

**SUNNISKY MPEG-2 Video/Audio Encoding & Modulators Series:
ECM100 for DVB-C QAM modulating;
ETM100 for DVB-T COFDM modulating**

The SUNNISKY ECM100 series is an two-in-one device, which has integrated MPEG-2 Video/Audio real-time encoding and DVB-C QAM modulating (only ECM100) , or and DVB-T COFDM modulating (only ETM100) to convert audio/video signals into RF output.

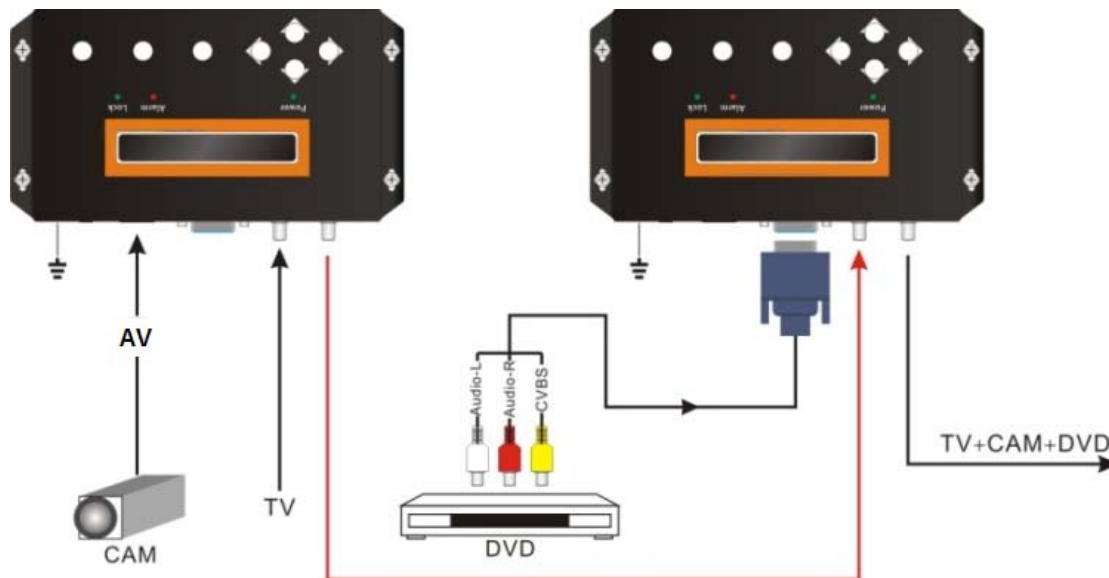


It can digital sample input analog video/audio (or optional S-Video signal) from satellite receiver, VCR/VCD/DVD, all kinds of Camera including CAM, etc., and by aid of MPEG-2 technology compress and encode them to convert into digital SPTS (Single Program Transport Stream), then output to the part of digital DVB-C QAM agile modulating (only ECM100) or DVB-T COFDM agile modulating (only ETM100), and RF processing to output one DVB-C RF signal in the range of 30MHz to 960MHz into CATV (Cable TV) network (only ECM100),, which will be received by all standard DVB-C FTA STBs in one same CATV network; or RF processing to output one DVB-T RF signal in the range of 30MHz to 960MHz into DVB-T wireless digital terrestrial TV network (only ETM100), which will be received by all standard DVB-T FTA STBs in one same DVB-T wireless digital terrestrial TV network.

Specially, it supports to record from input video source as TS file and play directly TS video files from its USB interface (Optional), which makes it more suitable for the demand of various applications in surveillance control, advertisement of digital signage in hotel and shopping, or home entertainment, etc.

