

The DXP-3400P provides operators an ideal solution for multi receiving, descrambling, remultiplexing and decoding operations. By the quad DVB common interfaces, DXP-3400P could decrypt multiple services in 4 transport stream. DXP-3400P is also a professional IRD that features a broadcast quality decoder for MPEG-2 and MPEG-4 AVC/H.264 in both Standard Definition and High Definition formats, and provides a variety of industry standard digital and analog outputs, including 4 separated CVBS video, analog Audio, SD-SDI and HD-SDI. The unit also performs HD down-conversion and aspect ratio adaptation of HD programs to generate professional quality baseband analog video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the DXP-3400P an ideal product for distribution and contribution networks.

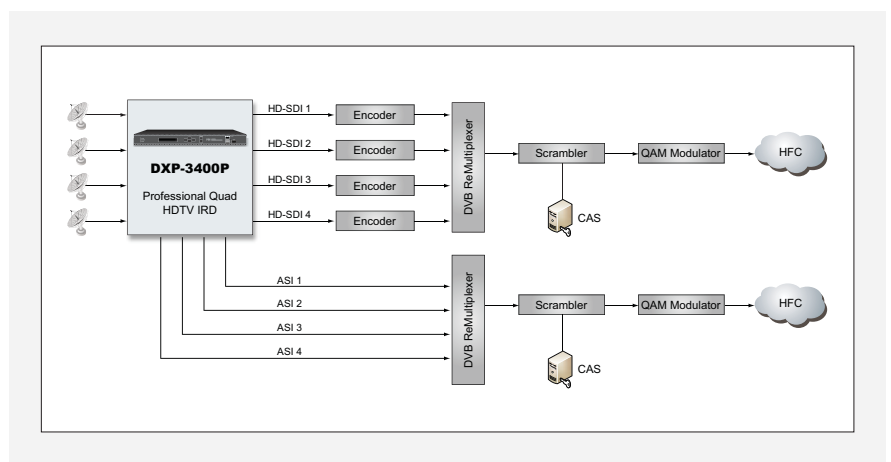
DXP-3400P

Professional Quad HDTV IRD



Main Feature

- Quad Tuner Input, Supports variety of input options DVB-T2/S2/S/C/T/DTMB/ATSC/ISDB-T, DS3/E3,
- Supports DVB-S2 Input Stream Identifier (ISI, optional) and DVB-T SFN MIP pass through
- SD/HD MPEG-2 and MPEG-4 AVC/H.264 digital video decoding
- Two Audio PIDs decode or pass through (compressed) for each SDI output
- Built-in 2xTS re-multiplexer, one receives from Tuner1, Tuner2, CI1 and CI2 Inputs, the other receives from Tuner3, Tuner4, CI3 and CI4 Inputs
- 4x DVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption
- On Site software update through IP or USB
- Dynamic PMT detection and automatic updating
- Supports VBI TELETEXT, EBU/DVB Subtitle, Closed Caption
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- PCM audio embedded in SDI and HDMI outputs
- AC3 and Dolby E audio can be passed through by SDI
- VBI TELETEXT, WSS and Closed Caption embedded in SDI
- RSSI, received Eb/No & BER monitoring
- Redundant power supply



Specification

Tuner Input	
DVB-S/S2 Tuner Input (ISI Factory Optional)	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rate	2~45MBaud
Roll-off Factor	DVB-S QPSK: 0.35
FEC Code Rate	DVB-S2 8PSK: 0.35, 0.25, 0.2 DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2 QPSK: 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
LNB Polarity Selection Voltage	0, 13V, 18V selectable
LNB Band Selection Tone	0/22KHz selectable
Satellite Selection Command	DiSEqC 1.0
ISI ID	1~255 user configurable
DVB-C Tuner Input	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	51~862MHz
Input Level	51~75dBμV
Symbol Rate	1~7MBaud (ITU J.83 Annex A)
Constellation	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
Input Return Loss	7dB (typ.)
DVB-T/T2 Tuner Input	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency	104~862MHz (VHF/UHF)
Input Level	-20~-70dBm
Constellation	DVB-T: QPSK, 16QAM, 64QAM DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
FFT Mode	DVB-T: 2K, 8K
Guarding Interval	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
FEC Code Rate	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
Input Return Loss	7dB (typ.)
DTMB Tuner Input	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	46.5~866MHz
Input Level	-87~-29dBm
Symbol Rate	7.56MBaud
Bandwidth	6MHz/7MHz/8MHz
Constellation	4QAM-NR, 4QAM, 16QAM, 32QAM, 64QAM
Guard Interval	PN420, PN595, PN945
Roll-off Factor	0.05
Interleaving Depth	240, 720
FEC Code Rate	0.4, 0.6, 0.8
ATSC Tuner Input	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	54~864MHz
Input Level	-75~-7dBm(ATSC 8VSB)
Symbol Rate	10.762MBaud
Constellation	8VSB
Roll-off Factor	0.115
Bandwidth	6MHz
DS3 Input (Option)	
Connector Type	4×BNC female, 75Ω, including loop through
Standard	Compliant with ITU-T G.703

