

Sumavision

Enhanced Multimedia Router

Product Catalogue



2011 V3.0

Sumavision
数码视讯

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Overview



Enhanced Multimedia Router - EMR

Sumavision's Enhanced Multimedia Router (EMR) is a standard platform on which users can realize all Digital TV head end functions. EMR is one rack-unit (1-RU) signal processing platform with flexible card-insertion structure (6 slots). EMR can support "Any input" (DVB-S/S2/ASI/IP/DS3/E3, and etc.), "Any processing" (encoding/decoding/multiplexing/scrambling, and etc.) and "Any output" (DVB-S/S2/ASI/IP/DS3/E3 etc)". EMR is available for any applications beyond your imagination besides encoding, decoding, multiplexing, transcoding, transmodulating, etc.

HIGHLIGHT




- Support flexible combination of any different type of cards
- Massive internal multiplexing: maximum 4G data processing
- Maximum 24 IRDs for DVB-S/S2 FTA streams
- Maximum 20 IRDs for DVB-S/S2 encrypted streams
- Multi-encoding support: SD/HD MPEG-2/MPEG-4/H.264
- Maximum 12 programs MPEG-2/H.264 encoding/decoding
- Maximum 24 QAM outputs
- Maximum 30 ASI inputs or 24 ASI outputs
- Maximum 4 GbE IP inputs/outputs
- Maximum 40 streams/2560 programs scrambling over IP
- Support IPTV and conversion of MPTS from any type of inputs to SPTS
- Support dual-power supply and hot-swap
- Maximum 180 programs statistic multiplexing
- Maximum 256 SPTS IP output through 1Gbe IP Card

Optional Modules Overview




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Modules Introduction


Analog MPEG2 SD Encoding Modules

Product	Description	Specification
C101A MPEG-2 Analog Encoding Card 	2 channels MPEG-2 4:2:0 MP@ML analog video coding, and 2 channels analog stereo audio encoding ----- Input: Video: 2 x CVBS, BNC Audio: 2 x Analog Stereo, Balanced	<ul style="list-style-type: none"> ● Video format: MPEG-2 4:2:0 MP@ML ● Image format: PAL, NTSC, PAL-M, PAL-N, SECAM ● Video encoding bit rate: CBR/VBR , 1.5~15Mb/s ● Frame rate: PAL@25fps, NTSC@30fps, Secam@25fps ● Aspect ratio: 4:3 or 16:9 ----- <ul style="list-style-type: none"> ● Audio Formats: MPEG-1 Audio Layer I, MPEG-1 Audio Layer II ● Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz ● Encoding Bit-Rate: 64 ~ 384Kbps ● 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option)
C101AE Single Channel MPEG-2 Analog Encoding Card 	1 channels MPEG-2 4:2:0 MP@ML analog video coding, and 2 channels analog stereo audio encoding ----- Input: Video: 1 x CVBS(BNC) Audio: 2 x Analog Stereo, Balanced	<ul style="list-style-type: none"> ● Video format: MPEG-2 4:2:0 MP@ML ● Image format: PAL, NTSC, PAL-M, PAL-N, SECAM ● Video encoding bit rate: CBR/VBR , 1.5~15Mb/s ● Frame rate: PAL@25fps, NTSC@30fps, Secam@25fps ● Aspect ratio: 4:3 or 16:9 ----- <ul style="list-style-type: none"> ● Audio Formats: MPEG-1 Audio Layer I, MPEG-1 Audio Layer II ● Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz ● Encoding Bit-Rate: 64 ~ 384Kbps ● 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option)
C103A Analog Audio Encoding Card 	Provides 2 analog stereo audio encoding ----- Input: Audio: 2 x Analog Stereo, Balanced	<ul style="list-style-type: none"> ● Audio Formats: MPEG-1 Audio Layer I, MPEG-1 Audio Layer II ● Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz ● Encoding Bit-Rate: 64 ~ 384Kbps ● 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option)


