

QAM6248 Plus

dibsys

8/12* Tuner to DVB-C/T Transmodulator(**CI Option**)

DVB-C **DVB-S2** **DVB-S2X**
CABLE

ATSC **ISDB-T** **DVB-T** **DVB-T2**
TERRESTRIAL

Module 1



Module 2



QAM6248Plus, Provides a highly flexible solution for delivery of any FTA /Encrypted Satellite **DVB-S/S2/S2X** and Terrestrial **DVB-T/T2** Signals, **ISDB-T**, **ATSC**, **DVB-C** optional, IPTV content all encoding and Resolution of 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.

This unit is designed especially for high channel density Distribution Video Engineering project, which support rapid deployment, and compatibility IP source and DVB-S/S2/S2X, DVB-T/T2, ISDB-T, ATSC, DVB-C RF inputs simultaneously.

It used in some of the most Digital TV Broadcasting and Hotel for Coax headend solution in the world, and it is an ideal solution for any environments which can support unlimited numbers of displays within big distance range, such as Community, Restaurants, Stadiums, Campus, Entertainment facilities, Airports, Theaters, Education Markets.

QAM6248Plus Big advantage, it works with 128 UDP/RTP IP IGMP2.0 source and FTA or encrypted Transponders inputs together. Integrate All in One Multiplexer and Scrambling MPEG-TS out Over 4 adjacent RF Channels as mirrored of MPTS over LAN network. It is also characterized with high integrated, high performance and breakthrough price.

Features

- Distribute FTA Channels over RF (DVB-T/C) to an unlimited number of TVs
- Up to 3 modules and 128 IP over UDP/RTP inputs in 1RU Chassis
- FTA RF modules Plug in: 4*FTA Tuners In/Loopout per module, DVB-S/S2; DVB-T/T2 tuner optional
- Encrypted RF modules Plug in: one module of 4 FTA Tuners In/Loopout, two modules of 4*tuners+ 4*CI, DVB-S/S2/S2X, DVB-T/T2, ISDB-T, ATSC, DVB-C optional
- Simultaneous video output in RF over coax and IP over Ethernet
- Support 4 Group of DVB-Simulcrypt CAS Scrambling for DVB-C QAM
- BISS mode 1 & BISS-E
- 4 separate multiplexing and Up-converter modulating adjacent carrier out
- LCN (Logical Channel Number) support
- PSI/SI editing & inserting
- PID Remapping & Filtering
- Support PCR correct and PCR interval adjusting
- 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
- Log information printing
- Lowest Cost per channel - Breakthrough Price !

TECHNICAL SPECIFICATIONS

FTA tuner modules

Input Interfaces

4 FTA Tuners In/Loopout per Module
Up to 3 Modules(12 FTA RF Ports)
Selectable DVB-S/S2 or DVB-T2 Mode
F-female type Connector
128 IP input over UDP and RTP ,RJ45 Port
SPTS/MPTS, ≤ 850 Mbps per port
Multicast(IGMP2.0/3.0)/Unicast, IPTV Sync

DVB-S/S2 Mode

Input Frequency 950-2150Mhz
Symbol rate 2~45Mbauds(DVB-S QPSK)
1~45Mbauds(DVB-S QPSK)
2~30Mbauds(DVB-S2 8PSK)
Signal Strength -65 ~ -25dBm
FEC Demodulation 1/2, 2/3, 3/4, 5/6, 7/8(DVB-S QPSK)
1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
(dvb-s2 QPSK/8PSK)
Roll Off 0.20; 0.25; 0.35 (Only DVB-S)
Demodulation Mode QPSK, 8PSK (Only DVB-S2)
Input Impedance 75 Ω
Number of RF Ports 4

DVB-T/T2 Mode

Frequency Range 30MHz-1000Mhz
Bandwidth 6Mhz, 7Mhz, 8Mhz
Level -87 ~ -20dBm
Constellation QPSK, 16QAM, 64QAM
FEC Demodulation 1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval 1/4, 1/8, 1/16, 1/32
Number of RF Ports 4

Modulation

Connector F-Type, 75 Ω
Ports 1 RF ports per module
Output Return Loss 14 dB
RF frequency 50~960MHz, 1KHz step
Number of RF Channels 4

