

Q1Pro

4/8/12* DVB-S2/DVB-C/DVB-T2
FTA IRD (Option RF Modulator)



DIBSYS

*DVB-S2 or DVB-C or DVB-T2
RF Tuner INPUT Switchable*



Q1Pro is a high-density, modular and FTA professional TS processor equipped with 12 independent tuners, which can be either of DVB-S2 (up to 16APSK, 32APSK), DVB-C, DVB-T/T2 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.

Q1Pro DVB-S/S2, DVB-C, DVB-T/T2 Tuner to IP Gateway is a head-end interface conversion device and Routes Any or All Transport Streams via IP Output Port by 512*SPTS, N*tuner passthrough, and 4*MPTS channels simultaneously. It is integrated with tuner demodulation with ASI input and gateway function, which can demodulate from 12 tuners and directly convert the TS from DVB-ASI, then output the IP package through different IP address and ports.

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.

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, easy to setup and monitor your channels, check firmware, and identify IP addresses.
- **Multi-Modulation:** : Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation (**Switchable**).

Features

- Distribute Up to 4/8/12 FTA Tuners over RF to an unlimited number of TVs
- Switchable DVB-S/S2, DVB-C, DVB-T/T2 free to air Tuners inputs
- **Each tuner can configure the receive type individual**
- DVB-S2 inputs support up to 16apsk, 32apsk (optional)
- Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation, 4*Carrier RF Out, 8*carrier RF out (option)
- In modulation Mode, support 128*IP input
- Two separate ASI input for External TS Multiplexing
- Simulaneously 4*MPTS, N*tuner passthrough and 512*SPTS over UDP/RTP IP out in Tuners Gateway
- 4 separate multiplexing and Up-converter modulating adjacent carrier out
- Support BISS-1 and BISS-E decryption
- Selectable the Value of PCR PID same as Video PID
- LCN (Logical Channel Number) support
- PSI/SI editing & inserting; PID Remapping & Filtering
- Support TTL editing
- Support PCR correct and PCR interval adjusting
- Low power consumption and high reliability
- Easy-to-Use System Management via Web

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

TECHNICAL SPECIFICATIONS

FTA Tuners Part

Numbers of Ports 4; 8; 12 Channels
 Tuner Types DVB-S/S2, DVB-C, DVB-T/T2
 (Switchable in the same time)
 Connector F-female type

DVB-S/S2 input

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
 Roll Off 0.20; 0.25; 0.35(Only DVB-S)
 Demodulation Mode DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
 DVB-S2 QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
 DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
DVB-S2 16APSK (optional): 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
DVB-S2 32APSK (optional): 3/4, 4/5, 5/6, 8/9, 9/10
 LNB Polarity Selection Vol 0, 13V, 18V Selectable
 LNB Band Selection Tone 0/22Khz Selectable
 Input Impedance 75 Ω
 Satellite Selection Command DISEqC 2.0

DVB-C Input

Connector Type 8*F type female 75Ω for Input
 Input Frequency Range 51 ~ 862MHz
 Input Level 51 ~ 75dBμV
 Symbol Rate 1 ~ 7MBaud (ITU J.83 Annex A, B, C)
 Constellation 16QAM, 32QAM, 64QAM, 128QAM, 256QAM
 Bandwidth 6MHz, 7MHz, 8MHz
 Input Return Loss 7dB (typ.)

DVB-T/T2 input

Frequency Range 30MHz-1000Mhz
 Bandwidth 6MHz, 7MHz, 8MHz
 Level -87 ~ -20dBm
 Constellation QPSK, 16QAM, 64QAM
 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
 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

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

Stream Output

DVB-ASI 2 Separate ASI, 75Ω, BNC, 188Bytes
 MPEG TS over DVB-ASI (EN 50083-9)
 Selectable Mirror of One MPTS or RF Channel
 RJ45 Port 100/1000M GbE Port
 Simultaneous output with 512* SPTS and 4*MPTS and N*tuner passthrough
(Note: In modulation . Only 128*SPTS and 1 * MPTS)
 MPEG TS over UDP, unicast, and multicast streaming
 MPEG 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 (optional)

Connector 1 Port, F-Type, 75
 Output Return Loss 14 dB
 MER ≥40dB
 RF output level -30 ~ -10dbm, 1db step
 RF frequency 50 ~ 960Mhz, 1KHz step
 Numbers of RF Channel 4, 8 (optional)
 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(this mode do not support SPTS out)
 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

Multiplexing

Maximum PID Remapping 180 input per channel
 PID remapping by automatically or manually
 PSI/SI SDT/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

System

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

Environment

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

Typical Order Information

Model	Tuners	Modulation	IP out
Q104Pro	4	Null	512*SPTS and 4*MPTS and N*tuner passthrough
Q108Pro	8	Null	
Q112Pro	12	Null	
Q108MPro	4 (with 128 IP in)	QAM; ATSC; DVB-T;ISDB; DTMB	128*SPTS and 1*MPTS
Q108MPro	8 (with 128 IP in)	QAM; ATSC; DVB-T;ISDB; DTMB	
Q112MPro	12 (with 128 IP in)	QAM; ATSC; DVB-T; ISDB; DTMB	