DHP300

DTV Head-end Processor

Product Outline

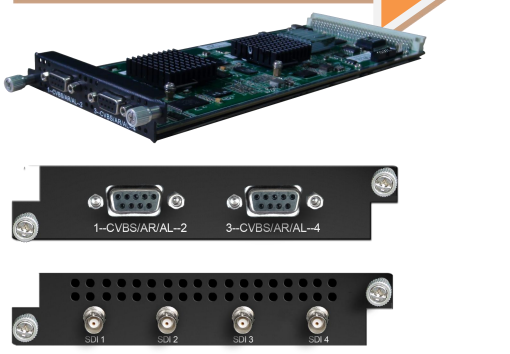
DHP300 DTV head-end processor is the new generation of intelligent headend processing equipment. This 1-U case comes with 6 independent module slots. Each module can be configured individually based on the applications including encoding, decoding, trans-coding, multiplexing, descrambling and modulating processing and the combination of all these functions. It supports multiple input and output interfaces and signal formats. With its powerful performance and low cost, DHP300 is especially adequate for the new generation CATV system.

Key Features

- **Support flexible combination of different type of modules**
- **Support up to 6 modules**
- **Support IP input/output, RJ45/SFP interface, Unicast/Multicast**
- **Support Web management, Updates via web**
- **Single or Redundancy power supply for option**

Module Specifications:

4 CVBS/SDI Encoding Module



DX214B

Module Specifications:

Input: 4 CVBS (DB9 to RCA) or 4 SDI (BNC)

Output: 1MPTS and 4 SPTS output over UDP/RTP, unicast and multicast

Video Encoding:

Video format: MPEG-2, MPEG4 AVC/H.264

Image format: PAL, NTSC SD signal (Only for CVBS input)

Resolution:

Input: 720*576 @50i

Output: 720*576/352*288/320*240/320*180/176*144/160*120/160*90@50Hz

Input: 720*480 @60i

Output: 720*480/352*288/320*240/320*180/176*144/160*120/160*90@60Hz

Rate Control: CBR/VBR

GOP structure: IPPP, IBPBP, IBBPB, IBBBP

Video bitrate: 0.5~5Mbps

Audio Encoding:

Audio format: MPEG1 Audio Layer 2, LC-AAC, HE-AAC

Sampling rate: 48KHz

Bit-rate: 48/56/64/80/96/112/128/160/192/224/256/320/384 Kbps

Support Logo, Caption, QR Code insertion

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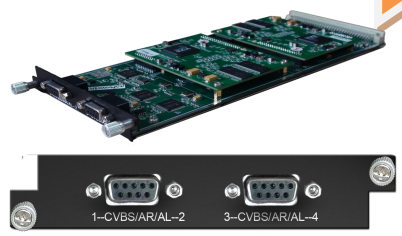
4 CVBS Encoding Module



DX214/DX214A

Module Specifications:

Input: 4 CVBS video, 4 Stereo Audio (DB9 to RCA)

Output: 1MPTS and 4 SPTS output over UDP/RTP, unicast and multicast

Video Encoding:

Video format: MPEG-2 (4:2:0)

Image format: PAL, NTSC SD signal

Output resolution: 720×480_60i, 544×480_60i, 352×480_60i, 352×240_60i, 320×240_60i, 176×240_60i, 176×120_60i, 720×576_50i, 704×576_50i, 640×576_50i, 352×288_50i, 320×288_50i, 176×288_50i, 176×144_50i

GOP structure: IP, IBP, IBBP, IBBBP

Video bitrate: 0.1Mbps~8Mbps per channel

Support CC (closed caption)

Audio Encoding:

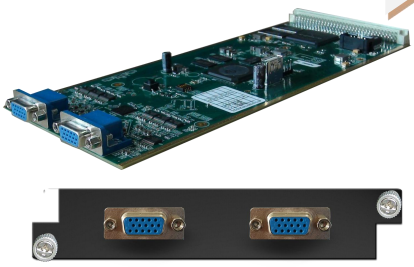
Audio format: MPEG-1 Layer 2, DD AC3 (2.0)

Sampling rate: 48KHz

Audio bitrate:128/192/256/320/384kbps each channel

Support Logo, Caption, QR Code insertion (for DX214A only)

8 CVBS(or 8 audio) Encoding Module



DX218S

Module Specifications:

Input: 8 CVBS video, 8 Stereo Audio (DB15 to RCA), or 8 ch analog audio input to work as audio encoder module