DVB-C Mode

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
QAM Constellations 16/32/64/128/256QAM(Annex A)
64/256QAM(Annex B)
RF output level -25~ -1dBm (82~107 dB μ V), 0.1db step

DVB-T Mode

Standard EN300744
FFT mode 2K
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 ≥ 42 dB
RF output level -28~ -3dBm (80~105 dB μ V), 0.1db step

Stream output

MPTS IP out Configurable mirroring per QAM
TS/IP encapsulation UDP/RTP, 1*GbE Port)
7x188 Bytes per TS packet
Filter Null Packet
Source TS select: Scrambled, No Scrambled

CI + tuner modules

Input Interfaces

3 Modules 4 FTA Tuners In/Loopout
2 *tuners+ 2*CI
2 *tuners+ 2*CI
Selectable DVB-S/S2/S2X, DVB-T(T), ISDB-T, ATSC, DVB-C Mode
F-female type Connector
128 IP input over UDP and RTP ,RJ45 Port
SPTS/MPTS, ≤ 850 Mbps per port
Multicast(IGMP2.0/3.0)/Unicast, IPTV Sync

Multi-mode tuners switchable (New)

DVB-C

Input Frequency	60~890 MHz	
Standard	J.83A, J.83C	J.83B
Constellation	16/32/64/128/256 QAM	64/256 QAM

DVB-T/(T2)

Input Frequency 60~890 MHz
Bandwidth 6/7/8 M

ISDB-T

Input Frequency 60~890 MHz

Version 1

DVB-S

Input Frequency 950-2150MHz
Symbol rate 0.5~45MSPS
Signal Strength -65~-25dBm
FEC 1/2, 2/3, 3/4, 5/6, 7/8 QPSK

DVB-S2

Input Frequency 950 ~2150MHz
Symbol rate QPSK: 1~45 MSPS; 8PSK: 0.5~45 MSPS
FEC 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Constellation QPSK, 8PSK

Version 2 (New)

DVB-S

Input Frequency 950-2150MHz
Symbol rate 0.5~45MSPS
Signal Strength -65~-25dBm
FEC 1/2, 2/3, 3/4, 5/6, 7/8
Constellation QPSK
Max input bitrate ≤ 129 Mbps

DVB-S2

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

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, 2/3-L, 32/45, 11/15, 7/9
Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK
Max input bitrate	≤129 Mbps

ATSC-T

Input Frequency	54~858MHz
Bandwidth	6M
Constellation	8VSB

Descrambling CAM/CI	4 sets
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Modulation**DVB-C**

Standard	J.83A (DVB-C), J.83B
MER	≥43dB
RF frequency	50~960MHz, 1KHz step
RF output level	-25~ -1dbm(83~107 dbμV), 0.1db step
Symbol rate	5.000~7.000Mps adjustable
RF Out	4*DVB-C non-adjacent carriers combined output,

Standard	J.83A	J.83B
Constellation	16/32/64/128/256 QAM	64/256 QAM
Bandwidth	8M	6M

Stream output

4*MPTS over UDP and RTP out (RJ45, 1000M/100M Unicast/Multicast)

DVB-T

Standard	EN300744
FFT mode	2K
Bandwidth	6M, 7M, 8M
Constellation	QPSK, 16QAM, 64QAM
Guard Interval	1/4, 1/8, 1/16, 1/32
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8

MER	≥42 dB
RF frequency	50~960MHz, 1KHz step
RF out	4*DVB-T non-adjacent carriers combined output 40M total bandwidth limitation
RF output level	-28~ -3 dBm (79~104 dbμV), 0.1db step

Stream output

UDP and RTP protocol (RJ45, 1000M/100M Unicast/Multicast)

4*MPTS out --- Version 1 ;

32*SPTS out ---Version 2

General**Multiplexing**

Maximum PID	180 input per channel
Remapping	PID remapping by automatically or manually)
PSI/SI	SDI/PMT/TOT/PAT/BAT/CAT/TDT/NIT Insert Accurate PCR adjusting PCR PID Sync

