

Q1

DIBSYS

8/12/24* FTA DVB-S2 IRD (Option RF Modulator)

DVB-C CABLE DVB-T TERRESTRIAL ISDB-T ATSC DTMB



Q1 is a high-density, modular and FTA professional TS processor equipped with 24 independent tuners, which can be either of DVB-S2/S, ATSC types. and option modulation (DVB-C/ DVB-T/ISDB-T/ATSC/DTMB) to convert Video/Audio signals into RF over exist Coax Cable distribution. It provides a best-of-class gateway platform for Digital TV Owners and IPTV operators.

Q1 DVB-S/S2 Tuner to IP Gateway is a head-end interface conversion device and Routes Any or All Transport Streams via IP Output Port by 256*SPTS and 4*MPTS channels simultaneously. It is integrated with tuner demodulation with ASI input and gateway function, which can demodulate from 24 tuners and directly convert the TS from DVB-ASI, then output the IP package through different IP address and ports.

Q1 enables an all-IP headend architecture, resulting in a more scalable and lower-cost transition to IP-based services. It distribute any HD and SD of unencrypted Tuners Channels to unlimited TVs over the existing TV coax cables with real time perfect quality at any distance. This is an ideal solution for environments where you have a large number of air Channel, and used largely to Medium-Scale IPTV, Hotel, entertainment facilities, education broadcasting systems at schools and government buildings or any kinds of Source signals convert to Cable TV broadcast environments in limited budget severely.

Used in some of the most 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. This DVB to IP Gateway is designed especially for high channel density environments where Rapid deployment, Easy management and compatibility are critical.

Highlights

Works both Coax Cable & IPTV networks: Distribute MPEG-4 AVC encoding to all kinds of Modulation and All SPTS/ MPTS Over UDP IP out.

Operation via LCD Screen and Web Management : easy to read LCD color front panel that makes it easy to setup and monitor your channels, check firmware, and identify IP addresses without a computer.

Multi-Modulation: Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation (can selectable in one device).

Flexible selection of different input modules: four tuner, four HDMI encoding in one device.

Main Features

- Distribute Up to 24 FTA Tuners over RF to an unlimited number of TVs
- Selectable DVB-S/S2; ATSC free to air Tuners inputs
- Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation, **4*Carrier RF Out**
- In modulation Mode, support 64*IP input
- Two separate ASI input for External TS Multiplexing
- Simultaneously 4*MPTS and 256*SPTS over UDP/RTP IP out in Tuners Gateway
- 4 separate multiplexing and Up-converter modulating adjacent carrier out
- Selectable the Value of PCR PID same as Video PID
- 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) \cong 87600 Hours
- Easy-to-Use System Management via Web
- Low Cost per channel - Breakthrough Price !

TECHNICAL SPECIFICATIONS

FTA Tuners Part

Numbers of Boards	4 Tuners ports per module Up to 6 Modules in Back panel
Numbers of Ports	8; 12; 16; 20; 24 Channels
Tuner Types	DVB-S/S2; DVB-T2; ISDB-T; ATSC;DTMB
Connecter	F-female type

DVB-S/S2 Tuners

Input Frequency	950-2150Mhz
Symbol rate	2~45Mbauds(DVB-S QPSK) 1~45Mbauds(DVB-S2 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-2 QPSK/8PSK)
Roll Off	0.20; 0.25; 0.35(Only DVB-S)
Demodulation Mode	QPSK, 8PSK(Only DVB-S2)
LNB Polarity Selection Vol	0, 13V, 18V Selectable
LNB Band Selection Tone	0/22Khz Selectable
Input Impedance	75 Ω
FEC (Code Rate)	1/2, 2/3, 3/4, 5/6, 7/8

ATSC Tuners

Frequency range	50 - 860 MHz
Key reference specification	ATSC A/53
Input level	-34 to +40 dBmV
Constellation	8-VSB
Bandwidth	6Mhz

DVB-T/T2 Tuners

Frequency Range	30MHz-1000Mhz
Bandwidth	6Mhz, 7Mhz, 8Mhz
Level	-87 ~ -20dBm
Constellation	QPSK, 16QAM, 64QAM, 256QAM(Only DVB-T2)
FEC Demodulation	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-T2:1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Guard Interval	DVB-T: 1/4, 1/8, 1/16, 1/32 DVB-T2:1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64,1/128

ISDB-T Tuners

Input frequency range	30 ~ 900MHz
Bandwidth	6MHz
Constellation	DQPSK, QPSK, 16QAM, 64QAM
Interleave	0, 4, 8, 16
Guard Interval	1/32, 1/16, 1/8, 1/4
Transmission Mode	2K, 4K, 8K (FFT)
FEC (Code Rate)	1/2, 2/3, 3/4, 5/6, 7/8

DVB-ASI inputs

Connector	BNC female, 75Ω
Signal Level	200-800mVp-p
Packet Length	188 bytes
Maximum bit-rate per port	≤100Mbps
Number of Input Ports	Dual separate ASI ports

Multiplexing

Maximum PID Remapping	180 input per channel
PID remapping by	automatically or manually
PSI/SI	SDI/PMT/TOT/PAT/BAT/CAT/TDT/NIT Insert Accurate PCR adjusting
Max Numbers	4 mux for RF and 1 Mux for 4*MPTS (4*MPTS channels can Separate MUX) IP out in Modulation 4 Mpts IP out In Tuners gateway

