LINEAR DENKI

MD3411S

HD/SD Encoder
HDMI / SDI / 1080i HD / H264 / MPEG2
HD / SD / 1-SEG

English

MD3411S

It is an advanced professional platform for ISDB-Tb applications in studio TV station, cable, satellite, IPTV, and terrestrial signals with high quality MPEG-2 and H.264 encoding.
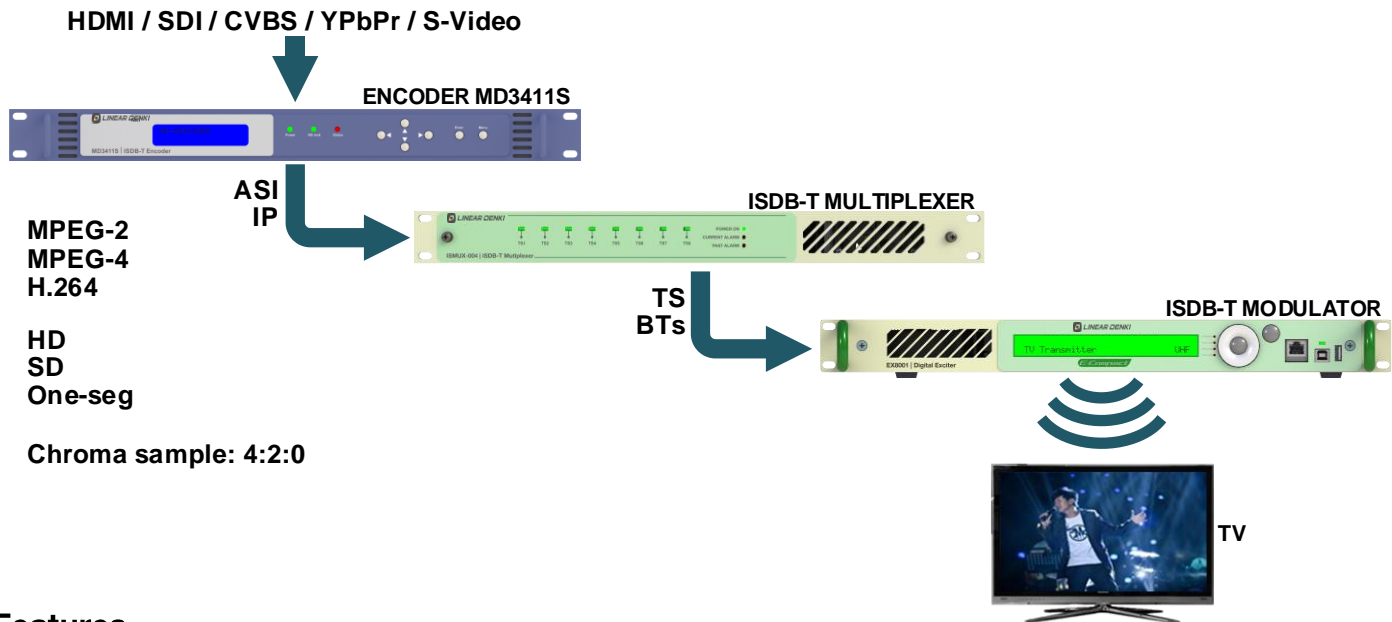
Supports encoding of input interfaces in HDMI, SDI, CVBS, YPbPr and CVBS standards and with high-resolution and high-framerate ASI and IP outputs simultaneously with low-resolution standards such as PIP (Picture-in-picture) and ISDB-T One-seg.

Applications

Headend system for digital TV and IPTV;

Audio and video over IP peer-to-peer;

Remote live re-broadcasts and real-time broadcasting;

HDMI / SDI / CVBS / YPbPr / S-Video

ENCODER MD3411S

ASI
IP

MPEG-2
MPEG-4
H.264

HD
SD
One-seg

Chroma sample: 4:2:0

ISDB-T MULTIPLEXER

TS
BTs

ISDB-T MODULATOR

TV

Features

Two AC-DC converters: Operation with energy redundancy;

MPEG-2 MP@ML4:2:0 and MPGE-4 AVC 4:2:0 (h.264) video encoding;