Feature

- Coincident with the standard MPEG-2 MP@ML 4:2:0, and fully complies with DVB-C ETSI / EN 300429 standard (only ECM100); or with DVB-T ETSI / EN 300429 standard (only ETM100)
- Integrated MPEG-2 Encoding and DVB-C QAM or DVB-T COFDM Modulator with two-in-one style
- Support several ECM100 series units to cascade via RF input port in order to increase the capacity

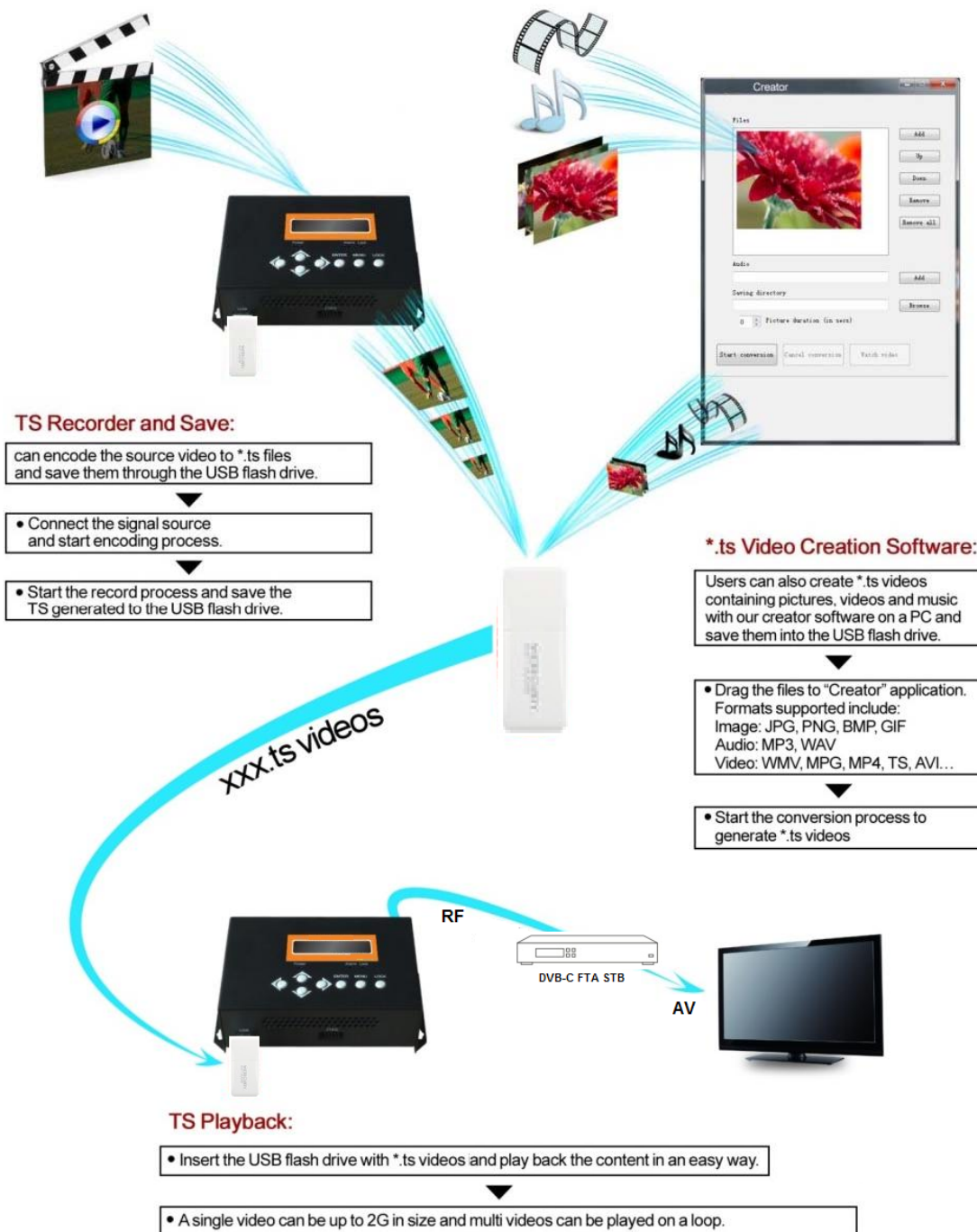


- PAT and PMT automatically or manually are generated
- NIT and SDT information could be edited and inserted
- Insert the DVB-SI service information into the output TS stream.
- Analog audio/video (default, S-Video optional) signal input
- Supports input both of NTSC, PAL and SECAM analog video system format
- Dual track Audio (Left and Right) input
- Full D1 and sub video resolutions to choose, for example, Half D1, SIF, QSIF
- 188 or 204bytes packet length is available

