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Catalog 2026

DCH & DXP Series

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DCH-3200P
IRD HD 4:2:0

The DCH-3200P is a cost-effective professional integrated receiver-decoder. It is widely used in satellite, cable, and terrestrial television networks with various tuners, such as DVB-S2/S, DVB-C, and DVB-T. It demodulates the RF signal into a transport stream via ASI and TSoIP. With two common DVB slots, the DCH-3200P works with most well-known CAS on the market and can decrypt multiple services within a transport stream. The decoder can handle a variety of digital video formats including MPEG-4 AVC/H.264, MPEG-2, AVS+, and H.265, in both standard definition and high definition. The television channel is decoded into digital and analog outputs: HDMI, CVBS, balanced and unbalanced audio. Its powerful demodulation, decryption, and decoding capabilities, combined with a user-friendly Web GUI and SNMP-based remote control, make this unit one of the most competitive professional IRDs on the market.

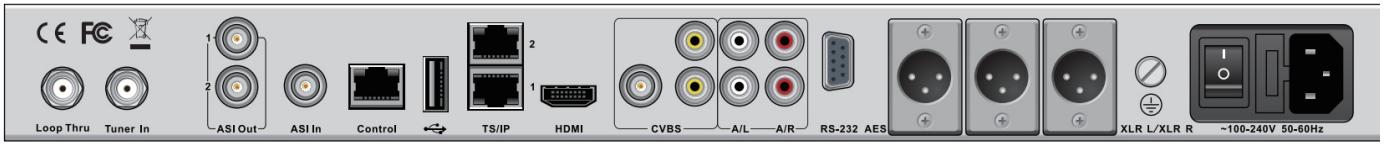
Main Features

- Multiple tuner inputs: DVB-S2/S, DVB-T/C, DTMB, ASI, and TS/IP
- 2 DVB-CI slots: Support for all major CAS and CAMs
- BISS-1 and BISS-E descrambling
- Digital video decoding: MPEG-2, MPEG-4/H.264, AVS+, and H.265
- Decoding of two digital audio channels: MPEG-1 Layer II, AAC, and AC-3 Dolby Digital
- Video outputs: HDMI and CVBS
- One balanced audio output, one AES/EBU digital audio output
- UDP/RTP, Unicast/Multicast, and SPTS/MPTS over IP
- Remote control and monitoring: SNMP, HTTP WEB, and TRAP
- Dynamic automatic PMT detection and update

Order Information

Interface / Model			DCH-3200P-10X	DCH-3200P-12X	DCH-3200P-20X	DCH-3200P-22X
Input	Tuner		x is tuner options: DVB-S2/S, DVB-T/C, DTMB, ASI In Factory default: x=S2			
	ASI In×1		option	option	•	•
	CI×2		•	•	•	•
Output	ASI Out x2				•	•
	HDMI		•	•	•	•
	CVBS	BNC + RCA	•	•	•	•
	Audio	RCA(L&R) x2	•	•	•	•
		XLR x1	•	•	•	•
TSoIP	GbE	RJ45 x2		•		•
USB	USB x1		•	•	•	•
Control	RJ45 x1		•	•	•	•

Rear Panel



Technical Specifications

TUNER INPUT	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
TS Input and Output	
ASI	
Connector Type	Input: 1×BNC, 75Ω; Output: 2× 2 BNC, 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	Input≤ 200Mb/s; Output ≤ 200Mb/s
TS over IP	
Connector Type	2×RJ45, 100/1000 Base-T, Independent
Effective Bit Rate	240Mb/s, Full duplex 64 output streams, 1 input streams
Protocol	UDP/RTP, Multicast / Unicast, IGMPv3, ARP
TS Processing	
TS Descrambler	Dual PCMCIA: DVB-CI, BISS-1, BISS-E
Audio and video output	
Audio Video Coding Standard	
Video Profile/Level	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), AVS MP@ML6.0, Support AVS-P16, H.265, AVS+
Audio Profile/Level	MPEG L1/L2, DRA AAC-LC 、HE AAC V1/V2、Dolby Digital
HDMI Output	
Connector Type	1xHDMI 2.0
Video Resolution	1080P×60, 1080P×59.97, 1080i×60, 1080i×25, 720p×60, 720p×50, 576i×25, 480i×29.97

Digital Audio Output	
Number of Output	Decoded or passed through 1 channel
Output Format	AES/EBU
Load Impedance	110Ω
Output Level	1Vp-p
Analog Audio and video output	
CVBS Connector	1×BNC 75Ω; 1×RCA 75Ω
CVBS Standard	NTSC, PAL and SECAM
Audio Connector	1 XLR Male Socket, 2 pairs of RCA
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	SNMP 2.0, HTTP (Web GUI), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and Front control 6-key keypad
Upgrade	FTP loader, WEB HTTP, USB