ASIC technology. Recommended video bitrate:
SD ~ 1.2 Mbps
720p ~ 2 Mbps
1080i ~ 6 a 8 Mbps

HDMI 1.3A interface with auto input detection and resolution;

Supports SDI, HD-SDI, HD-MI, CVBS and YPbPr encoders;

Low resolution channels for applications such as Picture-in-picture (PIP) and ISDB-T One-seg;

Audio sampling rates: 44.1 kHz, 32 kHz and 48 kHz;

MPEG-1 Layer II audio encoding, MPEG-2 AAC-LC, MPEG-4 AAC-LC, MPEG-2 HE-AAC, MPEG-4 HE-AAC audio encoders;

Supports unicast and multicast IP outputs with UDP protocol as well as two identical ASI outputs;

Management via WEB Server or via the front panel of the equipment;

Supports resolutions:
1080i@50/59.94/60fps
720p@50/59.94/60fps
480i
576i

Conforms to 2 simultaneous stream output standards for One-sec and Full-sec;

Built-in time base correction and video pre-processing;

Standard cabinet 19", 1RU high. Low energy consumption;

Technical Features

Video input

1×CVBS	PAL, NTSC, BNC Unbalanced 75Ω BNC connector
1×SDI	HD-SDI (SMPTE 292M) Unbalanced 75Ω BNC connector
HDMI	HD-MI 1.3a
1×YPbPr	YPbPr – component video interface Unbalanced 75Ω BNC connector

Audio input

Analog	Stereo analog audio balanced XLR connectors
HDMI/SDI	Embedded audio

Stream Output

DVB	2 identical ASI outputs In 50083-9 ASI standard BNC / 75Ω
IP	100/1000M Base-T Ethernet[1] UDP/RTP Supports Unicast/Multicast
Format	188 / 204 bytes per UDP packet
Bitrate	0,25-20 Mbps

One-seg / PIP video

PAL Resolution	352x288i 320x240i 320x180i 176x144i 160x120i 160x90i @ 50 Hz
NTSC Resolution	352x288i 320x240i 320x180i 176x144i 160x120i 160x90i @ 50 Hz
Encoder	MPEG-2; H.264; (Automatically follows main stream format)
Aspect Ratio	4:3; 16:9; (Automatically follows main stream format)
Video PID	32 – 8190
Audio PID	Follows the same format as the audio PID
Frame Rates	50 fps, 59.9 fps

Full-Seg video

Video	MPEG-2 / H.264 MP@ML 4:2:0
Resolution	1920x1080i @60/50 fps 1280x720p @60/50 fps 720x780i @60 fps 720x576i @050 fps
Bit rate mode	VBR, CBR
GOP	IBBP, IPPP, IBP, IBrBBP
In MPEG-2 encoder only supports SD output	

Audio Encoder

1 pair audio channel processing

Sampling rate	48 kHz, 44,1 kHz, 32 kHz
Bit rate	64, 128, 192, 256, 320, 384 (kbps)
Audio encoding	MPEG-1 Layer II, MPEG-2 AAC-LC, MPEG-4 AAC-LC, MPEG-2 HE-AAC, MPEG-4 HE-AAC
Quantization	24 bits
Audio gain	0, ±6 dB, ±12 dB

Data Processing

PSI/SI Edition	PMT PID, Video Audio, PCR PID, Service ID Program Name, Service Provider TS id PCR Interval

Management

Interface	1x RJ-45, 10/100 Base-T, for equipment IP Control
Remote	Web management
Local	LCD display e keypad

Electrical Features

AC power	100~250 VAC
AC Frequency	50 / 60 Hz
Typical consumption	20 W

Mechanical Features

Cabinet standard 19"	1 RU
Dimensions (Height x Width x Length)	44 x 482 x 350 (mm) 1RU x 19 x 13,77 in
Weight	3,8 Kg / 8,37 lb

Operating Environment Features

Operating Altitude	Up to 2500 meters above sea level
Environment Temperature	-10 °C to +50 °C 14 °F to 122 °F
Relative humidity	5 to 95% non-condensing

Notes:

[1] Ethernet is a trademark of Xerox Corporation.

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