Output: 1 MPTS and 8 SPTS output over UDP/RTP, unicast and multicast

Video Encoding:

Video format: MPEG4 AVC/H.264

Image format: PAL, NTSC SD signal

Resolution: 720×576i, 720×480i

Rate Control: CBR/VBR

GOP structure: IPP

Video bitrate: 1~7Mbps each channel

Audio Encoding:

Audio format: MPEG-1 Layer 2

Sampling rate: 48KHz

Bit-rate: 64/128/192/224/256/320/384Kbps each channel

Support Logo, Caption, QR Code insertion

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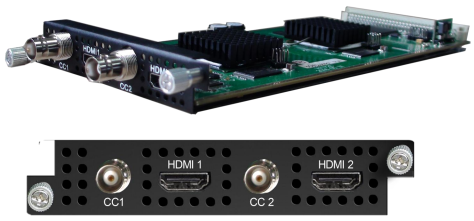
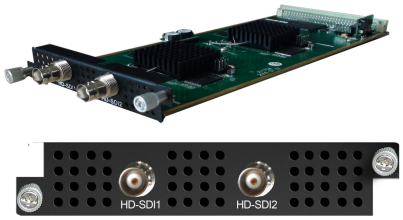
2 HDMI/SDI Encoding/Transcoding Module



DX202A



DX202A-D

Module Specifications:
Input: 2*HDMI, 2*BNC for CC (Closed Caption) input - (DX202A)
Input: 2*HD/SD SDI - (DX202A-D)
Output: 1*MPTS output over UDP, Unicast/Multicast
Video Encoding:
Video format: MPEG2 & MPEG4 AVC/H.264
Input resolution: 1920*1080_60P, 1920*1080_50P, 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P, 720*480_60i, 720*576_50i
Aspect ratio: 16:9, 4:3
Video bitrate: 0.8~19Mbps
Support CC (closed caption)
Audio Encoding:
Audio format: MPEG1 Layer II, MPEG2-AAC, MPEG4-AAC,
Dolby Digital AC3 (2.0) encoding (Optional); AC3 (2.0/5.1) passthrough
Sampling rate: 48KHz Audio bitrate: 64Kbps-320kbps each channel

Video Tanscoding:
2*MPEG2 HD → 2*MPEG2/H.264 HD; 4*MPEG2 HD → 4*MPEG2/H.264 SD;
2* H.264 HD → 2*MPEG2/H.264 HD; 4* H.264 HD → 4*MPEG2/H.264 SD;
4 *MPEG2 SD → 4 *MPEG2/H.264 SD; 4* H.264 SD → 4 *MPEG2/H.264 SD
Audio Tanscoding:
MPEG-1 Layer 2, AC3 (Optional) and AAC any-to-any

8 HDMI Encoding Module

DX228S

Module Specifications:
Input: 8*HDMI
Output: 1*MPTS and 8*SPTS output over UDP/RTP/RTSP, Unicast/Multicast
Video Encoding:
Video format: MPEG-4 AVC/H.264
Input resolution: 1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i,1280×720_60P, 1280×720_50P, 720×576_50i, 720×480_60i,
Output resolution: 1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720×576_25P,720×480_30P,
GOP structure: IP…P (P Frame adjustment, without B Frame)
Video Bit-rate: 1Mbps~13Mbps each channel
Rate Control: CBR/VBR
Audio Encoding:
Audio format: MPEG1 Layer II, LC-AAC, HE-AAC and AC3 Pass through, support audio gain adjustment
Sampling rate: 48 KHz
Audio Bit-rate:
MPEG-1 Layer 2: 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
LC-AAC: 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
HE-AAC: 48/56/64/80/96/112/128 kbps

Support Logo, Caption, QR Code insertion

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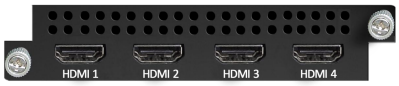
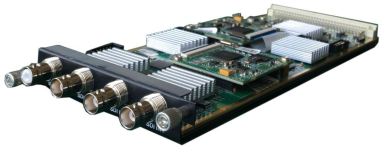
4 HDMI/SDI Encoding Module





DX224H/HV

Module Specifications:

Input: 4×HDMI (1.4) /SDI input, HDCP 1.4

Output: 1 MPTS and 4 SPTS output over UDP/RTP/RTSP

Video Encoding:

Video format: HEVC/H.265 & MPEG 4 AVC/H.264

Resolution:

	Input	Output	
		HEVC/H.265	MPEG-4 AVC/H.264
DX224HV	4*1080P-50	4*1080P-50	4*1080P-25 2*1080P-50
	4*1080P-60/59.94	4*1080P-60, 4*1080P-59.94	4*1080P-30 4*1080P-29.97 2*1080P-60 2*1080P-59.94
	4*1080I-50	4*1080P-50, 4*1080P-25	4*1080I-50 4*1080P-25 2*1080P-50
	4*1080I-60/59.94	4*1080P-60, 4*1080P-30	4*1080I-60 4*1080P-30 2*1080P-60
	4*720P-50	4*720P-50	4*720P-50
	4*720P-60/59.94	4*720P-60, 4*720P-59.94	4*720P-60 4*720P-59.94
	Input	Output	
		HEVC/H.265	MPEG-4 AVC/H.264
DX224H	4*1080P-50	4*1080P-50	4*1080P-50
	4*1080P-60/59.94	4*1080P-60, 4*1080P-59.94	4*1080P-60 4*1080P-59.94
	4*1080I-50	4*1080P-50, 4*1080P-25	4*1080P-25 4*1080P-50 4*1080I-50
	4*1080I-60/59.94	4*1080P-60, 4*1080P-30	4*1080P-30 4*1080P-60 4*1080I-60
	4*720P-50	4*720P-50	4*720P-50
	4*720P-60/59.94	4*720P-60, 4*720P-59.94	4*720P-60 4*720P-59.94

Chroma: 4:2:0

Bit rate (each channel): 0.5Mbps~20Mbps (H.265); 4 Mbps~20Mbps (H.264)

Rate Control: CBR/VBR GOP structure: IBBP, IPPP

Audio Encoding:

Audio format: MPEG-1 Layer 2, LC-AAC, HE-AAC, HE-AAC V2, AC3 Passthrough

Bit-rate (each channel):

48Kbps~384Kbps (MPEG-1 Layer 2 & LC-AAC);

24 Kbps~128 Kbps (HE-AAC); 18 Kbps~56 Kbps (HE-AAC V2)

Sampling rate: 48KHz Support Audio Gain adjust

Support Logo, QR Code insertion--Optional as per order

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4 HDMI/SDI Encoding Module

DX224V

Module Specifications:

Input: 4×SDI/HDMI (1.4) input, HDCP 1.4

Output: 1 MPTS and 4 SPTS output over UDP/RTP/RTSP

Video Encoding:

Video format: HEVC/H.265 & MPEG 4 AVC/H.264

Resolution:

HDMI VI & SDI：

Input	Output	
	HEVC/H.265	**MPEG-4 AVC/H.264**
4*1080P-50	4*1080P-50	2*1080P-50
4*1080P-60/59.94	4*1080P-60/59.94	2*1080P-60/59.94
4*1080I-50	4*1080P-50	4*1080I-50 2*1080P-50
4*1080I-60/59.94	4*1080P-60/59.94	4*1080I-60/59.94 2*1080P-60/59.94
4*720P-50	4*720P-50	4*720P-50
4*720P-60/59.94	4*720P-60/59.94	4*720P-60/59.94

HDMI V2:

Input	Output	
	HEVC/H.265	**MPEG-4 AVC/H.264**
4*2160P_25/30/29.97	2*2160P_25/30/29.97	1*2160P_25/30/29.97
4*1080P_50/60/59.94	4*1080P_50/60/59.94	2*1080P_50/60/59.94
4*720P_50/60/59.94	4*720P_50/60/59.94	4*720P_50/60/59.94

Chroma: 4:2:0 Bit rate: 0.5Mbps~20Mbps (H.265); 4 Mbps~20Mbps (H.264)

Rate Control: CBR/VBR

GOP structure: IBBP, IPPP

Audio Encoding:

Audio format: MPEG-1 Layer 2, LC-AAC, HE-AAC, HE-AAC V2, AC3 Passthrough

Sampling rate: 48KHz

Bit-rate (each channel):

48Kbps~384Kbps (MPEG-1 Layer 2 & LC-AAC)

24 Kbps~128 Kbps (HE-AAC)

18 Kbps~56 Kbps (HE-AAC V2)

Support audio gain adjust

Support Logo, QR Code insertion--available on HDMI V1

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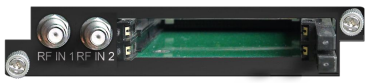
2 Tuner Descrambling Module