DCH-5200P
Professional H.264 4:2:0 Receiver

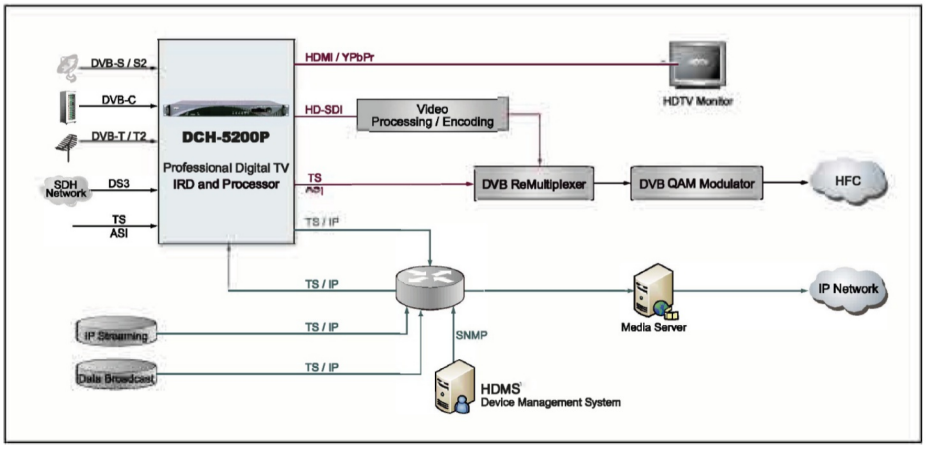
The DCH-5200P is a professional IRD that provides operators with the ideal solution for reception, demultiplexing, descrambling, and decoding operations. Equipped with a variety of inputs to ensure compatibility with all transmission media. The multiplexing capabilities of the DCH-5200P allow for the creation of new transport streams that are subsets of the original stream. Customized services can be output as multiple SPTS and MPTS over IP, as well as over ASI. Through its two common DVB-CI interfaces, the DCH-5200P can descramble multiple services. The DCH-5200P is also a professional IRD featuring a high-quality broadcast decoder for both MPEG-2 and MPEG-4 AVC/H.264 in both standard definition and high definition, and offers a wide range of standard digital and analog outputs, including CVBS video, AES/EBU audio, analog audio, SD-SDI, and HD-SDI.

The device also performs HD down-conversion and aspect ratio adjustment for HD programs to generate professional-quality analog baseband video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the DCH-5200P ideal for distribution and contribution networks.

Main Features

- √ Factory options: Supports reception of DVB-T2/S2/S/C/T, DTMB, ATSC, ISDB-T, DS3/E3, TS/IP, and ASI
- √ Supports input identification for DVB-S2 streams (ISI, optional) and DVB-T SFN MIP pass-through
- √ Redundant backup between Tuner, ASI, and TS/IP with configurable priority
- √ SD/HD MPEG-2 and MPEG-4 AVC/H.264 digital video decoding
- √ Two audio PIDs decoded or passed through (compressed) via the SDI output
- √ Multiple analog and digital outputs: ASI, CVBS, YPbPr, HDMI, SD/HD-SDI, AES/EBU Audio, TS/IP
- √ Built-in TS remultiplexer receives inputs from ASI, Tuner, and TS/IP
- √ RSSI, received Eb/No & BER monitoring
- √ 2 DVB-CI slots, multi-service descrambling, BISS-1 and BISS-E descrambling
- √ Dynamic PMT change detection
- √ Supports VBI Teletext, EBU/DVB subtitles, closed captioning
- √ UDP/RTP, Unicast/Multicast, and SPTS/MPTS over IP (full duplex, optional)
- √ Remote control and monitoring via SNMP, HTTP WEB, and proprietary HOMS software
- √ Integrated PCM audio with SDI and HDMI outputs
- √ PCM audio outputs on two AES/EBU audio ports
- √ Remote software update via IPP