Digital MPEG2 SD Encoding Modules

Product	Description	Specification
C101D MPEG-2 Digital Encoding Card 	2 channels MPEG-2 4:2:0 MP@ML digital video encoding, and 2 channels digital audio encoding ----- Input: Video: 2 x SDI (Audio Embedded), BNC Audio: 2 x AES/EBU, BNC	<ul style="list-style-type: none"> ● Video format: MPEG-2 4:2:0 MP@ML ● Image format: PAL, NTSC, PAL-M, PAL-N, SECAM ● Video encoding bit rate: CBR/VBR ,1.5~15Mb/s ● Frame rate: PAL@25fps, NTSC@30fps, Secam@25fps ● Aspect ratio: 4:3 or 16:9 ----- <ul style="list-style-type: none"> ● Audio Formats: MPEG-1 Audio Layer I, MPEG-1 Audio Layer II ● Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz ● Encoding Bit-Rate: 64 ~ 384Kbp ● 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option)
C101DE Single Channel MPEG-2 Digital Encoding Card 	1 channel MPEG-2 4:2:0 MP@ML signal video encoding and 2 channels digital audio encoding ----- Input: Video: 1 x SDI (Audio Embedded), BNC Audio: 2 x AES/EBU, BNC	<ul style="list-style-type: none"> ● Video format: MPEG-2 4:2:0 MP@ML ● Image format: PAL, NTSC, PAL-M, PAL-N, SECAM ● Video encoding bit rate: CBR/VBR ,1.5~15Mb/s ● Frame rate: PAL@25fps, NTSC@30fps, Secam@25fps ● Aspect ratio: 4:3 or 16:9 ----- <ul style="list-style-type: none"> ● Audio Formats: MPEG-1 Audio Layer I, MPEG-1 Audio Layer II ● Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz ● Encoding Bit-Rate: 64 ~ 384Kbp ● 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option)
C103D Digital Audio Encoding Card 	2 channel digital audio encoding ----- Input: Audio: 2 x Digital Stereo, BNC	<ul style="list-style-type: none"> ● Audio Formats: MPEG-1 Audio Layer I, MPEG-1 Audio Layer II ● Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz ● Encoding Bit-Rate: 64 ~ 384Kbps ● 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option)

Dolby AC-3 Encoding Module

Product	Description	Specification
C103DB Dolby AC-3 Encoding Card 	2 channels 2.0 stereo professional audio encoding, and 5.1 AC-3 professional audio encoding on HD encoding card ----- Dolby AC-3 Encoding Card is attached on other encoding cards instead of occupying slot	<ul style="list-style-type: none"> • Audio Formats: AC-3 2.0, AC-3 5.1 • Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz • Encoding Bit-Rate: 56kbps-640kbps • Dynamic Range: ≤ -90dBFS@48KHz, ≤ -84dBFS@44.1kHz, 32kHz • Support audio/video Synchronization, audio/video asynchronous time +5/-15ms

HD Encoding Modules

Product	Description	Specification
C101H MPEG-2 HD encoding card 	1 channel MPEG-2 HD video encoding ----- Input: Video: 1 x YPbPr/CVBS, BNC x 3; 1 x HD-SDI, (audio embedded), BNC Audio: 3 x AES/EBU, BNC; 3 x Analog Stereo, Balanced	<ul style="list-style-type: none"> • Video format: MPEG-2 MP@ML, MPEG-2 4:2:2P@ML, MPEG-2 MP@HL, MPEG-2 MP@H14L 分辨率: 1080i、720p • Resolution: <ul style="list-style-type: none"> - SD: 480p 720x480@59.94Hz, 576p 720x576@50Hz, 480i 720x480@29.97Hz, 576i 720x576@25Hz - HD: 1080i 1920x1080@29.97/25Hz, 1080i 1440x1080@29.97/25Hz, 720p 1280x720@59.94/50/29.97/25/23.97Hz • Aspect ratio: 16:9, 4:3 • GOP: I/IP/IBP/IBBP • Audio Formats: MPEG-1 Layer II 2 stereo channels Dolby Digital® (AC-3) 2.0 encoding (Option) Dolby Digital® (AC-3) 5.1 channel encoding (Option) • Sampling frequency: 48 KHz • Encoding Bit-Rate: 64 ~ 384Kbps(MPEG-1 Layer2) • Volume adjustment: -24dB~6dB

Product

Description

Specification

C109H
H.264 HD Encoding Card



1 channel H.264 HD video encoding (supports YPbPr input)

Input:
Video: 1 x YPbPr, BNC;
1 x CVBS,
(Same port with Y);
1x HD-SDI,
(audio embedded)
BNC;
Audio: 1 x Analog stereo
(balanced);
1 x AES/EBU
(balanced)

- Video format: H.264/AVC 4:2:0 MP@Level 3.0 for D1, H.264/AVC 4:2:0 HP@Level 4.0 for HD
- Encoding Bit-Rate: 2-10Mb/s for D1
4-20Mb/s for 1280x720x60p/59.94p/50p
5-20Mb/s for 1440x1080x60i/59.94i/50i,
6-20Mb/s for 1920x1080x60i/59.94i/50i
- Aspect ratio: 4:3, 16:9
- Entropy encoding: CABAC
- GOP structure: IBBP, IBP(1080i)
-
- Audio Formats: MPEG-1 Layer II
- Sampling frequency: 48K/44.1K/32K
- Encoding Bit-Rate: 32Kb/s ~384Kb/s

