



Redundancy Power Supply (Optional)
Two options for redundancy power supply:

- ◆ Non-Hot Plugging (option 1)
- ◆ Hot Plugging (option 2)

Product Outline

DHP400 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, DHP400 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 1 ASI output (Copy as MPTS2 through front panel GE2)
- Support 2 GE output, 512 SPTS (UDP, RTSP/RTP) output from GE1, 8 MPTS (UDP,RTP) output from GE2, Unicast/Multicast, RJ45/SFP interface
- Support Web management, Updates via web

Module Specifications:

4 CVBS/SDI Encoding Module



DX214B

Module Specifications:

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

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

Bits per sample: 32-bit

Bit-rate: 48-384Kbps each channel

Support **Logo, Caption, QR Code insertion**


DX224V
Module Specifications:

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

Video Encoding:

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

Resolution:

HDMI:

3840×2160_30P, 3840×2160_29.97P;

(Encoding 2 CHs per module for H.265, and encoding 1 CH for H.264)

1920×1080_60P, 1920×1080_59.94P, 1920×1080_50P;

(Encoding 4 CHs per module for H.265, and encoding 2 CHs for H.264)

1280×720_60P, 1280×720_59.94P, 1280×720_50P

(Encoding 4 CHs per module for H.264 and H.265)

SDI:

1920×1080_60P, 1920×1080_59.94P, 1920×1080_50P;

(Encoding 4 CHs per module for H.265, and encoding 2 CHs for H.264)

1280×720_60P, 1280×720_59.94P, 1280×720_50P

(Encoding 4 CHs per module for H.264 and H.265)

Input: 1920×1080_60i, 1920×1080_59.94i, 1920×1080_50i

Output: 1920×1080_60P, 1920×1080_59.94P, 1920×1080_50P

(Encoding 4 CHs per module for H.265, and encoding 2 CHs for H.264)

Chroma: 4:2:0

Bit rate: 0.5Mbps~20Mbps (each channel)

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

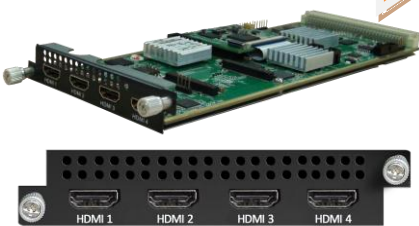
Bit-rate (each channel):

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

24 Kbps~128 Kbps (HE-AAC)

18 Kbps~56 Kbps (HE-AAC V2)

Audio Gain: 0~255

4 HDMI Encoding Module

DX224H/HV
Module Specifications:

Input: 4×HDMI (1.4) input, HDCP 1.4

Video Encoding:

 Video format: **HEVC/H.265** & MPEG 4 AVC/H.264---DX224H
HEVC/H.265---DX224HV

Resolution:

1920×1080_60P, 1920×1080_59.94P, 1920×1080_50P;

1280×720_60P, 1280×720_59.94P, 1280×720_50P

Input: 1920×1080_60i, 1920×1080_59.94i, 1920×1080_50i

Output: 1920×1080_60P, 1920×1080_59.94P, 1920×1080_50P

 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

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)

Audio Gain: 0~255

 Support **Logo, QR Code insertion--Optional as per order**
4 CVBS Encoding Module

DX214/DX214A
Module Specifications:

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

Video Encoding:

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

Image format: PAL, NTSC SD signal

 Input 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, IBBBBP

Video bitrate: 0.5Mbps~8Mbps per channel

Support CC (closed caption)

Audio Encoding:

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

Sampling rate: 48KHz

Resolution: 24-bit

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

 Support **Logo, Caption, QR Code insertion (for DX214A only) (Language Supported: 中文, English, اردو, for more languages please consult us...)**

8 CVBS Encoding Module

DX218S
Module Specifications:

Input: 8 CVBS video, 8 Stereo Audio (DB15 to RCA)

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

Resolution: 24-bit

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

Support Logo, Caption, QR Code insertion (Language Supported: 中文, English, اردو, for more languages please consult us...)