- Video compression code rate 0.5~19.5Mbps adjustable with stuffing null packets according to the requirements of the applications
- Adopting MPEG-1 & MPEG-2 Layer I & Layer II arithmetic to compress audio signal
- Support LCN (Logical Channel Number) insertion
- Support to record from input video source as TS file into this USB storage device, and play directly video file (JPG, PNG, BMP, GIF etc, image file format, MP4, WMV, AVI, MPG, TS, MKV etc, Video file format, MP3, WAV etc, Audio file format) which is smaller than 2GB from this USB storage device (Optional)



USB Recorder & Player



- Support ITU-T J.83 Annex A or B or C (need to confirm before order) modulation standard (only ECM100)
- Constellation range of 16QAM/32QAM/64QAM/128QAM/256QAM, or 64B QAM / 256B QAM (need to confirm before order) could be selectable (only ECM100)
- Constellation range of QPSK / 16QAM / 64QAM (need to confirm before order) could be selectable (only ETM100)
- Adjustable symbol rate from 5.0 to 9.0Msps only for ECM100; or 4.98 to 31.67Mbit/s only for ETM100
- 188/204 data packet length self-adaptation
- Support PID filtering, re-mapping and pass-through
- Support NIT, VCT and EIT insert
- RF output level in the range of 30MHz to 960MHz
- High RF output level from 73~93dB μ V with hybrid module IC, and self-adaptation tracking filter circuit design to ensure outstanding performance of out-of-band rejection
- Support parameters to import or export
- With compact size, meet the demand of various applications in surveillance control, advertisement of digital signage in hotel and shopping, or home entertainment, etc
- Automatically restored after power failure
- LCD display and user friendly operation
- Software upgrade via JTAG or USB port
- Low power consumption

Specification

Video Input and Compression	
Video compression and encoding	MPEG-2 4:2:0MP@ML encoding (ISO/IEC13818-2)
Video input (BNC connector)&	CVBS*1 (default), or S-video*1-optional
Video format	720x576_50i (PAL), 720x480_60i (NTSC)
Video compression code rate	0.5~19.5Mbps
Video Resolution	Support Full D1, Half D1, SIF, QSIF
Video input impedance	75 Ω
Audio Input and Compression	
Audio compression and encoding	MPEG-1 & MPEG-2 Layer I/II
Audio input	XLR (Left and Right)
Audio sampling	48KHz
Audio code rate	64/96/128/192/256/320/384Kbps could be selected
QAM Modulating only for ECM100	
Full compliance	DVB-C ETSI / EN300 429, and ITU-T J.83A/ ITU-T J.83B/ ITU-T J.83C (Optional)
QAM constellations	16, 32, 64, 128, 256 QAM for Annex A; or 64B, 256B QAM for Annex B (Optional)
FEC	RS(204, 188)
Output symbol rate	5.0~9.0Msps, 1Kbps step
Phase noise	\geq 90dBc/Hz
MER	\geq 38dB (64QAM, 6.875MS/s symbol rate)
S/N ratio	\geq 50dB
RF output frequency	Agile 30MHz~960MHz, 1KHz adjustable
RF output level	-36~-16dbm (73~93dB μ V, Adjustable, 0.1dB step)
RF output impedance	F-type, 75 Ω
RF harmonics and spurious	50dBc
RF output return loss	\geq 15dB
Or COFDM Modulating only for ETM100	
Full compliance	DVB-T ETSI/EN300 744
Bandwidth	6M, 7M, 8M (Optional)

QAM constellations	QPSK, 16QAM, 64QAM
Symbol rate	4.98 to 31.67Mbit/s
FEC Code Rate	Convolutional Code Rate 1/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7
Guard Interval	1/32, 1/16, 1/8, 1/4
IFFT mode/Transmission Mode	2K, 8K
Phase noise	≥90dBc/Hz
MER	≥42dB
S/N ratio	≥50dB
RF output frequency	Agile 30MHz~960MHz, 1KHz adjustable
RF output level	-36~-16dbm (73~93dBμV, Adjustable, 0.1dB step)
RF output impedance	F-type, 75Ω
RF harmonics and spurious	50dBc
RF output return loss	≥15dB
General	
Operating temperature	0°C~40°C
Power requirement	DC12V,15W
Weight	1Kg
Size	153mm*110mm*50mm

Note: All specifications are subject to change without notice.



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