Typical Application



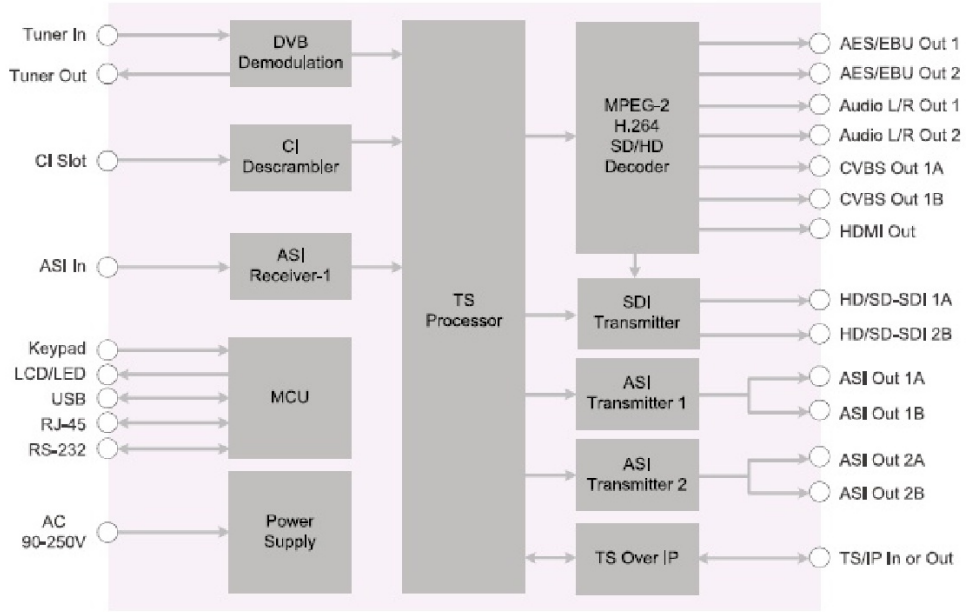
Technical Specifications

Tuner Input	
DVB-S2X/S2 Tuner Input	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Standard(s)	ETSI EN 302-307-1 V1.4.1 (Part 1: DVB-S2 and Part 2: DVB-S2X)
Symbol Rate	QPSK 1 ~ 60 MSps 8PSK 1 ~ 60 MSps 16APSK 1 ~ 58 MSps 32APSK 1 ~ 55 MSps 64APSK 1 ~ 34 MSps
Code Rates	Normal (64800 bits) FECFRAME supported
Roll-off	0.05 ~ 0.35
Input RF Frequency	950 ~ 2150MHz
Input RF Level	-65 ~ -25dBm
LNB Voltage	0, 13, 18V
0/22K	0, 22KHz
DiSEqC	DiSEqC 1.0
PLS gold code	0 ~ 262141
ISI	1 ~ 255
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 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
Bandwidth	6MHz, 7MHz, 8MHz
FFT Mode	2K, 8K
Guarding Interval	1/4, 1/8, 1/16, 1/32
FEC Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
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
ASI Input	
Connector Type	2×BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Input Bit Rate	≤ 100Mb/s
DS3 Input (Option)	
Connector Type	2×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 over IP	
Connector Type	1×RJ-45, 10/100 Base-T or 100/1000 Base-T for TS/IP
Effective Bit Rate	70Mb/s for 10/100/1000 Base-T
Protocol	UDP / RTP, Multicast / Unicast, IGMPv3, ARP
FEC	SMPTE 2022M (Pro-MPEG) FEC (for GbE only)
Operating mode & Effective Bit Rate	1 full duplex, Support Pro MPEG FEC, Backup 1+1, Max 80Mb/s 32-CH IPTV/DVB mode output, Total 500Mb/s, Spare mirror output
TS Processing	
TS Input Management	Demux and Remux among Tuner / DS3(optional) / E3 (optional), ASI and TS/IP Inputs
TS Output Management	Demux and Remux for 2 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	2 pairs of BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 99Mb/s
TS Processing	2 Independent TS Re-multiplexed from tuner, TS/IP and 2 ASI inputs
HDMI Output	
Standard	1×HDMI 1.3 interface (up to 1080i)
Video Resolution and Frame Rate	1080i×30, 1080i×29.97,1080×25,720p ×60,720p×59.94, 720p×50, 480p×60, 576p×50, 576i×25, 480i×29.97
Audio Embedded	2×stereo or Digital Audio pass through
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	< 80Mb/s
HD/SD-SDI Output	
Connector Type	1 pair of BNCs (mirrored) , female, 75Ω
SD Standard	SMPTE 259M, 270 Mb/s (10bit)
HD Standard	SMPTE 292M, 1.485 Gbit/s (10bit)
Level	800mV p-p
Digital Audio Processing	
Connector Type	2×D-sub 9 male with XLR adaptor cables
Number of Output	2×audios are decoded or passed through
Audio Sampling Rate	32, 44.1 and 48 KHz
Audio Bit Rate	32, 64, 96, 128, 160, 192, 224, 256, 288, 320, 352, 384, 416 and 448 Kb/s for MPEG-1 Layer I, 32, 48, 56, 64, 80, 96, 112, 128, 160, 192, 224,256, 320 and 384 Kb/s for MPEG-1 Layer II
Nominal Output Level	1V p-p (with standard test stream)
Output Format	AES/EBU
Load Impedance	110Ω (with XLR adaptor cables)

Analog Video Output	
CVBS Connector	1×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, with XLR adaptor cable
Output Impedance	600Ω (balanced)
Output Mode	Left, Right, Dual Mono, Stereo
Number of Output	2 pairs of stereo audio outputs (2 Audio PIDs or 4 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 ±I0dB
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Teletext, WSS

Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Redundancy	
Redundancy Port	among Tuner, ASI input and TS/IP input
Switching Condition	TS Sync Loss
Switching Mode	Main, Spare
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	44mm×483mm×255mm
Weight	3.4Kg Net, 5.4Kg Gross
Power Supply	AC 90V~250V, 50/60Hz
Power Consumption	24W (exclusive of LNB power)
Operating temperature	0~45℃
Storage temperature	-10~60℃
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	

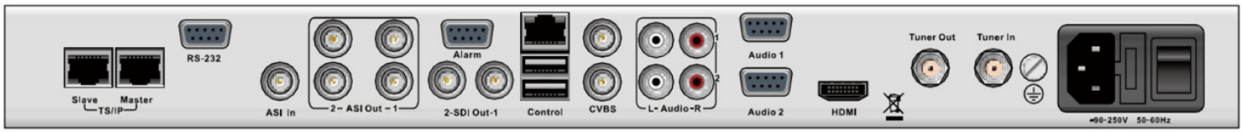
Functional Block Diagram



Order Information

Model			5200P-10 Series				5200P-20 Series				5200P-30 Series			
Interface			10X	12X	14X	16X	20X	22X	24X	26X	30X	32X	34X	36X
Standard Video/ Audio Option	CVBS	2*BNC, Mirrored	•	•	•	•	•	•	•	•	•	•	•	•
	AUDIO	2*R/L	•	•	•	•	•	•	•	•	•	•	•	•
	HD-VIDEO	1*HDMI	•	•	•	•	•	•	•	•	•	•	•	•
Digital Video/Audio	SDI	2*BNC									•	•	•	•
	AES/Balanced	2*D9, with extended cable adaptor									•	•	•	•
TS Input	ASI IN	1*BNC									•	•	•	•
TS Output	ASI OUT	4*BNC (2*2 redundant)					•	•	•	•	•	•	•	•
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	•	•	•	•	•	•	•	•	•	•	•	•
X = Tuner Frontend option	C	DVB-C	Par défaut X= S2											
	T	DVB-T												
	S2	DVB-S2												
	T2	DVB-T2												
	D	DS3												
	M	STM-1												
	A	Extended ASI port												
	N	No tuner frontend												

