

Juice Encoders / Series EN 9200&EN9400

SDI / HDMI / CVBS

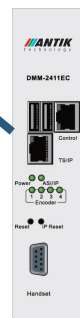
Juice EN9200/9400 are a series of high density H.264 HD/SD & MPEG-2 SD real time encoders. This blade type design integrates 4 independent encoders, 1 reMultiplexer, 1 ASI_in, 1 ASI_out, and 1 Gigabit (GbE) TS/IP port. New MPTS could be generated with the built-in reMultiplexer from any combination of services among ASI_in, TS/IP_in and the local encoders. HDMI and HD/SDI inputs are available as factory hardware options.

All models provide two TS/IP operation modes. The first is "Full Duplex", allows one MPTS or SPTS inputted to make up a new MPTS with local encoders, then sends the new one over IP & ASI_out. In the second mode "Multiple output" which delivers up to five streams over IP. There are four un-stuffed SPTS (lower bit rate but less PCR accurate than normal SPTS, from local encoders) and one MPTS (from internal reMultiplexer) over the IP with different Unicast or Multicast IP addresses.

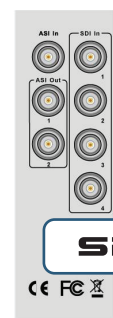
Juice EN9200/9400 series modules can be fitted into our **MR9000 chassis** (19" x 4RU, 8 slots, Dual power supplies).



Front Panel



Back Panels



EN9400SDI



EN9400H



EN9200CVBS

Key Features

- Compliant with H.264/AVC Baseline, Main & High Profile @ L4.0 or less & MPEG-2 MP@ML
- 4 independent AV inputs (SDI, HDMI)
- Internal reMultiplexer, new MPTS is made up from ASI_in, TS/IP_in & Local Encoders
- MPTS remultiplexed and 4 local un-stuffed SPTS available over IP
- Video Input Resolution: 1080i, 720p, 576i, 480i
- Minimum Video Bit Rate 500Kb/s (Standard PAL or NTSC SD video, while total bit rate ~ 700Kb/s)
- Independent Vertical & Horizontal pixel scale
- VBR & CBR
- Audio coding: MPEG1 Layer II, MPEG2/4 AAC-LC
- SNMP & HTTP WEB for monitoring & control
- Fit to MR9000