DX902A

Stream in: 2 Tuner input, F Type,
16 IP inputs from data port, UDP/RTP, unicast and multicast, IGMP V2/V3
Stream out: 1 MPTS and 16 SPTS outputs over UDP/RTP/RTSP,Unicast/Multicast
DVB-CI: 2 independent common interface slots
Tuner input: DVB-S/S2/S2X
Symbol rate: QPSK/8PSK/16APSK 0.5~45 Msps; 8APSK/32APSK: 0.5~40Msps
Input Frequency: 950-2150MHz

DVB-S Constellation: QPSK
FEC Demodulation: 1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2 Constellation: QPSK/8PSK/16APSK/32APSK
FEC Demodulation:
QPSK: 1/2, 2/3, 3/4, 5/6, 3/5, 4/5, 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
DVB-S2X Constellation: QPSK/8PSK/8APSK/16APSK/32APSK
FEC Demodulation:
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, 23/36, 25/36, 13/18
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, 9/10

Support Diseqc function

Multiplexing:
Maximum PID Remapping: 256 output pids
Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically
Descrambling:
CAM/CI Quantity: 2
BISS Mode: Mode 1, Mode E; up to 120Mbps, 32 BISS key

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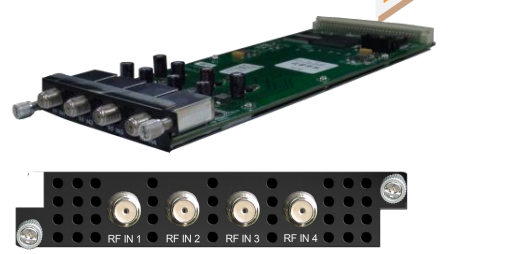
4 FTA Tuner Module



DX904B

Module Specifications:

Stream in: 4 Tuner input, F Type

Stream out: 1 MPTS out for mux, 4 MPTS out for 4 tuner input pass through over UDP/RTP/RTSP, unicast/multicast

Tuner input: DVB-S/S2/S2X

Symbol rate: QPSK/8PSK/16APSK 0.5~45 Msps; 8APSK/32APSK: 0.5~40Msps

Input Frequency: 950-2150MHz

DVB-S Constellation: QPSK
FEC Demodulation: 1/2, 2/3, 3/4, 5/6, 7/8

DVB-S2 Constellation: QPSK/8PSK/16APSK/32APSK
FEC Demodulation:
QPSK: 1/2, 2/3, 3/4, 5/6, 3/5, 4/5, 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

DVB-S2X Constellation: QPSK/8PSK/8APSK/16APSK/32APSK
FEC Demodulation:
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, 23/36, 25/36, 13/18
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, 9/10

Support Diseqc function

Multiplexing:

Max number of managing PID: 256

Function: PID remapping (automatically/ manually), Accurate PCR adjust, PID pass-through

Descrambling:

BISS Mode: Mode 1, Mode E; up to 120Mbps, 32 BISS Key

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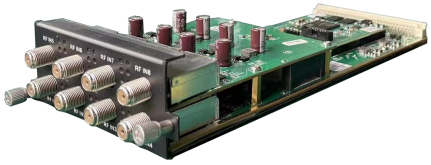
8 FTA Tuner Module



DX908

Stream in: 4/8 Tuner input, F Type,
Stream out: 8 MPTS passthrough out for 8 tuner input, or 2 MPTS out after multiplexing, or 512 SPTS out over UDP/RTP/RTSP, Unicast/Multicast
Tuner input: DVB-S/S2/S2X
Symbol rate: QPSK/8PSK/16APSK 0.5~45 Msps; 8APSK/32APSK: 0.5~40Msps
Input Frequency: 950-2150MHz

DVB-S Constellation: QPSK
FEC Demodulation: 1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2 Constellation: QPSK/8PSK/16APSK/32APSK
FEC Demodulation:
QPSK: 1/2, 2/3, 3/4, 5/6, 3/5, 4/5, 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
DVB-S2X Constellation: QPSK/8PSK/8APSK/16APSK/32APSK
FEC Demodulation:
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, 23/36, 25/36, 13/18
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, 9/10

Support Diseqc function

Multiplexing:
Maximum PID Remapping: 256 output pids
Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically

Descrambling:
BISS Mode: Mode 1, Mode E; up to 120Mbps, 32 BISS Key

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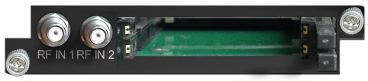
4 Freqs Descrambling Module



DX942A

Stream in: 4 frequencies input(each RF in interface for 2 frequencies locking), F Type, 16 IP inputs(UDP/RTP) from data port, unicast and multicast, IGMP V2/V3
Stream out: 1 MPTS and 16 SPTS output over UDP and RTP/RTSP, Unicast/Multicast
DVB-CI: 2 independent common interface slots
Tuner input: DVB-C (J.83 A/C)/J.83B/ DVB-T/DVB-T2/ISDB-T switchable

Standard: DVB-C (J.83 A/C); J.83B
Input Frequency: 60MHz~890MHz
Symbol rate: 1000~9000Ksps
Constellation: 16/32/64/128/256 QAM; 64/256 QAM for J.83B

Standard: DVB-T/T2
Frequency In: 60MHz~890MHz
Bandwidth: 5/6/7/8M bandwidth
PLP Index: 0~255 for DVB-T2

Standard: ISDB-T
Input Frequency: 60-890MHz

Multiplexing:
Maximum PID Remapping: 256 output pids
Function: PID remapping (automatically or manually), generate PSI/ SI table automatically
Descrambling:
CAM/CI Quantity: 2
BISS Mode: Mode 1, Mode E; up to 120Mbps, 32 BISS Keys

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8 FTA Tuner Module

DX928

Stream in: 8 tuner input, F Type
Stream out: 8 MPTS passthrough out for 8 tuner input, or 2 MPTS out after multiplexing, or 512 SPTS out over UDP/RTP/RTSP, Unicast/Multicast

Tuner input: DVB-C (J.83 A/C)/J.83B/ DVB-T/DVB-T2/ISDB-T switchable

Standard: DVB-C (J.83 A/C); J.83B
Input Frequency: 60MHz~890MHz
Symbol rate: 1000~9000Ksps
Constellation: 16/32/64/128/256 QAM; 64/256 QAM for J.83B

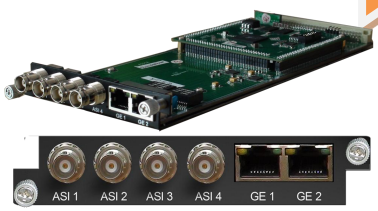
Standard: DVB-T/T2
Frequency In: 60MHz~890MHz
Bandwidth: 5/6/7/8M bandwidth
PLP Index: 0~255 for DVB-T2

Standard: ISDB-T
Input Frequency: 60-890MHz

Multiplexing:
Maximum PID Remapping: 256 output pids
Function: PID remapping (automatically or manually), generate PSI/ SI table automatically

Descrambling:
BISS Mode: Mode 1, Mode E; up to 120Mbps, 32 BISS Keys

4 ASI/IP Multiplexing Module



DX504

Module Specifications:
ASI inputs/outputs: 4 ASI bi-direction, BNC 75Ω (manually set input or output)
IP inputs/outputs: 2 GE Ports in the module (100/1000Mbps self-adaption) and the DHP300 chassis (data ports or other modules)
Re-multiplexing: PID remapping, PCR correction, generate PSI/ SI table automatically
Stream In: maximum 4 ASI input, 768 IP inputs over UDP/RTP (256 IP inputs thru GE1, GE2 in the module and the DHP300 chassis respectively)
Stream Out: maximum 4 ASI output, 4 MPTS output over UDP/RTP thru GE1, GE2 in the module and thru the DHP300 chassis

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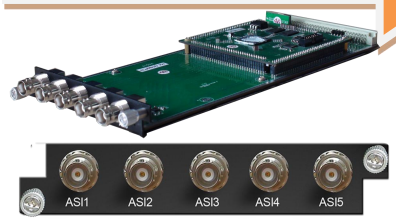
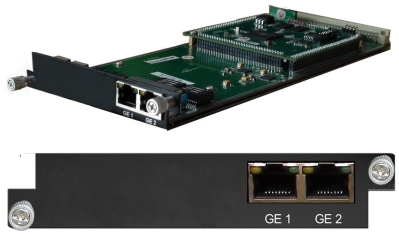
5 ASI Multiplexing Module