Rear Panel



DCH-5300P/DCH-5300PE
Professional HEVC IRD

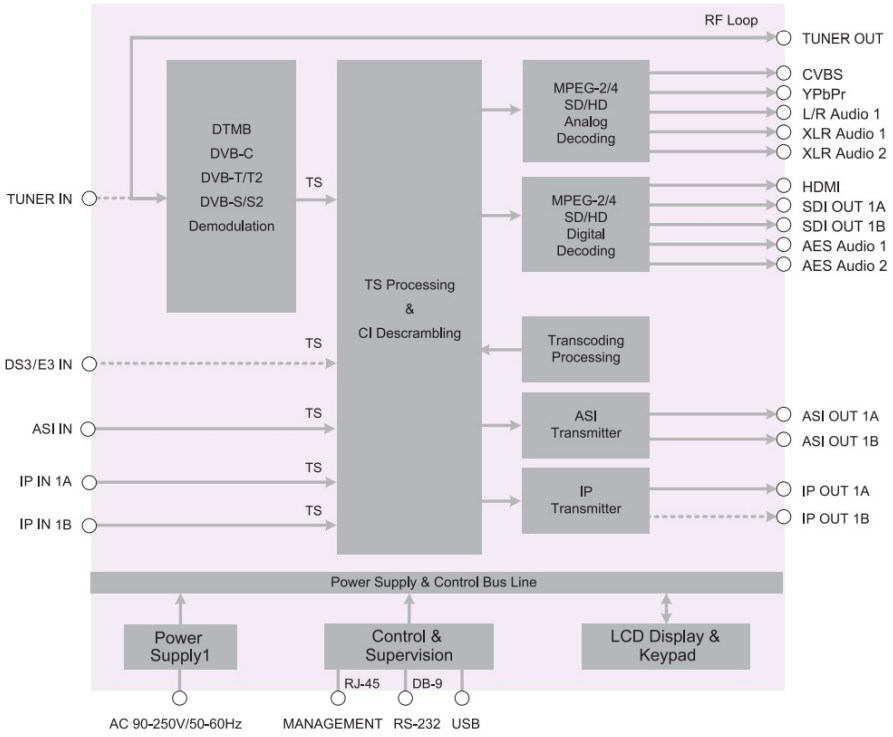
The DCH-5300P is the newest model in the IRD product family. It provides operators with an ideal solution for reception, remultiplexing, descrambling, and decoding operations. Equipped with a variety of inputs, it ensures compatibility with all transmission media. The remultiplexing capabilities of the DCH-5300P enable the creation of new transport streams that are subsets of the original stream. Custom services can be output as multiple SPTS or MPTS over IP, as well as over ASI. Through its dual common DVB interfaces, the DCH-5300P can descramble multiple services within one or two transport streams. The DCH-5300P is also a professional IRD featuring a broadcast-quality decoder for MPEG-2, MPEG-4 AVC/H.264, H.265/HEVC 4K, and AVS2 in both standard definition and high definition formats, and delivers a variety of standard digital and analog outputs, including CVBS video, AES/EBU audio, analog audio, SD/HD-SDI, and HDMI interfaces.

The unit also performs aspect ratio adaptation for HD programs to generate professional-quality analog baseband video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the DCH-5300P an ideal product for distribution and contribution networks. The DCH-5300PE can transcode any digital television format to SD/HD H.264 and SD MPEG-2.

Main Features

- √ Variety of input options: DVB-S2/S/C/T, TS/IP, and ASI
- √ Video decoding: SD/HD/UHD MPEG-2, MPEG-4 AVC/H.264, H.265/HEVC, AVS2
- √ Supports 2-channel AES/EBU digital audio output, Dolby AC-3 decoding
- √ Transcoding support (DCH-5300PE model)
- √ Analog and digital outputs: ASI, CVBS, AES/EBU audio, HDMI, HD/SD-SDI, TS/IP
- √ 2 × DVB-CI slots, supports all major CAS and CAMs, BISS-1 and BISS-E descrambling
- √ Built-in TS remultiplexer receives inputs from ASI, Tuner, and TS/IP
- √ Redundant backup between Tuner, ASI, and TS/IP with configurable priority
- √ Dynamic PMT detection and automatic update
- √ Supports VBI Teletext, EBU/DVB subtitles, closed captioning
- √ UDP/RTP, Unicast/Multicast, and full-duplex dual SPTS/MPTS over IP
- √ Remote control and monitoring via SNMP, HTTP WEB, and proprietary HDMS software
- √ On-site software update via IP and USB
- √ RSSI, Eb/No & BER monitoring

Functional Block Diagram



Technical Specifications

TUNER INPUT	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
TS Input and Output	
ASI	
Connector Type	Input: 2×BNC, 75Ω; Output: 2×2 BNC, 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	Input≤ 200Mb/s; Output ≤ 200Mb/s
TS over IP	
Connector Type	2×RJ45, 100/1000 Base-T, Independent
Effective Bit Rate	300Mb/s, Full duplex 64 stream outputs , 1 streams input
Protocol	UDP/RTP, Multicast / Unicast, IGMPv3, ARP, SRT reception (Option)
TS Processing	
TS Descrambler	Dual PCMCIA: DVB-CI, BISS-1, BISS-E
REMUX	Remux for 2 independent outputs
Service and PID Management	Remux, filtering and remapping
PSI/SI	PSI/SI table regeneration, NIT, SDT and SDT edition, LCN Edition and Re-generation, EIT P/F edition
Audio and video output	
Audio Video Coding Standard	
Video Profile/Level	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), AVS MP@ML6.0, Support AVS-P16, H.265, AVS+, AVS2
Audio Profile/Level	MPEG L1/L2, DRA AAC-LC 、HE AAC V1/V2、Dolby Digital
HDMI Output	
Connector Type	1xHDMI 2.0
Video Resolution	1080P×60, 1080P×59.97, 1080i×60, 1080i×25, 720p×60, 720p×50, 576i×25, 480i×29.97

SDI Output	
Connector Type	2xBNC
Standard	SD: SMPTE 259M, 270 Mb/s (10bit) HD: SMPTE 292M, 1.485 Gbit/s (10bit)
Video Resolution	1080I60, 1080Ii59.94,1080I50, 720P60,720P59.94, 720P50, 576I50, 480I59.97
Audio Embedded	2×PCM
Digital Audio Output	
Output Format	AES/EBU、SDI (Embedded)
Connector Type	2×D-sub 9 (XLR Converter Line, 110Ω)
Audio Sampling Rate	48 KHz
Output Level and Load Impedance	1Vp-p，110Ω
Analog Audio and video output	
CVBS Connector	2×BNC 75Ω
CVBS Standard	NTSC, PAL and SECAM
Audio Connector	2×RCA 2xDB9, XLR Converter Line
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	SNMP 2.0, HTTP (Web GUI), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and Front control 6-key keypad
Upgrade	FTP loader, WEB HTTP, USB

