



DHP 400

DTV Head-end Processor

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, modulating, multiplexing, descrambling processing and the combination of all these functions. It supports DVB-S/S2, IP and GE inputs, and RF, IP, ASI, and GE outputs. 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 (MPTS) output
- Support 2 GE output, RJ45 interface
- Support Web management, Updates via web

Redundancy power supply (optional)

Module Specifications:

4 ASI/IP Multiplexing Module



DX504

Module Specifications:

ASI inputs/outputs: 4 ASI bi-direction, BNC 75Ω
IP inputs/outputs: 2 100/1000M Ethernet Port
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, 256×2 IP output

5 ASI Multiplexing Module



DX505

Module Specifications:

ASI inputs/outputs: 5 ASI bi-direction, BNC 75Ω
Stream in: maximum 5 ASI input
Re-multiplexing: PID remapping, PCR correction, generate PSI/ SI table automatically
Stream out: maximum 5 ASI output

4 CVBS Encoding Module



DX214

Module Specifications:

Encoder inputs: 4 CVBS video inputs, 4 Stereo Audio inputs (BNC 75Ω)

Video Processing:

Video format: MPEG-2

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, 76×120_60i, 720×576_50i, 704×

576_50i, 640×576_50i, 352×288_50i, 320×288_50i, 176×288_50i,

176×144_50i,

GOP structure: IBBPB

Video bitrate: 0.1Mbps~8Mbps each channel

Audio processing:

Audio format: MPEG-1 Layer 2, AC3

Sampling rate: 48KHz

Resolution: 24-bit

Audio bitrate: 128Kbps, 192kbps, 256kbps, 320kbps, 384kbps each channel

2 HDMI Encoding/Transcoding Module



DX202A

Module Specifications:

Encoder inputs: 2 HDMI inputs

Video Encoding:

Video format: MPEG2 & MPEG4 AVC/H.264

Input resolution:

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: 0.5~19.5Mbps for H.264 encoding

1~19.5Mbps for MPEG-2 encoding

Audio Encoding:

Audio format:

MPEG1 Layer II, MPEG2-AAC, MPEG4-AAC, Dolby Digital AC3 (2.0)

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 ;

4 *MPEG2 SD → 4 *MPEG2/H.264 SD

2* H.264 HD → 2*MPEG2/H.264 HD ;

2* H.264 HD → 2*MPEG2/H.264 SD ;

4* H.264 SD → 4 *MPEG2/H.264 SD

Audio Transcoding:

MPEG-1 Layer 2, AAC and AC3 any-to-any or pass through

4 HDMI Encoding Module



DX224

Module Specifications:

Encoder inputs: 4 HDMI video inputs

Video Processing:

Video format: MPEG-4 AVC/H.264 encoding

Input resolution: 1920×1080_60i, 1920×1080_50i, 1280×720_60P
1280×720_50P, 720×576_50i, 720×480_60i

GOP structure: IBBP

Video bitrate: 0.8Mbps~19Mbps each channel

Rate Control: CBR/VBR

Audio processing:

Audio format: MPEG-1 Layer 2(HE-AAC V2, LC-AAC Option),
AC3 passthrough

Sampling rate: 48KHz

Resolution: 24-bit

Audio bitrate: 64Kbps~384Kbps each channel

Audio Gain: 0-400

2 IP Transcoding Module



DX202

Module Specifications:

Resolution: 480i, 576i, 720P@50, 720P@60, 1080i@50, 1080i@60,
1080P@50, 1080P@60

Video Transcoding:

2*MPEG-2/ H.264/ AVS/AVS+ HD/SD → 2* H.264 HD/SD

Audio Transcoding:

MPEG-1 Layer II, LC-AAC, HE-AAC, AC3, DRA →

MPEG-1 Layer II, LC-AAC, HE-AAC

Audio bitrate: 64Kbps-384Kbps

Rate Mode: CBR, VBR

GOP Struct: IBBP, IPPP, IBP

2 HD-SDI Decoding Module



DX702

Module Specifications:

ASI inputs: 2 ASI bi-direction, BNC 75Ω

Decoding:

Video Format: MPEG-2/H.264

Audio Format: MPEG1 Layer2, LC-AAC, AC3, HE-AAC, E-AAC

Stream In: 1-2 ASI input

Video/Audio Out: 2 HD/SD SDI output

16 RF Modulating Module



DX316

Module Specifications:

IP inputs/outputs: 512×2 IP input, 2 100/1000M Ethernet Port (Optical)
RF outputs (DVB-C): F type
16 channels of multiplexing, scrambling and modulation.

Multiplexing:

Maximum PID Remapping: 180 input per channel
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/C
MER: $\geq 40\text{db}$
RF frequency: 30~999MHz, 1KHz step
RF output level: -12~+13dbm(95~120 db μ V), 0.1db step for all carriers
Symbol Rate: 5.0Msps~7.0Msps, 1ksps stepping
Constellation: 16/32/64/128/256QAM
Output: 16 non-adjacent carrier outputs within 200M bandwidth

2 DVB-S/S2 Descrambling Module



DX902

Module Specifications:

DVB-CI: 2 independent common interface slots
Standard: DVB-S/S2

	DVB-S	DVB-S2
Input Frequency:	950-2150MHz	950-2150MHz
Symbol Rate:	QPSK 2~45Mbauds	QPSK 1-45Mbauds 8PSK 2~30Mbauds
FEC Demodulation:	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

Signal Strength: -65~-25dBm
Stream in: 2 Tuner input
Stream out: 1 ASI output 2 IP output over UDP protocol, 1000M Base-T

Multiplexing:

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

Descrambling:

CAM/CI Quantity: 2

4 FTA Tuner Module**DX904****Module Specifications:**

DVB-S2 inputs: 4 Tuner inputs, BNC 75Ω
Standard: DVB-S/S2

	DVB-S	DVB-S2
Input Frequency:	950-2150MHz	950-2150MHz
Symbol Rate:	QPSK 2~45Mbauds	QPSK 1-45Mbauds 8PSK 2~30Mbauds
FEC Demodulation:	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Signal Strength:	-65~-25dBm	

Multiplexing:

Maximum PID Remapping: 256 input

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

Descrambling(Optional):

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

Equipment Specifications:

Base Unit Parameters

Dimension(W×L×H): 482mm×410mm×44mm

Approx weight: 8kg

Environment: 0~45℃(work); -20~80℃(Storage)

Power requirements AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz

Power consumption : 20W