C110
H.264 HD Encoding and Transcoding Card



2 channel H.264 HD video encoding or MPEG-2 to H.264 transcoding

Input:
Video: 2 x HD-SDI, BNC
Audio: 2 x HD-SDI,
(audio embedded)
2 x AES/EBU ,
Phoenix socket
(balanced)

- Video format: HD H.264 High Profile@Level 4.0
SD H.264 Main Profile@Level 3.0
- Output resolution and frame rate:
1920 × 1080 × 50i/59.94i/60i
1440 × 1080 × 50i/59.94i/60i
1280 × 720 × 50p/59.94p/60p
720 × 576 × 50i
720 × 480 × 59.94i
- Conversion of HD program to SD program
- Transcoding of 23.98 frame/s up to 60 field/s
- Aspect Ratio: 4:3/16:9
- Encoding code rate: 1Mb/s - 20Mb/s
Advised HD code rate : 6 Mb/s - 20Mb/s
Advised SD code rate: 1.5 Mb/s - 5Mb/s
- Rate control: CBR/VBR
- GOP structure: IBBP/IBP
- Entropy code: CABAC
- Pre-processing: de-interlacing, de noise, sharpening
-
- MPEG-1 Audio Layer II
- Sampling frequency: 48kHz/44.1kHz/32kHz
- Sampling accuracy: 24-bit
- Encoding rate: 32 - 384kb/s

Product	Description	Specification
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C201AS
Analog Decoding Card



2 channels multi-format (MPEG-2 / H.264) SD analog video decoding, and HD video decoding to SD video

Output:
Video: 2 x CVBS, BNC
Audio: 2 x Analog Stereo, Balanced

- Video format: MPEG-2 HD/SD MP@HL; H.264/AVC High Level 4.1 high profile
- Image resolution: 1080i, 720p, downward-compatible
- Aspect ratio: 4:3
- Frame rate: PAL@25fps, NTSC@30fps

- Audio Formats: MPEG-1 Layer II
- Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz
- Encoding Bit-Rate: 32 ~ 384Kbps
- Output volume adjustment: -30dB~0dB

C201DH
Digital HD Decoding Card



2 channels multi-format (MPEG-2, H.264) signal SD video decoding

Output:
Video: 2 x (HDSDI+HDMI), BNC




Audio: HD-SDI or HDMI (Audio Embedded)

- Video format: MPEG-2 HD/SD MP@ML; H.264/AVC High Level 4.1 high profile
- Image format: PAL, NTSC
- Aspect ratio: 16:9, 4:3
- Image resolution: 1080i, 720p, downward-compatible




- Audio Formats: MPEG-1 Layer II
- Sampling frequency: 32 KHz, 44.1 KHz, 48 KHz
- Encoding Bit-Rate: 32 ~ 384Kbps
- Output volume adjustment: -30dB~0dB

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Main Control and Interface Modules

Product	Description	Specification
<p>C322C 2 ASI Input/2 ASI Output & Main Control Card</p> 	<p>2 channels ASI inputs and outputs with main control function</p> <p>-----</p> <p>Input: 2 x ASI Output: 2 x ASI</p> <p>Control via front panel or 10/100Base-T Ethernet interface</p>	<ul style="list-style-type: none"> • Maximum bit rate of each ASI up to 200Mbps and bit rate adjustable • Output bit rate accuracy: 0.001kbps • Maximum output PID up to 256 • Support PCR correction and remapping • Support PSI/SI table extraction and edition • Support data broadcasting/EPG/private data inserting • Support SMPTE 310
<p>C451 GbE IP Card</p> <p>C451C GbE IP Card & Main Control Card</p> 	<p>1 channel gigabit IP input and output with UDP encapsulation</p> <p>-----</p> <p>Input & Output: either 1×GBE (SFP) or 1×GBE (100/1000 Base-T)</p>	<p>Scrambling (option)</p> <ul style="list-style-type: none"> • 1×10/100BASE-T Ethernet port for scrambling, RJ-45 <p>Control</p> <ul style="list-style-type: none"> • 1×10/100BASE-T Ethernet control port, RJ-45 <p>Signal Processing over IP</p> <ul style="list-style-type: none"> • Total processing capability: 960Mbps • Support 16 different TS streams input and 12 different TS streams output • Packet length: 188 or 204 byte • Support bit rate setting for each output • UDP protocol, support SPTS and MPTS, unicast/multicast • Support IP address and port number setting for each output
<p>C300C Main Control Card</p> 	<p>main control function</p> <p>-----</p> <p>10/100 Base-T Ethernet for configuration and monitoring</p>	