Order Information

Interface / Model		DCH-5300P		DCH-5300PE	
		230x	232x	230x	232x
Input	Tuner	x is tuner options: DVB-S2/S, DVB-T/C, ISDB, ATSC, DTMB, DS3 Factory default: x=S2			
	ASI IN x2	•	•	•	•
	CI x2	•	•	•	•
ASI	ASI OUT 2x2	•	•	•	•
	HD/SD-SDI x2	•	•	•	•
	Transcoder			•	•
	HDMI	•	•	•	
	CVBS x2	•	•	•	•
	Analog Audio RCA L/R	•	•	•	•
	Balance Audio XLR L/R	•	•	•	•
	Digital Audio AES/EBU	•	•	•	•
IP	GbE RJ45 x2		•		•
Control	Web Management	•	•	•	•
	USB	•	•	•	•
	PS x2			•	•

Rear Panel

DCH-5300P

DCH-5300PE

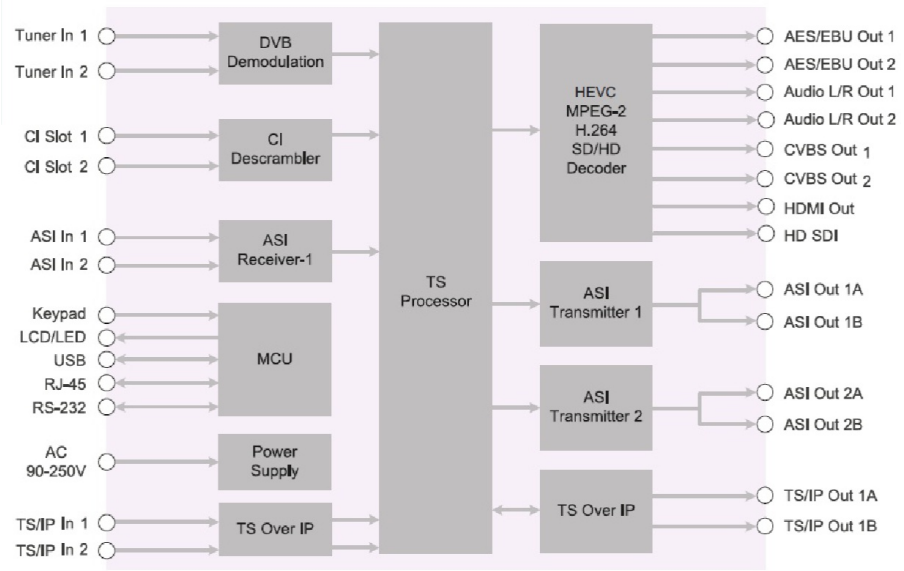
DCH-5500P
Professional HEVC IRD and Processor

The DCH-5500P is the latest model and the flagship product of the IRD family. It provides operators with the ideal solution for reception, remultiplexing, descrambling, and decoding operations, with maximum support for 1080i decoding at 60 frames/second. Equipped with a variety of inputs, it ensures compatibility with all transmission media. The remultiplexing capabilities of the DCH-5500P enable the creation of new transport streams that are subsets of the original stream. Custom services can be output as multiple SPTS or MPTS over IP, as well as over ASI. Through its dual common DVB interfaces, each slot can independently decrypt multiple services within a transport stream. The DCH-5500P is also a professional IRD featuring a broadcast-quality decoder for MPEG-2, MPEG-4 AVC/H.264, HEVC/H.265, and AVS+ in both standard definition and high definition formats, and provides a variety of analog and digital outputs, including CVBS video, HDMI, and SDI interfaces. The unit also performs aspect ratio adaptation for HD programs to generate professional-quality analog baseband video and audio outputs, facilitating easy integration with existing cable network infrastructure. This all-in-one architecture makes the DCH-5500P an ideal product for distribution and contribution networks.

Main Features

- Variety of input options: DVB-T2/S2/S/C/T/DTMB/ATSC/ISDB-T, DS3/E3, TS/IP, and ASI
- Supports DVB-S2 input stream identifier (ISI, optional) and DVB-T SFN MIP gateway
- Redundant backup between Tuner, ASI, and TS/IP with configurable priority
- SD/HD video decoding: MPEG-2, MPEG-4 AVC/H.264, HEVC/H.265
- Analog and digital outputs: ASI, CVBS, HDMI, SDI, TS/IP
- 2 × built-in remultiplexers
- 2 × DVB-CI slots, multi-service descrambling
- Multi-service descrambling with BISS, supports BISS-1 and BISS-E modes
- Dynamic PMT detection and automatic update
- Supports VBI Teletext, EBU/DVB subtitles, closed captioning
- UDP/RTP, Unicast/Multicast, and full-duplex dual SPTS/MPTS over IP
- Remote control and monitoring via SNMP, HTTP WEB, and TRAP
- TFT monitor and headphone jack
- On-site software update via IP and USB
- RSSI, C/N, Eb/No, and BER monitoring