Scrambling(Only for DVB-C)

Simul-Crypt CAS number	4
Scrambling algorithm	DVB-CSA
Table update	CAT/PMT
ECMG interface	TCP
EMMG interface	TCP/UDP
EMM bandwidth	0~3Mbps/TS

BISS Descrambling

Mode 1, Mode E (descramble individual program)

System function

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

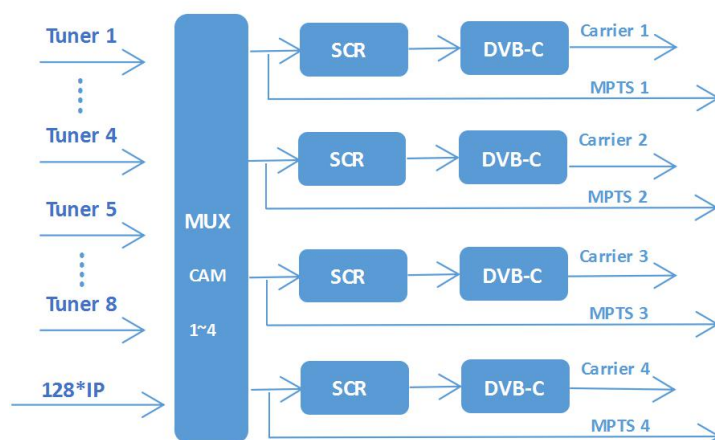
Environment

Dimension(W×L×H)	482mm×300mm×44mm(1RU)
Approx weight	4kg
Temperature	0~45℃(Operation); -20~80℃ (Storage)
Voltage range	100 to 120/200 to 240V AC ±10%; 50/60Hz
Power consumption	< 30W

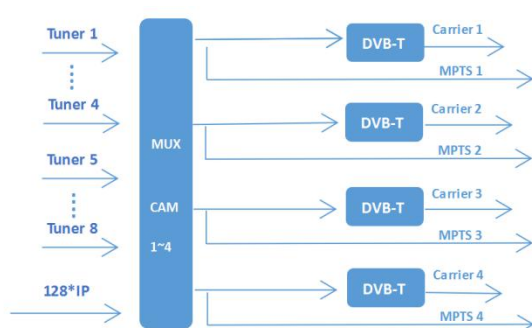
Ordering information

Input: 4*CI tuner +4*FTA tuner (Selectable DVB-S/S2/S2X, DVB-T(T2), ISDB-T, ATSC, DVB-C)

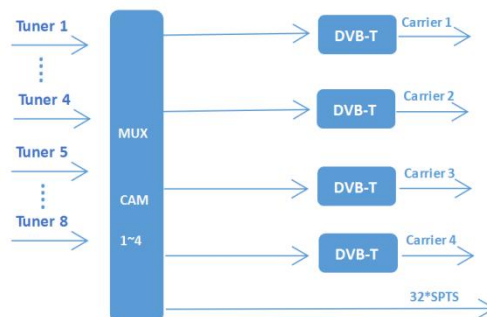
Output: DVB-C



Input: 4*CI tuner +4*FTA tuner (Selectable DVB-S/S2/S2X, DVB-T(T2), ISDB-T, ATSC, DVB-C)
Output: DVB-T

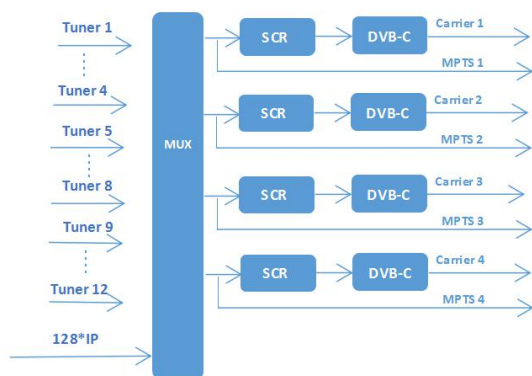


Version 1



Version 2

Input: 12*FTA tuner (Selectable DVB-S/S2, DVB-T(T2))
Output: DVB-C



Input: 12*FTA tuner (Selectable DVB-S/S2, DVB-T(T2))
Output: DVB-T

