

MSM621

16/32 CVBS MPEG-4 to Digital RF Modulator



MSM621 Provides a highly flexible solution for delivery of any cable and encrypted Satellite set top box, Blue Ray and DVD player, IPTV video content all SD MPEG-4 video can be simultaneously output over IP and RF(DVB-C/T), No Needs to wire new cables as it shares the existing antenna coax cables to deployed with Analog TV network.

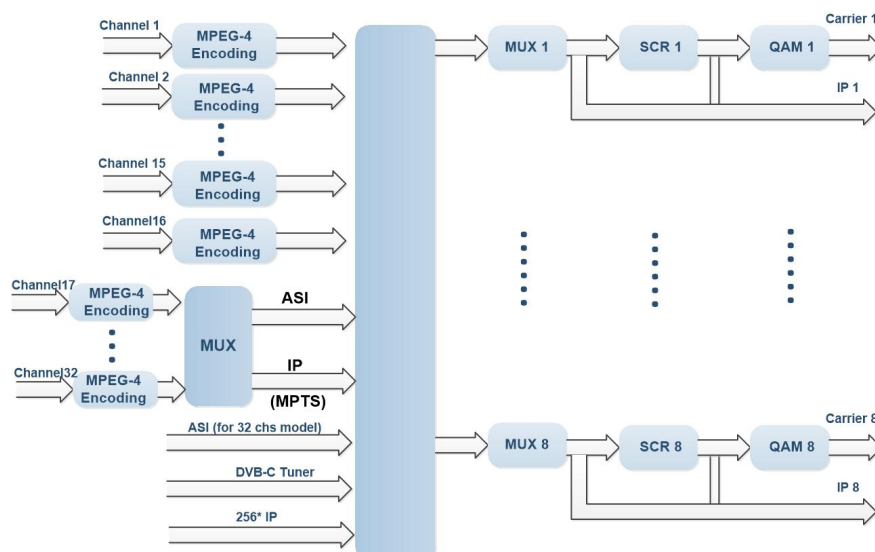
It has 2 models, Model 1: 16 channels; Model 2: 32 channels. For Model 2, 32 channels supporting 1 encoding modulating module and 1 encoding module, and both modules accept analog CVBS inputs. After multiplexing the 16 encoded TS (17~32 channels) to the encoding modulating module through 1 ASI port and 1 IP port with one MPTS, and then generating 8 MPTS output through data port.

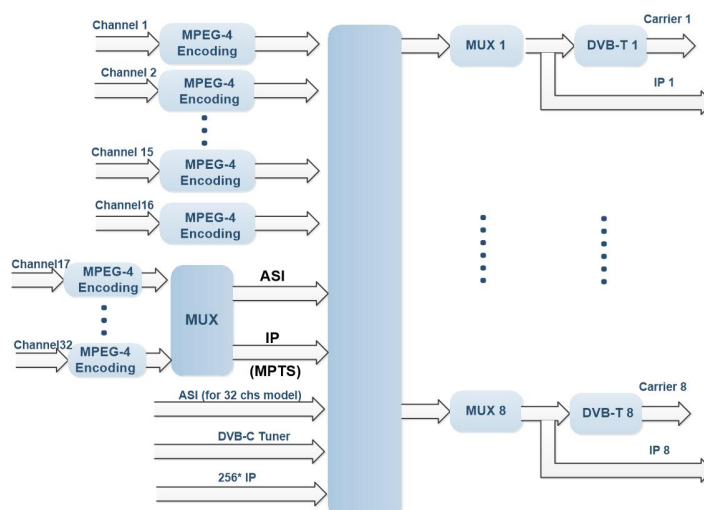
MSM621 Big advantage, it works with 256 UDP/RTP IP IGMP2.0 source and 1 Clear DVB-C Tuners inputs together, and up to 32 AV inputs. Integrate All in One Multiplexer and Scrambling MPEG-TS out Over 8 adjacent RF Channels as mirrored of 8 MPTS over LAN network. It is an ideal solution for environments, where displays to an unlimited number of displays over almost any distance, such as **Small Digital TV system, Hotel, Restaurants, Stadiums, Campus, Entertainment facilities, Airports, Theaters, Education Markets.**