ASI Interface Modules

Product	Description	Specification
C322C 2 ASI Input/2 ASI Output & Main Control Card 	2 channels ASI inputs and outputs with main control function ----- Input: 2 x ASI Output: 2 x ASI Control via front panel or 10/100Base-T Ethernet interface	<ul style="list-style-type: none"> • Maximum bit rate of each ASI up to 200Mbps and bit rate adjustable • Output bit rate accuracy: 0.001kbps • Maximum output PID up to 256 • Support PCR correction and remapping • Support PSI/SI table extraction and edition • Support data broadcasting/EPG/private data inserting • Support SMPTE 310
C304 4 ASI Output Card 	4 channels ASI outputs ----- Output: 4 x ASI	<ul style="list-style-type: none"> • Maximum number of PID each port can support: 256 • Maximum system bit rate and effective bit rate:200Mbps • Rise time(20%~80%)≤1200ps • Fall time (20%~80%) ≤1200ps • Deterministic Jitter ≤10% • Adaptively support TS package input of 188 or 204 byte • Output range: 800±80
C304 4 ASI Output & Scrambling Card 	4 channels ASI outputs with scrambling modules ----- Output: 4 x ASI	<ul style="list-style-type: none"> • Maximum number of PID each port can support: 256 • Maximum system bit rate and effective bit rate:200Mbps • Adaptively support TS package input of 188 or 204 byte • 8×scrambling modules, each module can independently scramble • Rise time(20%~80%)≤1200ps • Fall time (20%~80%) ≤1200ps • Deterministic Jitter ≤10% • Output range: 800±80

Product	Description	Specification
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C350
5 ASI Input Card



5 channels ASI inputs

Input: 5 x ASI

- Maximum bit rate (each ASI):200Mbps
- Minimum accepting sensitivity $\leq 200\text{mV}$
- Maximum input Voltage $\geq 880\text{mV}$
- Return Loss(5MHz~270MHz) $\leq -20\text{dB}$
- Support port backup, card backup and program backup

C340C
4 ASI Input & Main Control Card



4 channels ASI inputs with main control function

Input: 4 x ASI

Control via front panel or 10/100Base-T Ethernet interface

- Maximum input bit rate of every ASI is up to 200Mbps
- Maximum input Voltage $\geq 880\text{mV}$
- Minimum accepting sensitivity $\leq 200\text{mV}$
- Adaptively support TS packet input of 188 or 204 byte
- Return Loss(5MHz~270MHz) $\leq -20\text{dB}$
- Support port backup, card backup and program backup

CA07
ASI Splitter Card





1 channels ASI inputs and 4 channels outputs

Input: 1 x ASI
Output: 4 x ASI

- Adaptively support TS packet input of 188 or 204 byte
- Maximum input bit rate of every ASI is up to 270Mbps

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Adapting Modules

Product	Description	Specification
C416 DS3/E3 Card 	2 channels DS3/E3 with 1 channel ASI outputs and 1 channel DS3/E3 with 1 channel ASI Input ----- 1×DS3/E3 input 1×ASI input, 1×ASI output 2×DS3/E3 outputs	<ul style="list-style-type: none"> • Maximum input bit rate of DS3 up to 44.736Mbps • Maximum input bit rate of E3 up to 34.368Mbps • Support SPTS/MPTS • Support ASI↔DS3/E3 bi-directional adapting • Protocol compatible for DIVICOM、TANDBERG、BARCO、PHILIPS、THOMSON、SCOPUS、Harmonic、Huawei、ZTE • Support PCR correction
C451 GbE IP Card C451C GbE IP Card & Main Control Card 	1 channel gigabit IP input and output with UDP encapsulation ----- Input & Output: either 1×GBE (SFP) or 1×GBE (100/1000 Base-T)	Scrambling (option) <ul style="list-style-type: none"> • 1×10/100BASE-T Ethernet port for scrambling, RJ-45 Control <ul style="list-style-type: none"> • 1×10/100BASE-T Ethernet control port, RJ-45 Signal Processing over IP <ul style="list-style-type: none"> • Total processing capability: 960Mbps • Support 16 different TS streams input and 12 different TS streams output • Packet length: 188 or 204 byte • Support bit rate setting for each output • UDP protocol, support SPTS and MPTS, unicast/multicast • Support IP address and port number setting for each output


C471S
IP Scrambling Card



Scrambling Card attached on GbE IP card

- Maximum 40 AC for each TS stream, maximum 768 bytes for each AC
- Scrambling for 10 TS streams simultaneously
- Support scrambling up to 64 programs for each TS stream, up to 15 PID for each program
- Support DVB and OpenCAS for EIS
- Support the same EMM for different TS streams, maximum 12 EMMs ,maximum bandwidth 2Mbps for each EMM
- Support 4 CAS Simulcrypt for each TS stream;

