPEG-2 1.5~15Mbps
Audio	96Kbps~384Kbps

H.264 SD/HD Decoder

Output:	HDMI×2,HD-SDI×2 with audio embedded(BNC Type)
Video Resolution:	480i, 576i, 720p, 1080i
Decoding Format:	MPEG-2 SD 4:2:0 MP@ML MPEG-2 HD 4:2:0 MP@HL MPEG-4 AVC SD MP@L3 MPEG-4 AVC HD MP@L4.0 / HP@L4
Support program & PID level decoding	
Subtitle:	DVB / EBU subtitle & Close Caption
Audio Decoding:	MPEG-1 Layer II MPEG-2 LayerII Dolby Digital (AC-3) (optional), AAC (optional)
Support multi-Audio Decoding	
Adjustable Volume:	-63~0dB
Video Channel Mode:	L&R channel, stereo
Audio Sample:	48KHz, 44.1KHz, 32KHz
Video&Audio Sync:	+/- 40mSec

Digisat International Inc.
4195 W. New Haven Ave., Suite 15
Melbourne, FL 32904
USA
+1-321-676-5250
Email: sales@digisat.org
http://www.digisat.org