Features

- Distribute Up to 32 channels of SD content over RF (DVB-T/C) to an unlimited number of TVs
- AV Mode Select 16, 32 Ports, 256 IP input over UDP/RTP
- 1*DVB-C tuner input for re-mux
- Simultaneous video output in RF over coax and IP over Ethernet
- Audio gain adjustment supported
- Support 8 Group of DVB-Simulcrypt CAS Scrambling for DVB-C QAM
- 8 separate multiplexing and Up-converter modulating adjacent carrier out
- MPEG1 Layer II Audio encoding
- VBR and CBR mode
- LCN (Logical Channel Number) support
- DVB-C (EN300 429) and ITU-T J.83A/B supported
- PSI/SI editing & inserting
- PID Remapping & Filtering
- Support PCR correct and PCR interval adjusting
- LOGO, QR code, OSD insertion for every, All or Each module of local channel
- Superior Shoulders and Excellent modulation quality MER
- Low power consumption and high reliability with MTBF(Mean Time Between Failure) ≥ 87600 Hours
- Easy-to-Use System Management via Web
- Support Null PKT Filter
- Low Cost per channel - Breakthrough Price !

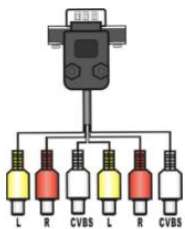
Principle Chart





TECHNICAL SPECIFICATIONS

Composite Inputs



32 Composite inputs (Option 16 Channels)
 PAL, NTSC, 75Ω unbalanced
 DB15-To-RCA interface
 Return loss ≥ 35 dB, 10Hz to 5.5MHz
 ASI input (only for 32 channels)
 1 DVB-C Tuner, F type
 256 IP input over UDP and RTP
 Selectable GbE1, GbE2 Port RJ45, 850Mbps per port
 Multicast(IGMP2.0/3.0)/Unicast, IPTV Sync

Down/Cross Conversion

Input	Output
720×576i	720×576_50i, 704×576_50i, 640×576_50i, 352×288_50i 320×288_50i, 176×288_50i, 176×144_50i
720×480i	720×480_60i, 544×480_60i, 352×480_60i 352×240_60i, 320×240_60i, 176×240_60i, 176×120_60i

Frame Rates 50fps, 60fps

Video Processing

Input Format	PAL-BGHID/PAL-CN/PAL-M/PAL-60 NTSC/NTSC-M/NTSC-4-43
Image Setting	Brightness: 1 - 255 Contrast: 1 - 255 Saturation: 1 - 255 Hue: -128 - 127
Video Sharpness	Close, Smoothness, General, Sharpness
Encoding	MPEG4 AVC/H.264 (HP/MP/BP)
Bit-rate	1Mbps~5Mbps for each channel
Encoding Schemes	VBR, CBR
GOP Structure	IPP (P frame is adjustable)
Aspect Ratio	4 : 3, 16 : 9
Multiplexing	Support NIT table insert

Audio Processing

Encoding	MPEG-1 Layer 2
Sampling rate	48KHz
Resolution	24-bit
Bit-rate	64kbps, 128Kbps, 192kbps, 224kbps, 256kbps, 320kbps, 384kbps
Audio Gain	0-255 adjustable

Scrambling(Only for DVB-C)

Simul-Crypt CAS number	4
Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197
Table update	CAT/PMT
ECMG interface	TCP
EMMG interface	TCP/UDP
EMM bandwidth	0~3Mbps/TS

General RF Modulation

Connector	F-Type, 75 Ω
Ports	1 RF ports
Output Return Loss	14 dB
RF frequency	50~960MHz, 1KHz step
RF output level	-20~ 3dBm (87~110 dBμV), 0.1db step
Numbers of RF Channel	8