Modulating & Demodulating

Product	Description	Specification
<p>C502 QAM Output Card</p> 	<p>2 RF outputs ----- Each output provides 2/4 adjacent QAM channels</p>	<ul style="list-style-type: none"> • ITU-T J.83 Annex A, B and C • 64, 128, 256 QAM constellations • Frequency range 52-1000MHz • Symbol rate: 5M-7M(1K step) • Output level: 95 ~ 120 dBuV • MER(balanced off): ≥ 38 dB@64QAM, ≥ 37 dB@256QAM • MER(balanced on): ≥ 44 dB • CNR: ≥ 55dB • PCR jitter:<100ns • Phase noise: ≤-65 dBc/Hz @1kHz, ≤-95 dBc/Hz @10kHz, ≤-110 dBc/Hz @100kHz

Product	Description	Specification
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C513CI
QAM-CI Input Card



1 RF outputs with one testing output

Output: 1 x RF

- Each input supports one QAM receiving and de-scrambling
- 16, 32, 64, 128, 256 QAM constellations
- Frequency range 51-858MHz
- Symbol rate: 0.87M-6.9M
- Input level: 65 ~ 120 dB
- Each CAM supports 16 programs descrambling
- Support TR101290

C505
QPSK Input Card



2 RF Inputs and 2 RF loop outputs

Inputs: 2 x RF
Loop Output: 2 x RF

- Frequency range: 950MHz~2150MHz
- Received signal level: -80dBm
- Symbol range: 2Msps ~ 45Msps
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- Support SCPC/MCPC
- Polarization: Vertical, Horizontal
- Roll-off factor : 35%
- Support C/Ku band

C515CI
DVB-S/S2 De-scrambling Receiver Card






1 RF Input and 1 RF loop output

Input: 1 x RF
Output: 1 x RF

- Frequency range: 950MHz~2150MHz
- Received signal level: -65dB~-25dB
- Symbol range: 1Msps ~ 45Msps
- FEC: DVB-S 1/2, 2/3, 3/4, 5/6, 7/8, DVB-S2 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
- Support SCPC/MCPC
- Polarization: Vertical, Horizontal
- Roll-off factor : 20%, 25%, 35%
- Support C/Ku band
- Support QPSK/8PSK
- Maximum 16 programs de-scrambling

Statistic Multiplexing Modules

Product	Description	Specification
C704 6-Channel Statistic Multiplexing Card 	3 channels ASI inputs and 1 channel ASI output ----- Input: 3 x ASI Output: 1 x ASI	<ul style="list-style-type: none"> • Input bit rate range: 2~8Mbps • Support setting program priority • Statistic multiplexing output: 1×TS(MPTS) with MPEG-2 standard • Support CBR/VBR • Support D1, 3/4D1 and HD1 resolution • support minimum/maximum bit rate setting
C705 20-Channel Statistic Multiplexing Card 	4 channels ASI outputs ----- Output: 4 x ASI	<ul style="list-style-type: none"> • Input bit rate range: 2~8Mbps • Support setting program priority • Statistic multiplexing output: 4×TS(MPTS) with MPEG-2 standard • Support CBR/VBR • Support D1, 3/4D1 and HD1 resolution • Support minimum/maximum bit rate setting
ATSC M/H Statistic Multiplexing Card 	2 outputs for ASI or SMPTE310 protocol and Gbe Input&output by two independent connector ----- Output : 2 x ASI/ SMPTE310 Control via front panel or 10/100Base-T Ethernet interface	

C707
30-Channel Statistic
Multiplexing Card





4 channels ASI outputs

Output: 4 x ASI
Connect type: RJ45
Format: 10/100 BaseT

- Input bit rate range: 2~8Mbps (SD), 12~20Mbps (HD)
- Output bit rate range: 1~8Mbps(SD) , 6~20Mbps(HD)
- Maximum Compressing Rate:50%(Recommend 40%)
- Audio Transparent Transmission
- Support maximum 30 SD programs / 6 HD programs
- Support setting program priority
- Statistic multiplexing output: 4×TS(MPTS) with MPEG-2 standard
- Support CBR/VBR
- Support ASI, IP, DS3 etc rear panel input
- Support D1, 3/4D1 and HD1 resolution
- Support minimum/maximum bit rate setting