Functional Block Diagram

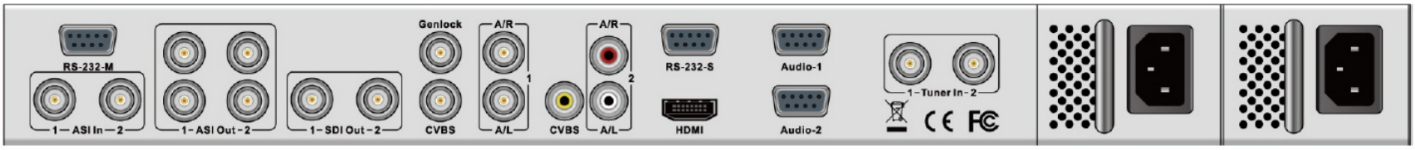


Technical Specifications

TUNER INPUT	
Connector Type	2×F type female 75Ω
TS Input and Output	
ASI	
Connector Type	Input: 2×BNC, 75Ω; Output: 2× 2 BNC, 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	Input≤ 200Mb/s; Output ≤ 200Mb/s
TS over IP	
Connector Type	2×RJ45, 100/1000 Base-T, Independent
Effective Bit Rate	Full duplex mode: 240Mb/s
Protocol	UDP/RTP, Multicast / Unicast, IGMPv3, ARP
TS Processing	
TS Descrambler	Dual PCMCIA: DVB-CI, BISS-1, BISS-E
Service and PID Management	Remux, filtering and remapping
PSI/SI	PSI/SI table regeneration, NIT, SDT and SDT edition, LCN Edition
Audio and video output	
Audio Video Coding Standard	
Video Profile/Level	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), AVS MP@ML6.0, Support AVS-P16, H.265, AVS+, AVS2
Audio Profile/Level	MPEG L1/L2, DRA AAC-LC 、HE AAC V1/V2、Dolby Digital
HDMI Output	
Connector Type	1xHDMI 2.0
Video Resolution	1080P×60, 1080P×59.97, 1080i×60, 1080i×25, 720p×60, 720p×50, 576i×25, 480i×29.97

SDI Output	
Connector Type	2xBNC
Standard	SD: SMPTE 259M, 270 Mb/s (10bit) HD: SMPTE 292M, 1.485 Gbit/s (10bit)
Video Resolution	1080I60, 1080Ii59.94,1080I50, 720P60,720P59.94, 720P50, 576I50, 480I59.97
Audio Embedded	2×PCM
Digital Audio Output	
Output Format	AES/EBU、SDI (Embedded)
Connector Type	2×D-sub 9 (XLR Converter Line, 110Ω)
Audio Sampling Rate	48 KHz
Output Level and Load Impedance	1Vp-p, 110Ω
Analog Audio and video output	
CVBS Connector	1×BNC 75Ω
CVBS Standard	NTSC, PAL and SECAM
Audio Connector	2×BNC (L/R) 2×RCA 2 x DB9, XLR Converter Line
GenLock	
Connector Type	1×BNC female, 75Ω
Clock signal input	Analog SD (black & burst)
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	SNMP 2.0, HTTP (Web GUI), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and Front control 6-key keypad
Monitoring	1.5" TFT LCD
Upgrade	FTP loader, WEB HTTP, USB

Rear Panel



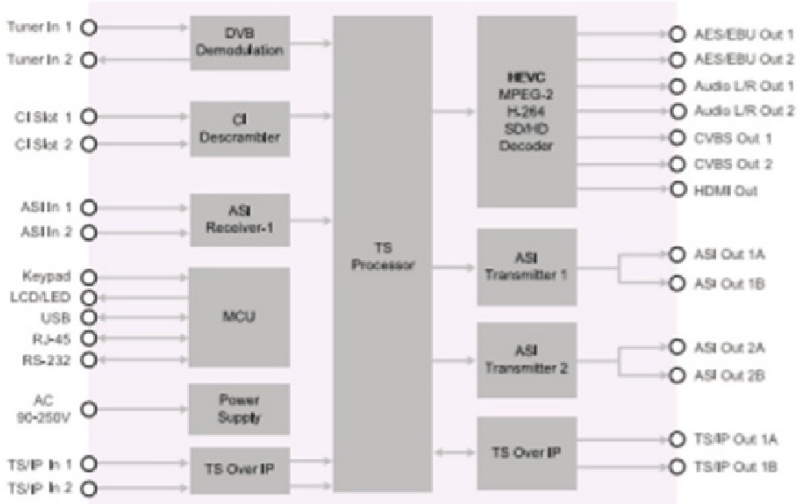
DCH-6000P
Professional HEVC 4K IRD and Processor

The DCH-6000P is our very latest IRD model. It provides operators with an ideal solution for reception, remultiplexing, descrambling, and decoding up to 4K*2K@60fps 10-bit. Equipped with a variety of inputs, it ensures compatibility with all transmission media. The remultiplexing capabilities of the DCH-6000P enable the creation of new TS streams that are subsets of the original stream. Customized services can be output as multiple SPTS and MPTS over IP and ASI interfaces. Through the common DVB-CI interface, the DCH-6000P can descramble multiple services within one or two TS streams. The DCH-6000P is also a professional IRD featuring an SD/HD MPEG-2 and MPEG-4 AVC/H.264 decoder as well as SD/HD/UHD HEVC/H.265 decoding, and provides a variety of industry-standard digital and analog outputs including CVBS video and HDMI interfaces. This IRD also performs aspect ratio adaptation for HD programs to generate professional-quality analog baseband video and audio outputs for easy integration with existing cable network infrastructure. This "all-in-one" architecture makes the DCH-6000P an ideal product for distribution and contribution networks.