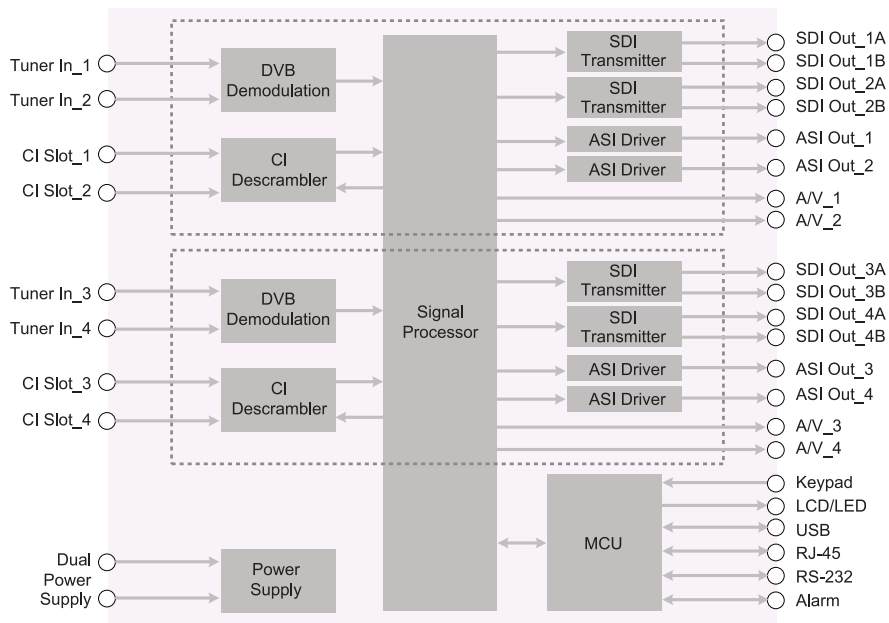
Frame Structure	Compliant with ITU-T G.752 and ITU-T G.804
Bit Rate	44.736Mb/s
TS Processing	
TS Input Management	Demux and Remux among Tuner and CI Inputs
TS Output Management	Demux and Remux for 4 independent ASI outputs
Service and PID Management	Remux, filtering and remapping
PSI/SI	PSI/SI table regeneration, NIT and SDT edition, LCN Edition and Re-generation
Descrambler	DVB Common Scrambling Algorithm (CSA)
BISS Mode	BISS-1, BISS-E
Common Interface	Double PCMCIA slots, compatible with major CA CAMs in the market
ASI Output	
Connector Type	4 independent BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 100Mb/s
TS Processing	2 Independent TS Re-multiplexed from tuner1, Tuner2, CI1 and CI2. The other 2 Independent TS Re-multiplexed from tuner3, Tuner4, CI3 and CI4.
Digital Video Processing	
Video Standard	MPEG-2(MP@ ML for SD, MP@HL for HD) MPEG 4/H.264 AVC Part 10 (MP@L3 for SD, HP@L4.1 for HD)
SDI Video Resolution	1080i×30, 1080i×29.97, 1080i×25, 720p×60, 720p×59.94, 720p×50, 576i×25, 480i×29.97
Video PID Bit Rate	≤ 60Mb/s
HD/SD-SDI or ASI Output	
Connector Type	4 Pairs of SDI output, BNC, female, 75Ω
SD Standard	SMPTE 259M, 270 Mb/s (10bit)
HD Standard	SMPTE 292M, 1.485 Gbit/s (10bit)
Level	800mV p-p
Embedded Audios	MPEG-1 Layer 2
	a. 2 stereo pairs (Stereo, Dual Mono, Left, Right)
	Dolby Digital (AC3)
	a. 5.1 down-mix to 2.0 (Stereo, Dual Mono, Left, Right)
	b. Dolby Digital Audio Pass-through
	Dolby Digital Plus(AC3+)
	a. 5.1 down-mix to 2.0 (Stereo, Dual Mono, Left, Right)
	b. Dolby Digital Audio Pass-through
	Dolby E
	a. 5.1 down-mix to 2.0 (Stereo, Dual Mono, Left, Right)
	b. Dolby Digital Audio Pass-through
	MPEG-2 AAC
	a. 5.1 down-mix to 2.0 (Stereo, Dual Mono, Left, Right)
	b. 2.0 (Stereo, Dual Mono, Left, Right)
	MPEG-4 HE-AAC v1/v2
	a. 5.1 down-mix to 2.0 (Stereo, Dual Mono, Mono, Left, Right)
	b. 2.0 (Stereo, Dual Mono, Left, Right)
Embedded Ancillary Data	Teletext, WSS, CC
Analog Video Output	
CVBS Connector	4×BNC female 75Ω
CVBS Standard	NTSC, PAL, and SECAM
CVBS Resolution	576i×25, 480i×29.97
Nominal Output Level	1.0 Vp-p±5% (with standard test stream)
Frequency Response	<±1 dB, at 5.5 MHz for PAL/SECAM, 4.2MHz for NTSC
Chroma-Luma Delay	<±30 ns