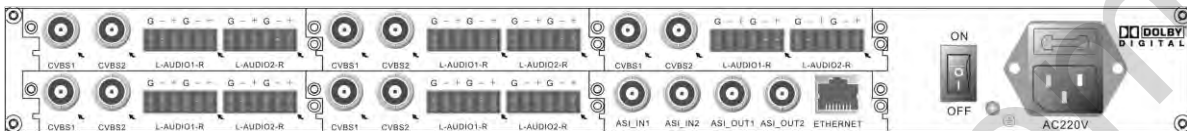
Switch Modules

Product	Description	Specification
<p>CA05 RF Switch Card</p> 	<p>2 RF Inputs and 1 RF Output with 1 ASI output</p> <p>-----</p> <p>Input: 2 x RF Output: 1 x ASI, 1 x RF</p>	<ul style="list-style-type: none"> • Switch from 2×RF to 1×RF and 1×ASI (same) • Support program priority setting • Automatic/manual • Switch time: 125ms
<p>CA01 ASI Switch Card</p> 	<p>3 channels ASI inputs and 2 channels ASI outputs</p> <p>-----</p> <p>Input: 3 x ASI Output: 2 x ASI</p>	<ul style="list-style-type: none"> • Switch from 3×ASI to 2×ASI • Automatic/manual • Switch time: 125ms

Typical Applications

MPEG-2 Analog SD Encoders

Case 1:



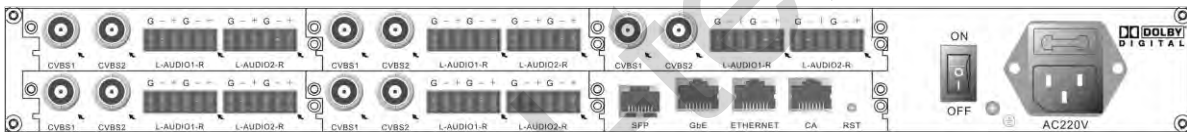
Details: This application can encode 10×CVBS signals to MPEG-2 streams and output 2×ASI after re-multiplexing.

Input: 10×CVBS, 10×balanced stereo, 2×ASI

Output: 2×ASI

Card Combination: 5 × MPEG-2 Analog Encoding Card + 1 × 2 ASI Input/2 ASI Output & Main Control Card

Case 2:



Details: This application can encode 10×CVBS signals to MPEG-2 streams and output 1×GbE IP after remultiplexing.

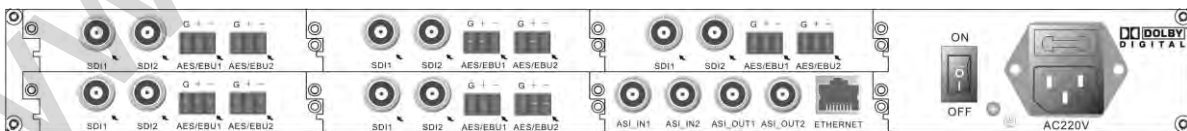
Input: 10×CVBS, 10×balanced stereo, 1×GbE IP

Output: 1×GbE IP

Card Combination: 5 × MPEG-2 Analog Encoding Card + 1 × Gigabit IP & Main Control Card

MPEG-2 Digital SD Encoders

Case 1:



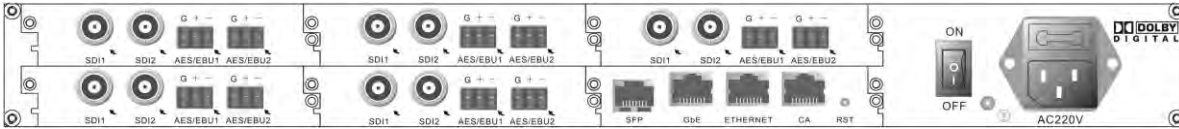
Details: This application can encode 10×SDI signals to MPEG-2 streams and output 2×ASI after remultiplexing.

Input: 10×SDI, 10×AES/EBU, 2×ASI

Output: 2×ASI

Card Combination: 5× MPEG-2 Digital Encoding Card + 1 × 2 ASI Input/2 ASI Output & Main Control Card

Case 2:



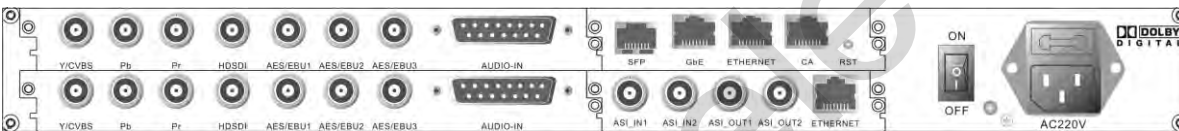
Details: This application can encode 10×SDI signals to MPEG-2 streams and output 1×GbE IP after re-multiplexing.

Input: 10×SDI, 10×AES/EBU, 1×GbE IP

Output: 1×GbE IP

Card Combination: 5 × MPEG-2 Digital Encoding Card + 1× Gigabit IP & Main Control Card

MPEG-2 HD Encoders



Details: This application can encode 2×YPrPb/CVBS/HD-SDI signals to MPEG-2 HD streams and output 1×GbE IP and 2×ASI after re-multiplexing.