Stream Output

DVB-ASI	2 Separate ASI, 75Ω, BNC, 188Bytes MPEG-2 TS over DVB-ASI (EN 50083-9)
RJ45 Port	Selectable Mirror of One MPTS or RF Channel 100/1000M GbE Port Simultaneous output with 256* SPTS and 4*MPTS
(Note: In modulation . Only 1 * MPTS)	MPEG-2 TS over UDP, unicast, and multicast streaming MPEG-2 TS over RTP/RTSP Configurable packet size(2-7)x188Bytes Filter Null Packet
SPTS limit selectable	2.3M, 2.5M, 2.9, 3.3M, 3.8M, 4.6M, 5.7M, 7.6M, 11.5M, 23M

Modulation Part

Connector	1 Port, F-Type, 75
Output Return Loss	14 dB
MER	≥40dB
RF output level	-30 ~ -10dbm,0.1db step
RF frequency	47-860Mhz, 1KHz step
Numbers of RF Channel	4
Modulation Mode	DVB-C, DVB-T, ATSC, ISDB-T, DTMB

DVB-T Standard

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

DVB-C Standard

J83.A (DVB-C, J83.B, J83.C)

Carrier	ANNEX A	Annex B	Annex C	
Constellation (QAM)	16,32,64,128, 256	64	256	64/256
Bandwidth (Mhz)	8	6	6	6
Symbol Rate (Mbaud)	5-7	5.057	5.361	4.2-5.3

ISDB-T Standard

ARIB STD-B31	
Constellation	DQPSK, QPSK, 16QAM, 64QAM
Guard Interval	1/32, 1/16, 1/8, 1/4
Transmission Mode	2K, 4K, 8K
Code rate	1/2, 3/4, 5/6, 7/8
BandWidth	6Mhz

ATSC Standard

ATSC A/53	
Constellation	8 VSB

DTMB Standard

GB20600-2006	
Constellation	4QAM, 16QAM, 32QAM, 64QAM
Code rate	0.4, 0.6, 0.8
Guard Interval	420, 595, 945

System

Local interface	LCD + control buttons
Remote management	Web/NMS
NMS interface	RJ45, 100M
Language	English

Environment

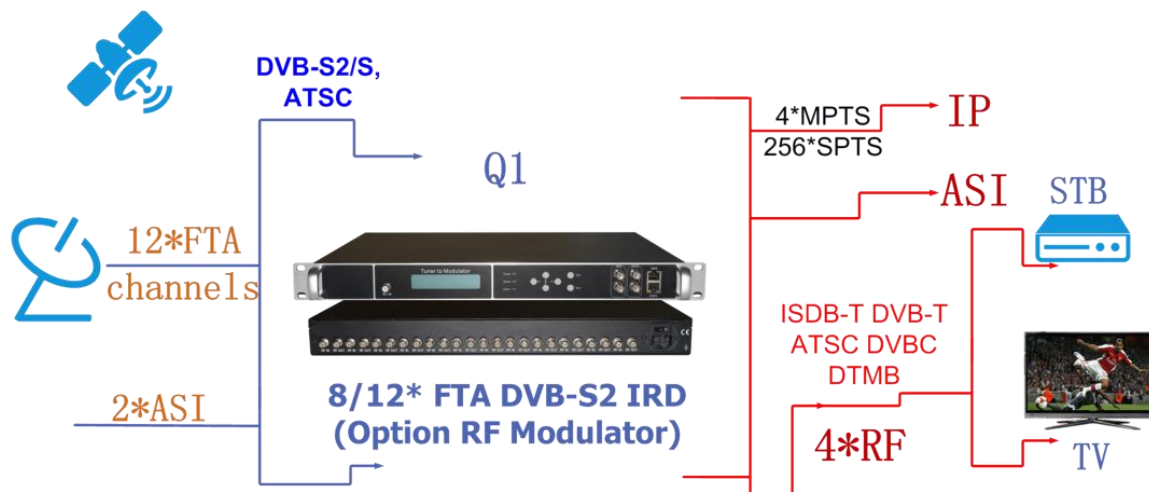
Voltage range	100 to 120/200 to 240V AC ±10%; 50/60Hz
Power consumption	60W
Operation Temperature	0 ~ 45℃
Storage Temperature	-20 ~ 80℃
Dimensions	482mm (L) * 380mm (W) * 44mm (H)
Weight	4.5 kg

Typical Order Information

Model	Tuners	Modulation	IP out
Q108	8	Null	256*SPTS/4*MPTS
Q112	12	Null	256*SPTS/4*MPTS
Q116	16	Null	256*SPTS/4*MPTS
Q120	20	Null	256*SPTS/4*MPTS
Q124	24	Null	256*SPTS/4*MPTS
Q108M	8 (with 64 IP in)	QAM; ATSC; DVB-T;ISDB; DTMB	1*MPTS
Q112M	12 (with 64 IP in)	QAM; ATSC; DVB-T; ISDB; DTMB	1*MPTS

Application

- Advertising, monitoring, training and educating
- Upgrade all your analog Head-ends to digital TV Solution
- Enterprise, Hotel, campus, hospital, Public Place
- Low cost Digital TV distribution



Product Information

Product category	Product Model	Detail Description	Application
Similar HD Modulator	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
Similar HD Modulator	PREMIUM 4Ch HDMI/AV/YPbPr MPEG-2/AVC HD Encoder Modulator EMI3440	1*ASI Mux and 4 Ch HDMI/YPbPr/AV MPEG2/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	4Channel Digital TV Transmodulator QAM6248Plus	12*FTA DVB-S2 or 12*FTA DVB-T2 or 8*FTA DVB-S2+4 *FTA 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	16 FTA dvbs2/IP QAM Transmodulator IPQ6250S	16*DVB-S2 FTA/512*IP Input, 16*DVB-C (Scrambling, Annex A/B/C) /MPTS over UDP/RTP out	--Upgrade Analog to Digital TV
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	--Hotel, Campus