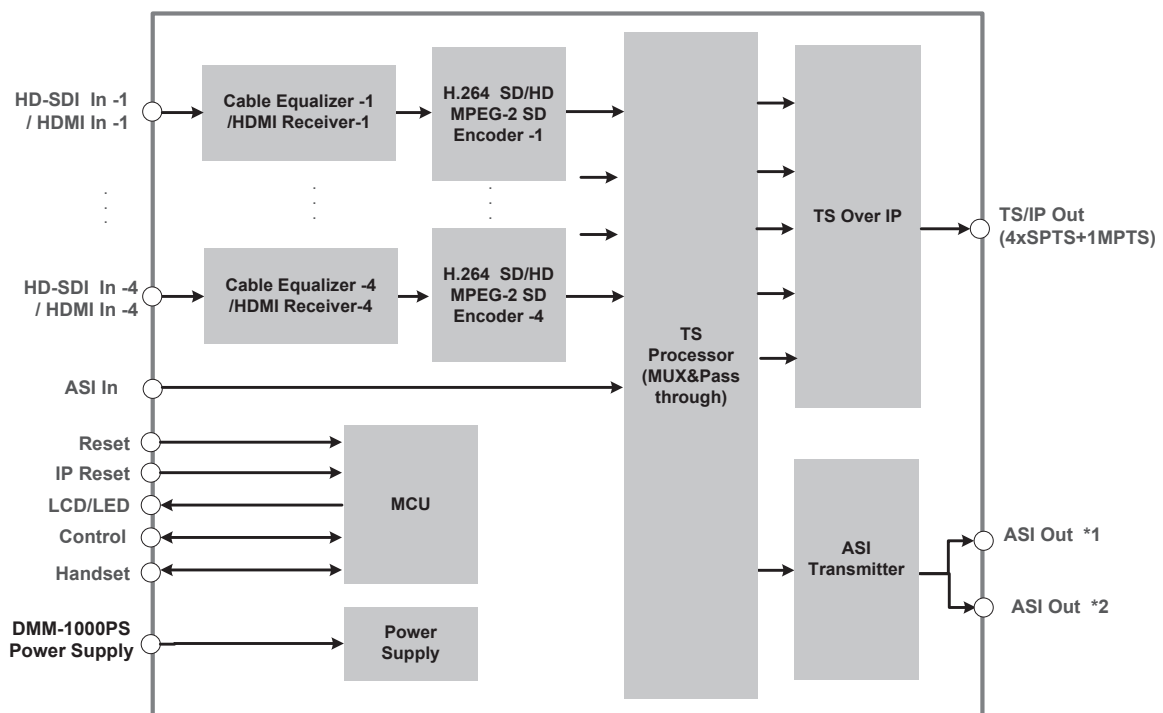
Specification

Video Input & compression Coding	
Video Input Interfaces	4x HDMI, 4x SDI, or 4x CVBS
Coding Profile & Level	H.264/AVC BLP, MP, HP @ L4.0 or less, MPEG-2 MP@ML
Sampling Format	4:2:0, 10-bit, YCbCr
Compression Bit Rate	600K~20Mbps
Video Resolution & Recommend Compression Bit Rate H.264	1080i (1920×1080) @25Hz,29.97Hz,30Hz:SMPTE274M: 1~20Mb/s 720p (1280×720) @25Hz,29.97Hz,30Hz:SMPTE296M: 1~20Mb/s 480i (720×480) @29.97Hz:SMPTE656M: 600K~10Mb/s 576i (720×576) @25Hz: SMPTE656M:600K~10Mb/s
Video Resolution & Recommend Compression Bit Rate MPEG 2	480i (720×480) @29.97Hz:SMPTE656M: 3~10Mb/s 576i (720×576) @25Hz: SMPTE656M: 3~10Mb/s
Video Resolution Down Scaling	Vertical & Horizontal adjustable respectively (frame rate is not scalable)
Aspect Ratio	4:3, 16:9 Selectable
Audio Input & Compression Coding	
Audio Input Interfaces	HDMI/SDI Embedded or Analog
Coding Standard	MPEG1 Layer II MPEG2 AAC-LC, MPEG4 AAC-LC
Sampling Rate	48KHz
Recommend Compression Bit Rate	MPEG1 Layer II :32~192Kbps(mono), 64~384Kbps(stereo), MPEG2 AAC-LC, MPEG4 AAC-LC :56~256Kbps(mono), 112~512Kbps(stereo)
DVB-ASI Input	
Input Interface	BNC Female, 75Ω
Maximum Bit Rate	100 Mb/s
Data Type	Byte
Packet Length	188/204 Bytes
Signal Level	200 ~ 880mVp-p
DVB-ASI Output	
Input Interface	BNC Female, 75Ω
Effective Bit Rate	120Mb/s
Data Type	Byte
Packet Length	188/204 Bytes
Signal Level	800±80mV
TS/IP Gigabit Ethernet	
Standard	IEEE 802.3, 10/100/1000 Base-T
Maximum Effective Bit Rate	80Mb/s , 200Mb/s
Encapsulation	SPTS or MPTS
Protocol	UDP, RTP, ICMP, ARP, IGMPv2
Rear Panel options	
ASI In	1 x BNC Female, 75Ω

Specification

SDI In	4 x BNC Female, 75Ω (D MM-2410EC-S or DMM-2411EC-S, see Model List)
HDMI In	4 x HDMI Socket, 75Ω (D MM-2410EC-H or DMM-2411EC-H, see Model List)
CVBS In & Analog Audio In	2 x D-Sub15 (with D-Sub 15 to BNC female adapter cablings, total 4 sets of inputs, see Model List)
ASI Out	2 x BNC Female, 75Ω(1 Backup)
Front Panel	
Control	1x RJ-45, 10/100 Base-T
TS/IP	1x RJ-45, 10/100/1000 Base-T
LED	1x Power, 4x Encoder Status, 1x ASI/IP Status
IP Reset	Press for 5 second or more to return the default IP address of control port
Reset	Local reset
Others	
Power	DC 3.3V/5V/12V, from DMM-1000 (8-slot) or DMM-200 (2-slot)
Operating Temperature	0 ~ 40°C
Storage Temperature	-10 ~ 60°C
Operating Humidity	10 ~ 90% (Non-condensed)

TS/IP “Output Only” mode (EN9400H)



Model numbers & Order Information

Mode Interface		EN9200AV	EN9400H	EN9400SDI	EN9200AV+AAC	EN9400H+AAC	EN9400SDI+AAC
Input	HD/SD SDI with Embedded Audio			x4			x4
	HDMI with Embedded Audio		x4			x4	
	CVBS & Analog Audio	x4			x4		
TS Input	ASI	●	●	●	●	●	●
	TS/IP (GbE)	●	●	●	●	●	●
TS Output	ASI (1+1)	●	●	●	●	●	●
	TS/IP (GbE)	●	●	●	●	●	●
Audio AAC-LC Encoding		●		●		●	

Function block diagrams