Main Features

- Multiple input options: DVB-T2/S2/S/C/T, TS/IP, and ASI
- Supports DVB-S2 ISI input streams (optional) and DVB-T SFN MIP pass-through
- Redundancy between Tuner, ASI, and TS/IP with configurable priority
- SD/HD video decoding: MPEG-2, MPEG-4 AVC/H.264, and HEVC/H.265 (4:2:0 up to 2160p60 10-bit)
- Analog and digital outputs: ASI, CVBS, SDI (12G, 2×6G, or 4×3G), HDMI 2.0, AES/EBU audio, TS/IP
- Frame synchronization via external black burst reference
- Built-in TS remultiplexer from ASI, Tuner, and TS/IP inputs
- Dynamic PMT change detection
- Supports VBI Teletext, EBU/DVB subtitles, and closed captioning
- UDP/RTP, Unicast/Multicast, and full-duplex dual SPTS/MPTS over IP
- Remote control and monitoring via SNMP, HTTP WEB, and proprietary NMS software
- Relay alarm with 9-pin male D-sub connectors
- Software update via WEB interface
- RSSI, Eb/No & BER monitoring

Functional Block Diagram



Technical Specifications

TUNER INPUT	
Connector Type	2×F type female 75Ω
TS Input and Output	
ASI	
Connector Type	Input: 2×BNC, 75Ω; Output: 2× 2 BNC, 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	Input≤ 200Mb/s; Output ≤ 200Mb/s
TS over IP	
Connector Type	2×RJ45, 100/1000 Base-T, Independent
Effective Bit Rate	Full duplex mode: 240Mb/s
Protocol	UDP/RTP, Multicast / Unicast, IGMPv3, ARP
TS Processing	
TS Descrambler	Dual PCMCIA: DVB-CI, BISS-1, BISS-E
Service and PID Management	Remux, filtering and remapping
PSI/SI	PSI/SI table regeneration, NIT, SDT and SDT edition, LCN Edition
Audio and video output	
Audio Video Coding Standard	
Video Profile/Level	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), AVS MP@ML6.0, Support AVS-P16, H.265, AVS+, AVS2
Audio Profile/Level	MPEG L1/L2, DRA AAC-LC 、HE AAC V1/V2、Dolby Digital
HDMI Output	
Connector Type	1xHDMI 2.0
Video Resolution	1080P×60, 1080P×59.97, 1080i×60, 1080i×25, 720p×60, 720p×50, 576i×25, 480i×29.97

SDI Output	
Connector Type	2xBNC
Standard	SD: SMPTE 259M, 270 Mb/s (10bit) HD: SMPTE 292M, 1.485 Gbit/s (10bit)
Video Resolution	1080I60, 1080Ii59.94,1080I50, 720P60,720P59.94, 720P50, 576I50, 480I59.97
Audio Embedded	2×PCM
Digital Audio Output	
Output Format	AES/EBU、SDI (Embedded)
Connector Type	2×D-sub 9 (XLR Converter Line, 110Ω)
Audio Sampling Rate	48 KHz
Output Level and Load Impedance	1Vp-p, 110Ω
Analog Audio and video output	
CVBS Connector	1×BNC 75Ω
CVBS Standard	NTSC, PAL and SECAM
Audio Connector	2×BNC (L/R) 2×RCA 2 x DB9, XLR Converter Line
GenLock	
Connector Type	1×BNC female, 75Ω
Clock signal input	Analog SD (black & burst)
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	SNMP 2.0, HTTP (Web GUI), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and Front control 6-key keypad
Monitoring	1.5" TFT LCD
Upgrade	FTP loader, WEB HTTP, USB

DCH-5200EC
Single-Channel HD H.264 Encoder

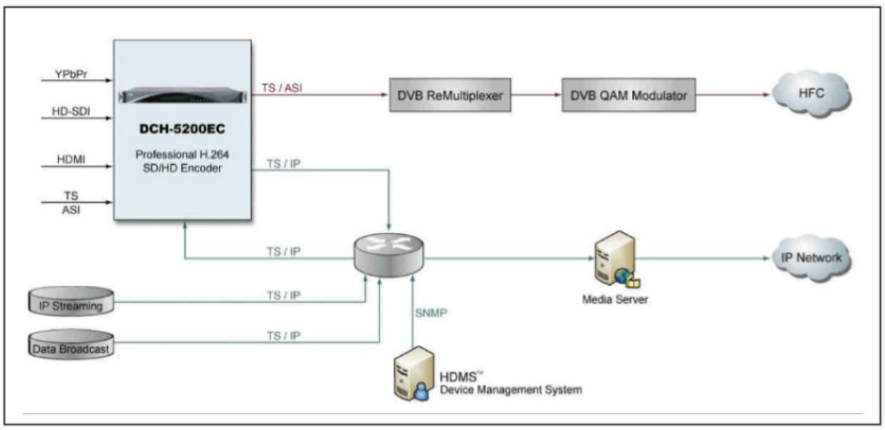
The DCH-5200EC is a single-channel high-definition MPEG-4/H.264 encoder. It features a wide range of analog and digital video and audio inputs: CVBS, HD-SDI, YPbPr, and stereo audio. It supports high-definition television up to 1080p, and the compressed MPEG-4/H.264 signal is output via ASI and IP ports. Compared to the DCH-4000EC and 5000EC, it offers a unique base-time correction function to ensure audio-video synchronization – an essential feature for professional television signal streams.

The remultiplexing function of the DCH-5200EC enables the creation of a new transport stream between the encoder's TS and the ASI or IP input TS. The encoder/transcoder output can be multiple SPTS or MPTS over IP, as well as over ASI. In transcoding mode, digital audio is passed through and timestamping is automatically applied to maintain synchronization between video and audio. This single encoder/transcoder with integrated remultiplexer architecture makes the DCH-5200EC one of the leading solutions for meeting MPEG-2 to MPEG-4/H.264 migration needs in today's digital broadcasting market.