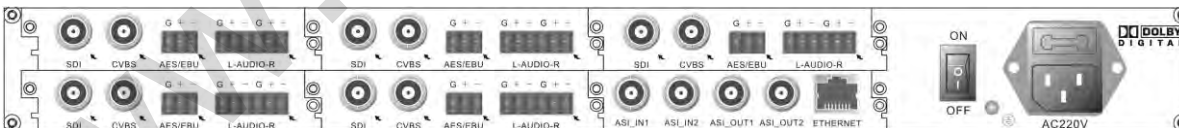
Input: 2× YPrPb/CVBS, 2×HD-SDI, 6×AES/EBU, 6×analog stereo (DB25), 1×GbE IP, 2×ASI

Output: 1×GbE IP, 2×ASI

Card Combination: 2 × MPEG-2 HD Encoding Card + 1 × 2 ASI Input/2 ASI Output & Main Control Card + 1 × GbE IP Card

H.264 SD Encoders

Case 1:



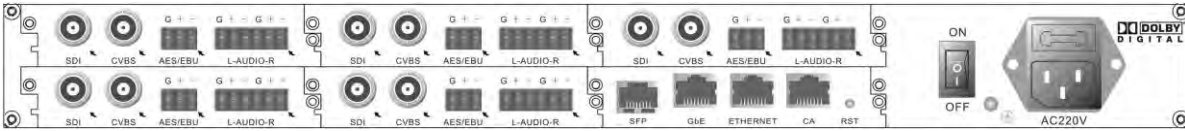
Details: This application can encode 5×SDI signals or 5×CVBS to H.264 streams and output 2×ASI after re-multiplexing.

Input: 5×SDI, 5×CVBS, 5×AES/EBU, 5×balanced stereo, 2×ASI

Output: 2×ASI

Card Combination: 5 × H.264 SD Encoding Card + 1 × 2 ASI Input/2 ASI Output & Main Control Card

Case 2:



Details: This application can encode 5×SDI signals or 5×CVBS signals to H.264 streams and output 1×GbE IP with SPTS or MPTS.

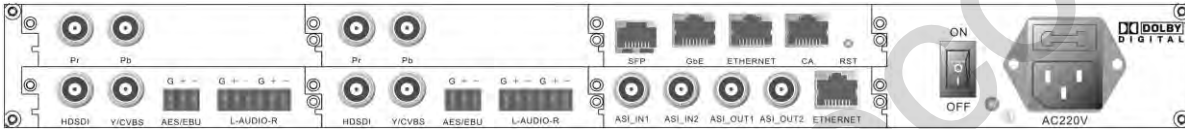
Input: 5×SDI, 5×CVBS, 5×AES/EBU, 5×balanced stereo, 1×GbE IP

Output: 1×GbE IP

Card Combination: 5 × H.264 SD Encoding Card + 1 × Gigabit IP & Main Control Card

H.264 HD Encoders

Case 1:



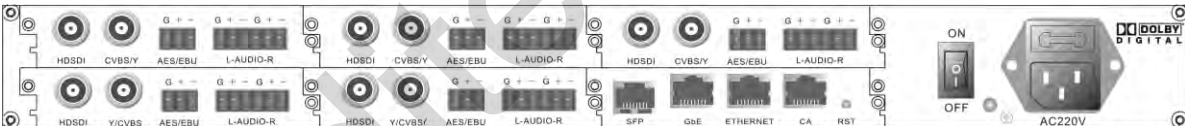
Details: This application can encode 2×YPrPb/CVBS/HD-SDI signals to H.264 HD streams and output 2×ASI as well as 1×GbE IP after re-multiplexing.

Input: 2×YPrPb/CVBS, 2×HD-SDI, 2×AES/EBU, 2× balanced stereo, 2×ASI, 1×GbE IP

Output: 2×ASI, 1×GbE IP

Card Combination: 2 × H.264 HD Encoding Card + 1 × GbE IP Card + 1 × 2 ASI Input/2 ASI Output & Main Control Card

Case 2:



Details: This application can encode 5×CVBS/HD-SDI signals to H.264 HD streams and output 1×GbE IP after re-multiplexing.

