

MSM628Pro

DIBVISION | DIBSYS

16/24* RF/IP to RF Modulator

DVB-C DVB-S2 DVB-S2X
CABLE
DVB-T2 ISDB-T



MSM628Pro is a high-density, modular and professional TS processor equipped with 16/24 FTA tuners, which works with DATA 1 Port and Two DVB-ASI Ports inputs. After demodulating, multiplexing and DVB-T or DVB-C modulating, it outputs 8/16 non-adjacent carriers and 8/16 IP (MPTS) as mirror of carriers through DATA2. It's very suitable for any industry which needs to integrate live video content and provide variety of TV channels on the local Coax Cable deployment of Digital TV broadcasting commercial buildings, apartments, hotels, hospitals, schools and government Institutes.

MSM628Pro enables an all-IP headend architecture, resulting in a more scalable and lower-cost transition in contribution and distribution services. This unit is designed especially for high channel density environments where rapid deployment, advanced management and compatibility are critical. Used in some of famous ballparks in the world, this is an ideal solution for environments where you have a large number of displays, such as stadiums, entertainment facilities, or broadcast environment.

Business Benefits

- Enhanced Modulated Channel resource utilization
- Preserved cascading of two sets of ASI interface inputs and outputs
- LCD screen facilitates convenient operation and setting of local IP address
- Reduced cost and complexity of management
- Concurrent high availability for all services
- Support Tuner RF In/Loop out interface for cascading with Tuner; Reduced the number of TUNER CABLE line connections and level attenuation

Features

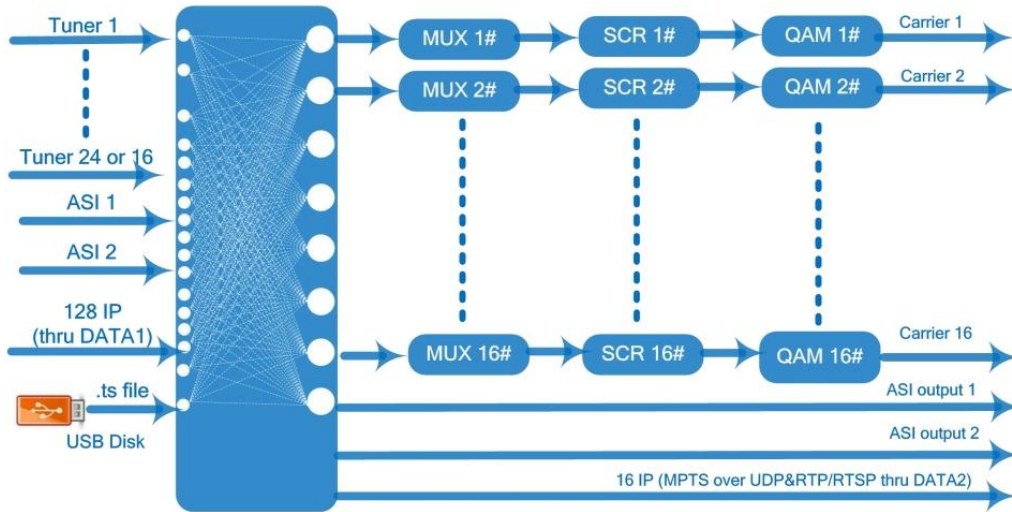
- Selectable RJ45 interfaces port of GbE IP, 2*DVB-ASI and up to 16/24 FTA RF inputs
- 16/24* FTA Tuners Input, Supports variety of input options DVB-T2/S2/S2X/C/ISDB-T
- Multi-mode tuners switchable (DVB-T/T2, DVB-C, ISDB-T)
- Up to 128*IP Inputs over GbE Port
- 8/16 IP (MPTS) outputs over UDP and RTP/RTSP, as mirror of the carriers
- 2 TS outputs thru ASI out 1 and ASI out 2, as mirror of the 2 chosen carriers
- 16 groups multiplexing+16 groups scrambling(optional) +16 groups QAM modulating (DVB-C out)
- 8 groups multiplexing+8 groups QAM modulating (DVB-T out)
- 16*DVB-C or 8*DVB-T No-adjacent Carrier RF output as mirror of IP out after Multiplexing or Scrambling
- BISS descrambling, max 64 BISS Keys per output channel **(optional)**
- PID Filtering, Remapping and Passthrough Capabilities with User-Defined PID Value and any Index of In/Out TS
- TS files input by playing ts via an USB disk (FAT 32)
- Excellent RF output performance index, MER≥40db
- Multiplexing and transparent pass-through of two operating modes for each modulated carrier output
- PSI/SI editing and inserting
- accurate PCR adjusting
- Easy-to-Use System Management via Web

