

iQ4

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IPTV Network Modulator

optional DVB-C/DVB-T/ISDB-T/ATSC/DTMB



UDP/RTP/RTMP/RTSP/HLS/SRT



iQ4 IPTV Network Modulator, with ASI input, optional modulation (DVB-C, DVB-T, ATSC, ISDB-T, DTMB) to convert Video/Audio signals into RF over exist Coax Cable distribution. And IP output supports UDP/RTP protocol (MPTS/STPS), and supports IP outputs over **RTMP/HTTP/RTSP/HLS/SRT** protocol.

The platform can change the modulation signal by software upgrade, this flexible operation can help to reduce the cost in the operation of the project. It provides a best-of-class modulator platform for Digital TV Owners and IPTV operators.

This is an ideal solution used largely to Hotel, entertainment facilities, education broadcasting systems at schools and government buildings or IP Source signals convert to Cable TV broadcast environments.

Key Features

- High density, high quality, high performance, high flexibility
- Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation, 8/16/24*Carrier RF Out
- **DATA1**: URL input, **RTMP/HTTP/RTSP/HLS/SRT** protocol
- **DATA2**: 8*MPTS (6*MPTS and 2*RF pass through) out
- **DATA3**: supports 128*IP (UDP/RTP) inputs
- 6 separate ASI input
- 8/16/24 Channel Non-adjacent Carrier RF output
- **Supports non-adjacent frequencies in the whole frequency range, and solves a small number of isolated frequency points**
- Agile full-band: 96 ~ 864Mhz
- 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
- PCR correct and PCR interval adjusting
- Superior Shoulders and Excellent modulation quality MER
- Easy-to-Use System Management via Web

TECHNICAL SPECIFICATIONS

IP Interfaces

Types	3* Gigabit Ethernet
Connector	providing 1000Base-T (twisted pair, RJ-45)
IP Encapsulation	URL, RTMP/HTTP/RTSP/HLS/SRT over DATA1
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 over DATA3
Transport stream	reception of MPTS and SPTS

IP Output

Maxinumber of services	8*MPTS (6*MPTS and 2*RF pass through) over DATA2
TS out	GbE
Packet Length	1-7
MPEG Format	188 Bytes per TS packet
Null Packet Processing	Filtering & Insertion

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	6 separate ASI ports

Stream Output

RJ45 Port	100/1000M GbE Port
	MPEG TS over UDP, unicast, and multicast streaming
	MPEG TS over RTP/RTSP
	Configurable packet size(2-7)x188Bytes
	Filter Null Packet

Modulation Part

Connector	1 RF Port , F-Type, 75Ω
Output Return Loss	14 dB
MER	≥40dB
RF out level (8/16/32 Carrier)	-35 ~ -5dbm
High RF out level (16/32 Carrier)	-35 ~ 5dbm
RF frequency	96~ 864Mhz, 1KHz step
separate control	Frequency difference range (0 ~768M)
Numbers of RF Channel	8/16/24*Carrier RF Out, 16/32 Carrier DVB-C
Modulation Mode	DVB-C, DVB-T, ATSC, ISDB-T, DTMB

DVB-T Standard

EN300744	
FFT mode	2K, 4K, 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

Multiplexing

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

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

The number and bandwidth of IPTV stream input

IP Protocol	Video&Audio	Video Bitrate	Audio Bitrate	TS Bitrate	Output Numbers	Total bitrate
RTMP/RTSP/HTTP	H.264+AAC-LC	4Mbps	128Kbps	4.5Mbps	64 Channels	280Mbps
HLS	H.264+AAC-LC	3Mbps	128Kbps	3.5Mbps	64 Channels	210Mbps
SRT	H.264+AAC-LC	2Mbps	128Kbps	2.5Mbps	56 Channels	140Mbps