2 HDMI Encoding/Transcoding Module

DX202A
Module Specifications:

Input: 2*HDMI, 2*BNC for CC (Closed Caption) input and stream connector

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

Rate control mode: CBR/VBR

Aspect ratio: 16:9, 4:3

Video bitrate: 0.8~19Mbps for MPEG-2 /H.264 encoding

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 Transcoding:

2*MPEG2 HD → 2*MPEG2/H.264 HD; 2*MPEG2 HD → 2*MPEG2/H.264 SD;

2* H.264 HD → 2*MPEG2/H.264 HD; 2* H.264 HD → 2*MPEG2/H.264 SD;

4 *MPEG2 SD → 4 *MPEG2/H.264 SD; 4* H.264 SD → 4 *MPEG2/H.264 SD

Audio Transcoding:

MPEG-1 Layer 2, AC3 (Optional) and AAC any-to-any

2 SDI Encoding/Transcoding Module

DX202A-D
Module Specifications:

Input: 2*HD-SDI and stream connector

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

Rate control mode: CBR/VBR

Aspect ratio: 16:9, 4:3

Video bitrate: 0.8~19Mbps for MPEG-2 /H.264 encoding;

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 Transcoding:

2*MPEG2 HD → 2*MPEG2/H.264 HD; 2*MPEG2 HD → 2*MPEG2/H.264 SD;

2* H.264 HD → 2*MPEG2/H.264 HD; 2* H.264 HD → 2*MPEG2/H.264 SD;

4 *MPEG2 SD → 4 *MPEG2/H.264 SD; 4* H.264 SD → 4 *MPEG2/H.264 SD

Audio Transcoding:

MPEG-1 Layer 2, AC3 (Optional) and AAC any-to-any

4 HDMI Encoding Module

DX224S
Module Specifications:

Input: 4*HDMI

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, **support audio gain adjustment**

Sampling rate: 48 KHz

Resolution: 24-bit

Audio Bit-rate: 64kbps, 128Kbps, 192kbps, 224kbps, 256kbps, 320kbps, 384kbps

Support Logo, Caption, QR Code insertion (Language Supported: 中文, English, العربية, ไทย, हिन्दी, русская, اردو, for more languages please consult us...)

4 HDMI Encoding Module



DX224HS

Module Specifications:

Input: 4*HDMI (1.4) input, HDCP 1.4

Video Encoding:

Video format: HEVC/ H.265, MPEG4 AVC/H.264

Input Resolution	Available Output Resolution
1920x1080P@60/59.94	1920x1080/1280x720/720*576/720*480P@60/50/30/25/24
1920x1080I@60/59.94	1920x1080/1280x720/720*576/720*480P@30/25/24
1920x1080P@50	1920x1080/1280x720/720*576/720*480P@50/30/25/24
1920x1080I@50	1920x1080/1280x720/720*576/720*480P@25/24
1280x720P@60/59.94	1280x720/720*576/720*480P@60/50/30/25/24
1280x720P@50	1280x720/720*576/720*480P@50/30/25/24
720*576I@50	720*576/720*480P@25/24
720*480I@60	720*480P@30/25/24

Chroma: 4:2:0

GOP structure: IP, IBBP, IBBBP

Video Bit-rate: 1Mbps~15Mbps per channel

Rate Control: CBR/VBR

Audio Encoding:

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

Sampling rate: 48 KHz

Resolution: 24-bit

Audio Bit-rate (per channel):

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

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

Others: Support Logo, Caption, QR Code insertion

**2 Tuner Descrambling Module****DX912****Module Specifications:**

Stream in: 2 Tuner input, F Type
DVB-CI: 2 Independent common interface slots
Standard: DVB-C (J.83 A/C)/J.83B/ DVB-T/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
Frequency In: 60MHz~890MHz
Bandwidth: 5/6/7/8M bandwidth
PLP Index: 0~255 (optional)

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

Signal Strength: -65~ -25dBm

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 (Optional as required)


DX902A
Module Specifications:

Stream in: 2 Tuner input, F Type
 DVB-CI: 2 Independent common interface slots
 Standard: DVB-S/S2/S2X

Tuner Section	DVB-S	Input Frequency: 950-2150MHz Symbol Rate: QPSK0.5~45Msps FEC Demodulation: 1/2, 2/3, 3/4, 5/6, 7/8
	DVB-S2	Input Frequency: 950-2150MHz Symbol rate: QPSK/8PSK/16APSK: 0.5~45 Msps; 32APSK: 0.5~40 Msps FEC Demodulation: 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
	DVB-S2X	Input Frequency: 950-2150MHz Symbol rate: QPSK/8PSK/16APSK: 0.5~45 Msps; 8APSK/32APSK: 0.5~40 Msps 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

Signal Strength: -65~ -25dBm

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 (Optional as required)

4 FTA Tuner Module

DX904B
Module Specifications:

Stream in: 4 Tuner input, F Type

Stream out: 1 MPTS out over UDP, unicast/multicast

Standard: DVB-S/S2/S2X
Tuner Section

DVB-S Input Frequency: 950-2150MHz
 Symbol Rate: QPSK: 0.5~45 Msps
 FEC Demodulation: 1/2, 2/3, 3/4, 5/6, 7/8

DVB-S2 Input Frequency: 950-2150MHz
 Symbol rate: QPSK/8PSK/16APSK: 0.5~45 Msps;
 32APSK: 0.5~40 Msps
 FEC Demodulation: 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

DVB-S2X Input Frequency: 950-2150MHz
 Symbol rate: QPSK/8PSK/16APSK: 0.5~45 Msps;
 8APSK/32APSK: 0.5~40 Msps
 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

Signal Strength: -65 ~ -25dBm

Support Diseqc function

Multiplexing:

Max number of managing PID: 256

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

4 FTA Tuner Module



DX924

Module Specifications:

Stream in: 4 Tuner input, F Type
 Standard: DVB-C (J.83 A/C)/J.83B/ DVB-T/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

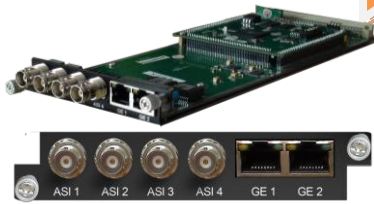
Standard: DVB-T
 Frequency In: 60MHz~890MHz
 Bandwidth: 5/6/7/8M bandwidth
 PLP Index: 0~255 (Optional)

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

Multiplexing:

Max number of managing PID: 256
 Function: PID remapping (automatically/ manually), Accurate PCR adjust, PID pass-through

4 ASI/IP Multiplexing Module



DX504

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, 256×2 IP input
 Stream Out: maximum 4 ASI output, 4 IP output

4/8 CH EAS Multiplexing Module



DX504E/DX508E

Module Specifications:

ASI input: ASI1 input (SPTS), BNC 75Ω
 IP input: 256 IP input thru 1 GE1 (100/1000M)
 EAS Source: ASI1 or IP (the 256th IP) (ASI&IP should be SPTS, both can't mux, source Bitrate ≤ 10Mbps)
 Re-multiplexing: PID remapping, PCR correction (only for IP), generate PSI/ SI table automatically
 Stream Out: 4 IP output thru GE1, maximum 16 programs each channel--DX504E
 Stream Out: 8 IP output thru GE1, maximum 8 programs each channel--DX508E

5 ASI Multiplexing Module

DX505
Module Specifications:

ASI inputs/outputs: 5 ASI bi-direction, BNC 75Ω

Stream connector input

Stream in: maximum 5 ASI input

Re-multiplexing: PID remapping, PCR correction, generate PSI/ SI table automatically

Stream out: maximum 5 ASI output

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, IP input 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

Module Specifications:

Input: 3 ASI

Output: 2 ASI mirror out

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

**DX515
16/32 QAM Modulating Module**



DX316/DX332

Module Specifications:

Data input: 512 or 1024 IP input over UDP/RTP, 2 GE Ports (RJ45/SFP), Stream connector

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 modulation.

Multiplexing:

Maximum PID Remapping: 180 output pids per channel for DX316, 256 output pids per channel for DX332

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

Scrambling:

Maximum simulcrypt CA: 4

Standard: ETR289, ETSI 101 197, ETSI 103 197

Connection: Local/remote connection

Modulation:

Standard: EN300 429/ITU-T J.83A/B (DVB-C) MER: $\geq 40\text{dB}$

RF frequency: 50~960MHz, 1KHz step

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

Symbol Rate: 5.0Msps~7.0Msps, 1ksps stepping

Constellation: 16/32/64/128/256QAM

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: 1024 IP input over UDP/RTP, unicast/multicast, 2 GE Ports (RJ45/SFP), 512 IP input through stream connector

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

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

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

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: $\geq 40\text{dB}$

RF frequency: 50~960MHz, 1KHz step

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

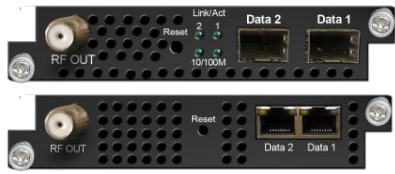
Symbol Rate: 3600~7000Ksps, 1ksps stepping