Field Time Distortion	<2%
Line Time Distortion	<1%
Short Time Distortion	<2%
Differential Gain	<3%
Differential Phase	<2°
Signal to Noise Ratio	>55dB (luminance weighted)
Analog Audio Output	
Connector Type	2×D-sub 9 male included 4 pairs of stereo audio with XLR adaptor cable
Output Impedance	600Ω (balanced)
Output Mode	Left, Right, Dual Mono, Stereo
Number of Output	4 pairs of stereo audio outputs (4 Audio PIDs or 8 channels are decoded)
Cross Talk Among Channels	>70dB
THD	<0.3% @ 400Hz, 1KHz test tone
Frequency Response	±0.5dB over 20Hz ~ 18KHz
Output Level	0dBm in 600Ω (0dBu), adjustable range ±10dB
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Control & Monitoring	

Connector Type	1×RJ-45, 10/100 Base-T, for equipment IP Control
Remote Control	SNMP, HTTP (Web Interface), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and 6-key keypad
Serial Port	1×RS-232 D-sub female, for debug use only
Equipment Upgrade	Embedded FTP loader and Telnet
Physical Dimension	
Weight	
Power Supply	AC 90V ~ 250V, 50/60Hz
Power Consumption	24W (exclusive of LNB power)
Operating temperature	0~45°C
Storage temperature	-10~60°C
Operating Humidity	10~90%, non-condensed
Certification	
EMC: EN 55024:1998+A1:2001+A2:2003, EN 55022:2006+A1:2007, EN 61000-3-2:2006, EN 61000-3-3:2008	
FCC: Part 15 Class B	
LVD: EN 60950-1:2006 + A11:2009	

Block Diagram

DXP-3400P Functional Block Diagram



Order Information

"X" in table below stands for the option of tuner frontend.

Model			3400P-10 Series				3400P-20 Series				3400P-30 Series			
Interface			10X	12X	14X	16X	20X	22X	24X	26X	30X	32X	34X	36X
Standard Video/ Audio Option	CVBS	4*BNC	•	•	•	•	•	•	•	•	•	•	•	
	AUDIO	2XDB9 with 8*R/L	•	•	•	•	•	•	•	•	•	•	•	
	HD-VIDEO	1*HDMI	•	•	•	•	•	•	•	•	•	•	•	
Digital Video/Audio	SDI	8*BNC, 4 Pairs												
TS Output	ASI OUT	4*BNC												
IP	100M Base-T / 6* Multicast	2*RJ45, Mirrored												
	100M Base-T / 32* Multicast	1*RJ45												
	GbE	1*RJ45												
Control/Upgrade	Management	1*RJ45												
	Upgrade	2*USB	•	•	•	•	•	•	•	•	•	•	•	
	RS-232	1*D9	•	•	•	•	•	•	•	•	•	•	•	
	ALARM/RELAY	1*D9	•	•	•	•	•	•	•	•	•	•	•	
Power Supply	Power	2*	•	•	•	•	•	•	•	•	•	•	•	
X = Tuner Frontend option	C	DVB-C	Factory default option: X= S2											
	T	DVB-T												
	S2	DVB-S2												
	T2	DVB-T2												
	D	DS3												
	M	STM-1												
	A	Extended ASI port												
	N	No tuner frontend												

Back Panel Interface