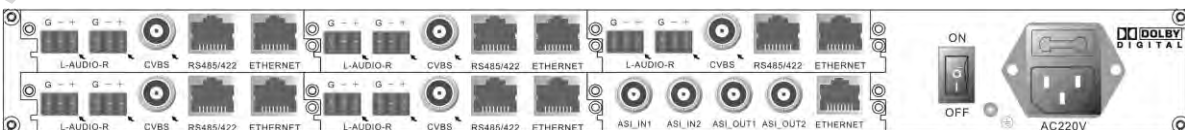
Input: 5× CVBS, 5×HD-SDI, 5×AES/EBU, 5×stereo, 1×GbE IP

Output: 1×GbE IP

Card Combination: 5 × H.264 HD Encoding Card + 1 × GbE IP & Main Control Card

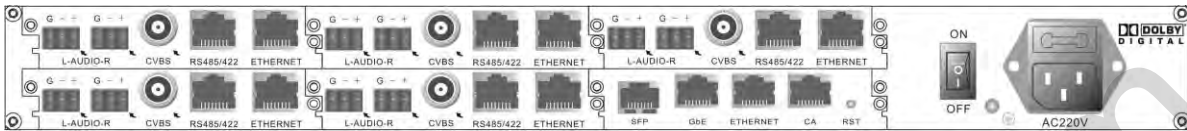
MPEG-4 SD Encoders

Case 1:



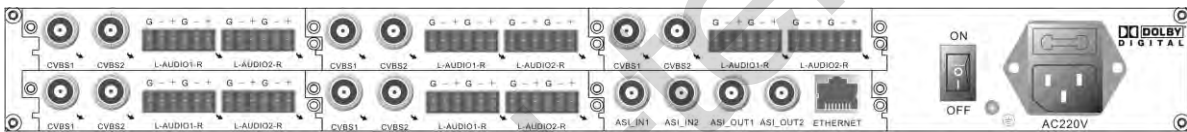
Details: This application can encode 5×CVBS signals to MPEG-4 streams and output 2×ASI after re-multiplexing.
Input: 5× CVBS, 5× balanced stereo, 2×ASI
Output: 2×ASI, 5×IP
Card Combination: 5 × MPEG-4 Analog SD Encoding Card +1 × 2 ASI Input/2 ASI Output & Main Control Card

Case 2:



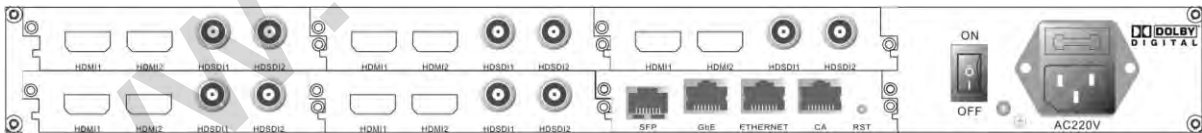
Details: This application can encode 5× CVBS signals to MPEG-4 streams and output 1×GbE IP after re-multiplexing.
Input: 5× CVBS, 5× balanced stereo, 1×GbE IP
Output: 5×IP, 1×GbE IP
Card Combination: 5× MPEG-4 Analog SD Encoding Card +1 × GbE IP & Main Control Card

ASI Input Analog Decoders



Details: This application can decode MPEG-2/H.264 SD/HD streams from 2×ASI to 10× CVBS.
Input: 2×ASI
Output: 10× CVBS, 10× balanced stereo, 2×ASI
Card Combination: 5 × Analog Decoding Card +1 × 2 ASI Input/2 ASI Output & Main Control Card

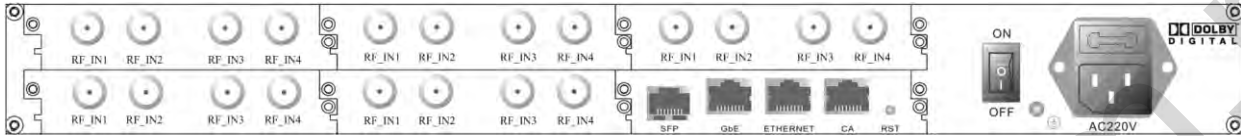
IP Input Digital Decoders



Details: This application can decode MPEG-2/H.264 SD/HD streams from 1×GbE IP to 10× (SDI + HDMI).
Input: 1×GbE IP
Output: 10× (SDI + HDMI) (Audio Embedded) , 1×GbE IP
Card Combination: 5 × Digital HD Decoding Card + 1× GbE IP & Main Control Card

IRDs based on EMR

5x4 CH QPSK Input Card +1xGbE IP & Main Control Card



Details: This application can receive 20 QPSK FTA streams (DVB-S/S2) or 5 QPSK encrypted streams (DVB-S/S2) from satellites as well as 1xGbE IP, and output in one GbE IP after remultiplexing.

Input: 20xQPSK (DVB-S/S2) or 5x QPSK (DVB-S/S2), 1xGbE IP

Output: 1xGbE I

7ca dUbm`8]HY`, LhX.

5E, Mitrofanievskoye shosse

St.Petersburg, 198095, Russia

Tel: +7 (812) 655-5052, +7 921 438-2446

Fax: +7 (812) 655-5052

<http://www.ditel-telecom.ru>