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

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

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

8 DVB-T/ATSC Modulating Module



DX308T/DX308AT

Module Specifications:
 Data input: Stream connector
 256 IP input over UDP/RTP, 2GE Ports (RJ45/SFP)
 Data output: 8 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP)
 Trans Rate: Max 840Mbps/GE Port
 RF Output (F type): 8 non-adjacent carrier outputs within 192M bandwidth

Multiplexing:
 Channel Number: 8 multiplexing channels
 Maximum PID Remapping: 180 output pids per channel
 Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically

Modulation: DX308T (8*DVB-T)
 Standard: ETSI EN300 744 MER: $\geq 40\text{dB}$
 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), 0.5dB step

Modulation: DX308AT (8*ATSC)
 Standard: ATSC A/53 MER: $\geq 40\text{dB}$ RF Frequency: 50~960MHz, 1KHz step
 Constellation: 8VSB Bandwidth: 6MHz FEC: RS(208 188)+Trellis
 RF Output Level: -20~+10dBm (for all carriers), 0.5dB step

6 ISDB-Tb Modulating Module



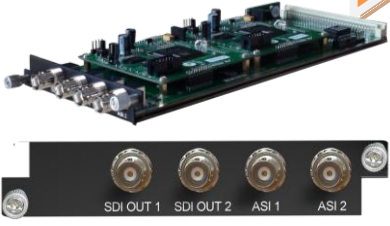
DX306I

Module Specifications:
 Data input: 32x6 IP input over UDP/RTP, 2 GE Ports (RJ45/SFP) and stream connector
 Data output: 6 IP output over UDP/RTP/RTSP, unicast/multicast, 2 GE Ports (RJ45/SFP)
 Trans Rate: Max 840Mbps/GE Port
 RF output (F type): 6 channels of multiplexing and modulation.

Multiplexing:
 Maximum PID Remapping: 180 output pids 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: $\geq 40\text{dB}$
 RF frequency: 50~960MHz, 1KHz step
 RF output level: -20dBm~+10dBm (87~117dB μ V), 0.1dB stepping

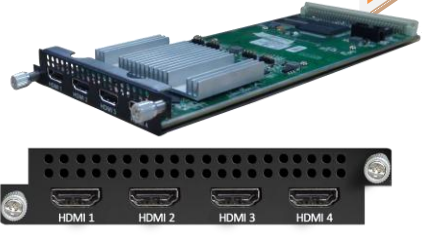
2 HD-SDI Decoding Module



DX702

Module Specifications:
 ASI input/output: 2 ASI bi-directions, BNC 75Ω
 Stream Connector input
 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
 Support CC/Subtitle

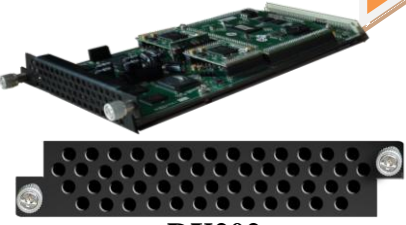
4 HDMI Decoding Module



DX714

Module Specifications:
 Input: 1 IP (MPTS/SPTS) input over UDP 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)
 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**

2 IP Transcoding Module



DX202

Module Specifications:
 Input: Stream connector
 Resolution: 480i, 576i, 720P@50, 720P@60, 1080i@50, 1080i@60, 1080P@50, 1080P@60
Video Tanscoding:
 2*MPEG-2/ H.264/ AVS/AVS+ HD/SD → 2* H.264 HD/SD
 Video Bit-rate: 1~19.5Mbps each channel
 Rate Mode: CBR/VBR GOP Struct: IBBP, IPPP, IBP
AudioTanscoding:
 MPEG-1 Layer II, LC/HE-AAC, AC3, DRA→ MPEG-1 Layer II, LC/HE-AAC
 Audio bitrate: 64/96/128/192/256/320/384Kbps Audio Gain Control: 0-100

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

Parameters Comparison:

	DHP400	DHP400A
IP Data Transport	One-way Transport: GE1/GE2 support output maximum 8 MPTS & 512 SPTS	Bi-directional Transport: GE1/ GE2 support IP data input and output
TS Processing Number	Support 1 TS (MPTS/SPTS) input from each module, and maximum bit rate is 350Mbps	Support maximum 512 TS (MPTS/SPTS) input from each module, and maximum bit rate is 350Mbps
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 port
Output Per Module	1 MPTS after multiplexing	1 or multiple MPTS/SPTS