Main Application

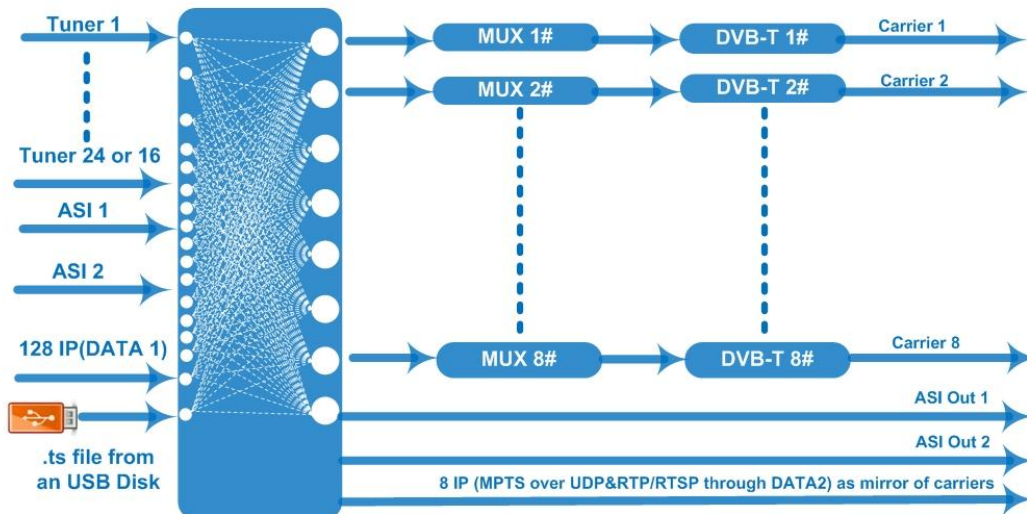
- Upgrade all your analog Head-ends to digital TV Solution
- Enterprise, Hotel, campus, hospital, Public Place
- Convert Huge FTA Channels into Cable TV networks
- Highest cost effective Digital TV deployment

Principle Chart

DVB-C output



DVB-T output



TECHNICAL SPECIFICATIONS

Tuners Inputs

Number of Tuners	16/24 FTA Tuners In
Type	DVB-C, DVB-T/T2, DVB-S/S2/S2X, ISDB-T
Connector	F female, 75 Ω

Version 1

DVB-S tuner

Input Frequency	950-2150Mhz
Symbol rate	0.5~45Mbauds(QPSK)
Signal Strength	-65~-25dBm
Code rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Constellation	QPSK, 8PSK

DVB-S2 tuner

Input Frequency	950-2150Mhz
Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 32APSK: 0.5~40Msps;
FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
Constellation	QPSK, 8PSK, 16APSK, 32APSK
Max input bitrate	≤129 Mbps

DVB-S2X Tuner

Input Frequency	950-2150Mhz
Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 8APSK/32APSK: 0.5~40Msps
FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 2/3-L, 32/45, 11/15, 7/9
Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK
Max input bitrate	≤129 Mbps

Version 2 Multi-mode tuners switchable

DVB-T/T2 Mode

Frequency Range	60~890Mhz
Bandwidth	6Mhz, 7Mhz, 8Mhz

DVB-C Mode

Frequency Range	60 ~ 890MHz
QAM Encoding	ITU-T J.83 Annex A(DVB), Annex B,Annex C

ISDB-T Mode

Input frequency range	60 ~ 890MHz
-----------------------	-------------

IP Interfaces

Types	Two independent Gigabit Ethernet GbE1 and GbE2 port
Connector	100/1000Base-T auto-sensing Each providing 1000Base-T (twisted pair, RJ-45)
IP Encapsulation	MPEG-TS over UDP/RTP IP
I/O Speed (1Gbe ports)	840 Mbps per port

IP Input

Addressing & Protocols	Unicast, Multicast(IGMP V2/V3)
MPEG Format	188/204 Bytes per TS packet
Maxinumber of services	128 IP inputs via GbE1
Transport stream	Reception of MPTS and SPTS

IP Output

DVB-T Configuration	mirroring per Carrier Channel (thru GE2)
DVB-C Configuration	mirroring per Carrier Channel (thru GE2)
TS out	GbE2
Packet Length	1-7
MPEG Format	188 Bytes per TS packet
Null Packet Processing	Filtering & Insertion

DVB-ASI

Standard	GY-T 170-2001, EN50083-9
Interface port	2 port in, 2 ports out, BNC-Female, 75Ω
Date Bitrate	≅ 150Mbps

Multiplexing

Maximum PID Remapping	256 output per channel
PID remapping (automatically or manually)	
Accurate PCR adjusting	
Generate PSI/SI table automatically	

Scrambling(Only for DVB-C)

Simul-Crypt CAS number	4
Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197
Connection	Local/remote connection

General RF Modulation

Connector Type	1×F type Female in front panel, 75Ω
Output Return Loss	14 dB
RF frequency	50~960MHz, 1KHz step
Output Level	-20~+10dbm(87~107 dbμV),0.1db step

QAM Modulating

Modulation Standard	DVB-C EN300429
MER	≥ 40dB
Num of QAM Channels	16 Non-adjacent Carrier
QAM Encoding	ITU-T J.83 Annex A (DVB), Annex B
Symbol Rate	5.0~7.0Msps, 1KHz stepping
QAM Constellations	16/32/64/128/256QAM(Annex A) 64/256QAM(Annex B)
Bandwidth	8M (Annex A) ; 6M (Annex B)

DVB-T Modulating

Modulation Standard	EN300744
Num of Cofdm Channels	8 Non-adjacent Carrier
MER	≥ 42dB
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 Code	1/2, 2/3, 3/4, 5/6, 7/8

System function

Management Port	Web-GUI, RJ45,100M Chinese/English language Ethernet software upgrade
-----------------	-----------------------------------------------------------------------------

Environment

Dimensions (W*L*H)	482mm×270mm×44mm
Temperature	0~45℃ (operation), -20~80℃ (storage)
Power Voltage	AC 100V±10%/60Hz; AC 220V±10%, 50/60HZ