DVB-C Mode

Standard	EN300 429/ITU-T J.83A/B
QAM Encoding	EN300 429& ITU-T J.83 Annex A (DVB), Annex B
MER	≥ 40 db
Bandwidth	6Mhz(Annex B) or 8 Mhz(Annex A)
Symbol Rate	5.0Msps~7.0Msps, 1ksps stepping
Constellations	16/32/64/128/256QAM (Annex A) 64/256QAM (Annex B)

DVB-T Mode

Standard	EN300744
FFT mode	2K, 4K, 8K
Bandwidth	6Mhz, 7Mhz, 8Mhz
Constellation	QPSK, 16-QAM, 64-QAM
Guard Interval	1/4, 1/8, 1/16, 1/32
FEC	1/2, 2/3, 3/4, 5/6, 7/8
MER	≥ 40 dB

Stream output

8*MPTS IP out Configurable mirroring per QAM
MPEG-TS Over UDP/RTP, 1*1000(GbE1 Port)
7x188 Bytes per TS packet
Filter Null Packet
Source TS select: Scrambled, No Scrambled

System function

Web Network management
English language
Ethernet software upgrade
Save/Restore/Facture Set/Backup/Load Setting

Environment

Dimension(W×L×H)	482mm×410mm×44mm
Approx weight	8kg
Temperature	0~45℃(Operation); -20~80℃ (Storage)
Voltage range	100 to 120/200 to 240V AC ±10%; 50/60Hz
Power consumption	70W

Ordering Information

16 Composite inputs	do not support ASI input
32 Composite inputs	support ASI input

Ordering Information

Product category	Product Model	Detail Description	Application
Related products	4Channel Digital TV Transmodulator QAM6248Plus	12*FTA DVB-S2 or 12*FTA DVB-T2 or 8*FTA DVB-S2+4*FTA DVB-T2 or 4*FTA DVB-S2+8*FTA DVB-T2 and 128*IP in; 4 DVB-T or 4 DVB-C (Scrambling, Annex A/B)/ 4 MPTS over UDP/RTP out	--Small Digital Cable TV System; --DVB-S2 To DVB-C/T Converter;
Related products	High Density Digital TV Transmodulator MSM628	16*DVB-S2 FTA/2ASI/512IP Input, 16*DVB-C (Scrambling, Annex A/B) /8*DVB-T RF/MPTS over UDP/RTP out	--Upgrade Analog to Digital TV --Hotel, Campus
Related products	Carrier 8Ch HDMI H.264 modulator-1080P@60fps EMI3381	1*ASI Mux and 8/4 Ch HDMI H.264 1080p/1080i/720p/480i/ (576i/1080i->576,480i Downscale convert)@50/60/59.94 fps; MPEG1 L2 Audio; 4*DVB-C/4*ATSC/2*DVB-T/2*ISDB-T/8* SPTS UDP and 2*ASI out	--Distribute HD to Coax& IP TV; --Hotel, Campus
Related products	PREMIUM 4Ch HDMI/AV/ YPbPr MPEG2/AVC HD Encoder Modulator EMI3440	1*ASI Mux and 4 Ch HDMI/YPbPr/AV MPEG-2/H.264 1080p/1080i/720p/480i@50/60/59.94 fps; MPEG1 L2/AAC/AC3; 4*DVB-C/4*ATSC/2*DVB-T/2*ISDB-T/4* SPTS UDP and 2*ASI out	--Distribute MPEG-2 HD to Coax&IP TV; --DVB/ATSC off air --Hotel, Campus
Related products	8/12/24Ch AV MPEG2 Digital TV Modulator MSM620	128*IP and 8/12/24 Ch AV MPEG2 SD@50/60 fps; 4*DVB-C/4*DVB-T/4*MPTS over UDP/RTP out	--Small Digital Cable TV System; --DVB-S2 To DVB-C/T Converter; --Hotel, Campus