DX505

Module Specifications:
ASI inputs/outputs: 5 ASI bi-direction, BNC 75Ω (manually set input or output)
IP inputs/outputs: the DHP300 chassis (data ports or other modules)
Stream in: maximum 5 ASI input, 256 IP inputs over UDP/RTP thru the DHP300 chassis
Re-multiplexing: PID remapping, PCR correction, generate PSI/ SI table automatically
Stream out: maximum 5 ASI output, 5 MPTS out over UDP/RTP thru the DHP300 chassis

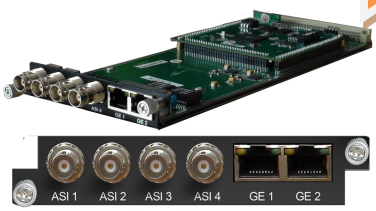
IP De-Multiplexing Module



DX506

Module Specifications:
IP input: 512 SPTS or MPTS input over UDP, RTP, Unicast and Multicast thru GE1 Ethernet Port (100/1000M)
Re-multiplexing: PID remapping, PCR correction, generate PSI/ SI table automatically
Stream Out: 512 SPTS output over UDP, RTP, Unicast and Multicast through GE2 Ethernet Port (100/1000M)

ASI/IP Mux-Scrambler Module

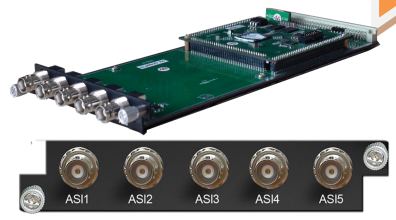


DX514

Module Specifications:
ASI inputs/outputs: 4 ASI bi-direction, BNC 75Ω
IP inputs/outputs: 2 Ethernet Port (100/1000M)
Stream connector input
Re-multiplexing: PID remapping, PCR correction, generate PSI/ SI table automatically
Stream In: maximum 4 ASI input, 32 IP input per channel over UDP/RTP
Stream Out: maximum 4 ASI output, 4 IP (MPTS) output over UDP/RTP/RTSP

Scrambling:
Maximum simulcrypt CA: 4
Standard： ETR289, ETSI 101 197, ETSI 103 197
Connection： Local/remote connection

ASI TS Switch Module



DX515

Module Specifications:
Input: 3 ASI
Output: 2 ASI output (output 1 for one of the switch steams out, output 2 for main input stream)
TS packet: 188/204
Switch Mode: Manually/Auto
Support monitor program status (bitrate, continuous counting, synchronization status)
Support channel mode and program mode switching
Support to switch back to the main stream manually or automatically once the main stream recovers

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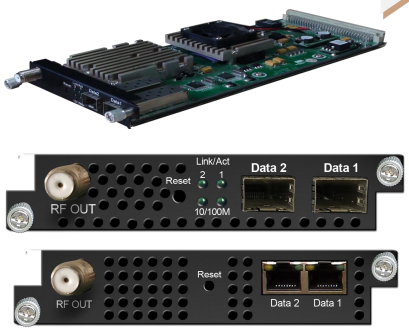
16/32 QAM Modulating Module



DX316/DX332

Module Specifications:

Data input: 512*3 IP input over UDP/RTP from 2 GE Ports (RJ45/SFP) and internal stream connector board, unicast/multicast

Data output: 16 or 32 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP)

Trans Rate: Max 840Mbps/GE Port

RF output (F type): 16/32 channels of multiplexing, scrambling and modualtion.

Multiplexing:

Maximum PID Remapping: 256 output pids per channel

Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/SI table automatically

Scrambling:

Maximum simulcrypt CA: 6

Standard: ETR289, ETSI 101 197, ETSI 103 197

Connection: Local/remote connection

Modulation:

Standard: EN300 429/ITU-T J.83A/B/C MER: ≥40dB

RF frequency: 50~960MHz, 1KHz step

RF output level: -20~+10dBm (87~117 dBμV), 0.1dB step for all carriers

Symbol Rate: 3600~7200Ksps, 1ksps stepping

5057Ksps (J.83B, 64QAM), 5361Ksps (J.83B, 256QAM)

Constellation/Bandwidth: J.83A: 16/32/64/128/256QAM, 8M

J.83B/C: 64/256QAM, 6M

DX316 Output: 16 non-adjacent carrier outputs within 192M bandwidth

DX332 Output: 32 non-adjacent carrier outputs within 384M bandwidth

48 QAM Modulating Module

DX348D

Module Specifications:

Data input: 512*3 IP input over UDP/RTP from 2 GE Ports (RJ45/SFP) and internal stream connector board, unicast/multicast

Data output: 48 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP), GE1 for IP #1-#24, GE2 for IP #25-#48

Trans Rate: Max 840Mbps/GE Port

Multiplexing:

Maximum PID Remapping: 256 output PIDs per channel

Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/SI table automatically

Scrambling:

Maximum simulcrypt CA: 6

Standard: ETR289, ETSI 101 197, ETSI 103 197

Connection: Local/remote connection

Modulation:

Standard: EN300 429/ITU-T J.83A/B/C MER: ≥40dB

RF frequency: 50~960MHz, 1KHz step

RF output level: -20~+10dBm (87~117 dBμV), 0.1dB step for all carriers

Symbol Rate: 3600~7200Ksps, 1ksps stepping

5057Ksps (J.83B, 64QAM), 5361Ksps (J.83B, 256QAM)

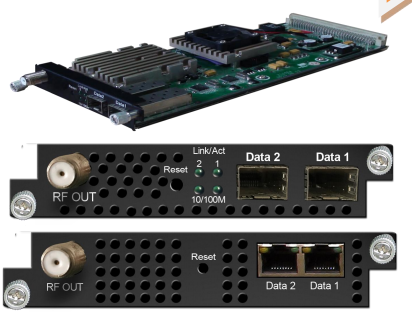
Constellation/Bandwidth: J.83A: 16/32/64/128/256QAM, 8M

J.83B/C: 64/256QAM, 6M

RF output: 2 F type output ports for 48 non-adjacent carriers, 75Ω

Carrier 1~24 out thru RF1, 25~48 thru RF2, each RF supports 384M bandwidth

8/16 ISDB-Tb Modulating Module



DX306I

Module Specifications:

Data input: 512*3 IP input over UDP/RTP from 2 GE Ports (RJ45/SFP) and internal stream connector board, unicast/multicast

Data output: 8/16 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP)

Trans Rate: Max 840Mbps/GE Port

RF output (F type): 8/16 channels of multiplexing and modulation.

Multiplexing:

Maximum PID Remapping: 256 input per channel

Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically

Modulation:

Standard: ARIB STD-B31

Bandwidth: 6M Constellation: QPSK, 16QAM, 64QAM

Guard Interval: 1/32, 1/16, 1/8, 1/4 Transmission Mode: 2K, 4K, 8K

Code rate: 1/2, 2/3, 3/4, 5/6, 7/8 MER: ≥40dB

RF frequency: 50~960MHz, 1KHz step

RF output level: -20dBm~+10dBm (87~117dbμV), 0.1dB stepping

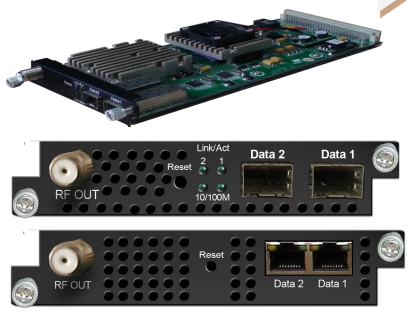
RF Output: 8/16 non-adjacent carrier outputs within 192M bandwidth

Order Guide:

DX306i-8: 8 non-adjacent ISDB-T carrier output + 8 IP MPTS output

DX306i-16: 16 non-adjacent ISDB-T carrier output + 16 IP MPTS output

8/16 DVB-T Modulating Module



DX308T

Module Specifications:

Data input: 512*3 IP input over UDP/RTP from 2 GE Ports (RJ45/SFP) and internal stream connector board, unicast/multicast

Data output: 8/16 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP)

Trans Rate: Max 840Mbps/GE Port

Multiplexing:

Channel Number: 8/16 multiplexing channels

Maximum PID Remapping: 256 input per channel

Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically

Modulation:

Standard: ETSI EN300 744 MER: ≥40db

RF Frequency: 50~960MHz, 1KHz step

Constellation: QPSK/16QAM/64QAM Bandwidth: 6/7/8 MHz

Trans mode: 2K/4K/8K FEC: 1/2, 2/3, 3/4, 5/6, 7/8

RF Output Level: -20~+10dbm (for all carriers), 0.1dB stepping

RF Output (F type): 8/16 non-adjacent carrier outputs within 192M bandwidth

Order Guide:

DX308T-8: 8 non-adjacent DVB-T carrier output + 8 IP MPTS output

DX308T-16: 16 non-adjacent DVB-T carrier output + 16 IP MPTS output

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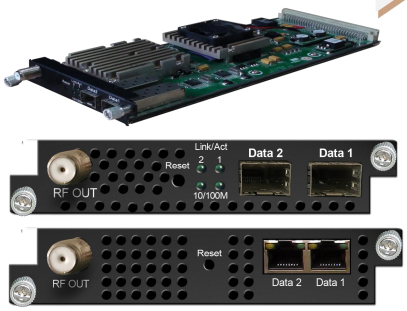
8 ATSC Modulating Module



DX308AT

Module Specifications:

Data input: 512*3 IP input over UDP/RTP from 2 GE Ports (RJ45/SFP) and internal stream connector board, unicast/multicast

Data output: 8 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP)

Trans Rate: Max 840Mbps/GE Port

Multiplexing:

Channel Number: 8 multiplexing channels

Maximum PID Remapping: 256 input per channel

Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically

Modulation:

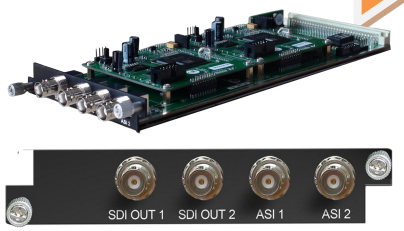
Standard: ATSC A/53 MER: ≥40db RF Frequency: 50~960MHz, 1KHz step

Constellation: 8VSB Bandwidth: 6MHz FEC: RS(208 188)+Trellis

RF Output Level: -20~+10dbm (for all carriers), 0.1db stepping

RF Output (F Type) : 8 non-adjacent carrier outputs within 192M bandwidth

2 HD-SDI Decoding Module



DX702

Module Specifications:

ASI input/output: 2 ASI bi-directions, BNC 75Ω

IP Stream input support

IP output: 1 MPTS output over UDP, Unicast/Multicast

Decoding:

Video/Audio Out: 2 HD/SD SDI output

Video Format: MPEG-2, MPEG-4 AVC/H.264

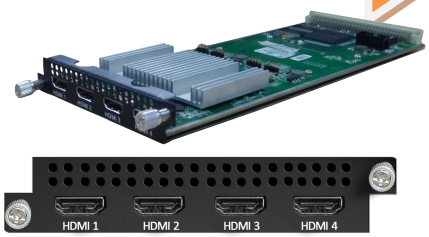
Resolution: 480i,480p,576i,576p,720p@50/59.94/60,1080i@50/59.94/60

Chroma: 4:2:0

Audio Format: MPEG1 Layer2, LC-AAC, HE-AAC, AC3 (2.0/5.1), AC3 Passthrough,

Support Dual Audio Out

4 HDMI Decoding Module



DX714A

Module Specifications:

Input: 8 IP (MPTS/SPTS) input over UDP/RTP thru stream connector, Unicast/Multicast

Output: 4 HDMI output

Decoding:

Video/Audio Out: 4 HDMI output with 1 channel stereo audio embedded in each port

Video Format: MPEG-2, MPEG-4 AVC/H.264, HEVC/H.265, AVS, AVS+

Audio Format: MPEG 1 Layer 2, LC-AAC, HE-AAC, AC3 (2.0), DRA

Resolution: 480i, 480p, 576i, 576p,1280×720_50p, 1280×720_60p, 1920×1080_50i, 1920×1080_50p 1920×1080_60i, 1920×1080_60p

Support manually upscale/downscale resolution

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Equipment Specifications:

Base Unit Parameters

Dimension (W×L×H): 482mm×410mm×44mm
Environment: 0~45℃(work); -20~80℃(Storage)
Power requirements AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz
Power Supply: Single or Redundancy power supply for option, as per order

Parameters Comparison:

	DHP400	DHP300
IP Data Transport	One-way Transport: GE1/GE2 support output maximum 8 MPTS & 512 SPTS	Bi-directional Transport: GE1/GE2. SFP1/SFP2 for IP stream input and output
TS Processing Number	Support 1 TS (MPTS/SPTS) input from each module, and maximum bit rate is 350Mbps	N/A
Multiplexing	Support multiplexing function: It can mux TSs from different modules to one TS and output through one module or GE1/GE2 port	Doesn't support multiplexing function: It can combine TSs from different modules and output these TSs through one module or GE1/GE2 SFP1/SFP2 port
Output Per Module	1 MPTS after multiplexing	1 or Multiple MPTS/SPTS
LED	N/A	LED in the front panel show IP address

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