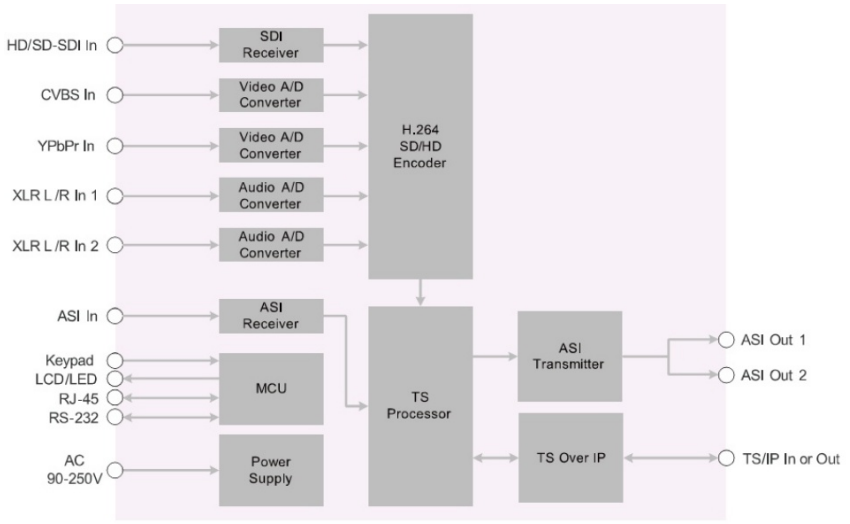
Main Features

- Multiple video resolutions including 1080p, 1080i, 720p, 576i, and 480i
- Multiple inputs: HD-SDI, YPbPr, and CVBS
- Unique video-audio synchronization via base-time correction
- Supports 10/100M TS/IP SPTS and MPTS
- Built-in remultiplexer for encoder loopback
- Supports VBR and CBR encoding modes
- Supports 2 pairs of stereo analog audio encoding with optional matrix expansion
- Remote control and monitoring via SNMP and HTTP WEB

Typical Application



Functional Block Diagram



Technical Specifications

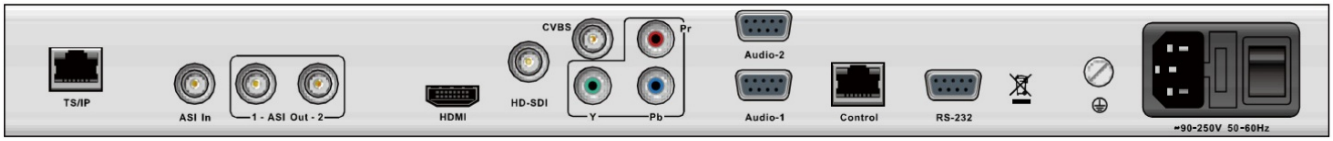
Video Compression	
Video Resolution	1080p (1920×1080) @50Hz, 59.94Hz, 60Hz: SMPTE 372M 1080i (1920×1080) @25Hz, 29.97Hz, 30Hz: SMPTE 292M 720p (1280×720) @50Hz, 59.94Hz, 60Hz: SMPTE 292M 480i (720×480) @29.97Hz: SMPTE 259M 576i (720×576) @25Hz: SMPTE 259M
Compression Standard	H.264 High Profile Level 4.0
Aspect Ratio	4:3 / 16:9 selectable
Video Encoding Bitrate	2 Mb/s – 30 Mb/ss
Audio Compression	
Audio Input	Embedded audio, Analog audio
Audio Channels	Maximum 2 stereo pairs
Audio Sampling Rate	48 kHz
Audio Encoding Bitrate	32 – 384 kb/s
Audio/Video Interface Input	
Analog Audio	1 × 9-pin D-sub Female with adapter cables
Analog CVBS	1 × BNC Female, 75 Ω
YPbPr	3 × RCA Female, 75 Ω
HDMI	1 × HDMI 1.3
ASI Input	
Connector Type	1 × BNC Female, 75 Ω
Input Bitrate	≤ 100 Mb/s
Packet Mode	Byte
Packet Length	188 / 204 Bytes
TS Processing	
TS Input Management	Remux and Demux for mirrored ASI outputs
TS Output Management	Remux and Demux between ASI input and encoded SPTS

Service and PID Management	Remux, Filtering and Remapping
PSI/SI	PSI/SI table regeneration, NIT and SDT editing
TS Over IP	
Connector Type	1 × RJ-45, 10/100 for TS/IP
Useful Bitrate	70 Mb/s for 10/100M
Protocol	UDP/RTP, Multicast/Unicast, IGMPv2, ARP
Source	Built-in remux, ASI input and encoder
ASI Output	
Connector Type	6 × BNC Female, 75 Ω
Output Bitrate	≤ 99 Mb/s
Packet Length	188/204 Bytes
Signal Level	800 ± 80 mV3
Control and Monitoring	
Connector Type	1 × RJ-45, 10/100 for IP equipment control
Remote Control	SNMP, HTTP Web
Local Control	LCD screen and 6-key keypad
Software Update	Built-in FTP loader and Telnets
General	
Dimensions	44 mm × 483 mm × 340 mm
Net Weight	3.2 kg
Power Supply	AC 90 V – 250 V, 50/60 Hz
Power Consumption	Max 20 W
Operating Temperature	0 °C – 45 °C
Storage Temperature	-10 °C – 60 °C
Humidity	10% – 90% non-condensing
Certification	
EMC	EN 55024:1998+A1:2001+A2:2003, EN 55022:2005+A1:2007, EN 61000-3-2:2006, EN 61000-3-3:2008
FCC	Part 15 Class B
LVD	EN 60950-1:2006 +A11:2009

Order Information

Functionality / Model		DCH-5200EC-30	DCH-5200EC-40
Input	Analog Audio Input (Stereo L/R, RCA)	•	•
	HD SDI Input (BNC)	•	•
	CVBS Input (RCA)	•	•
	YPbPr Input	•	•
	ASI Input	•	•
Processing	Built-in Remuliplexer	•	•
Output	ASI Output (2x mirrored)	•	•
TS/IP I/O	10/100M TS/IP Extension Board (Single RJ-456 Channel)		•

Rear Panel



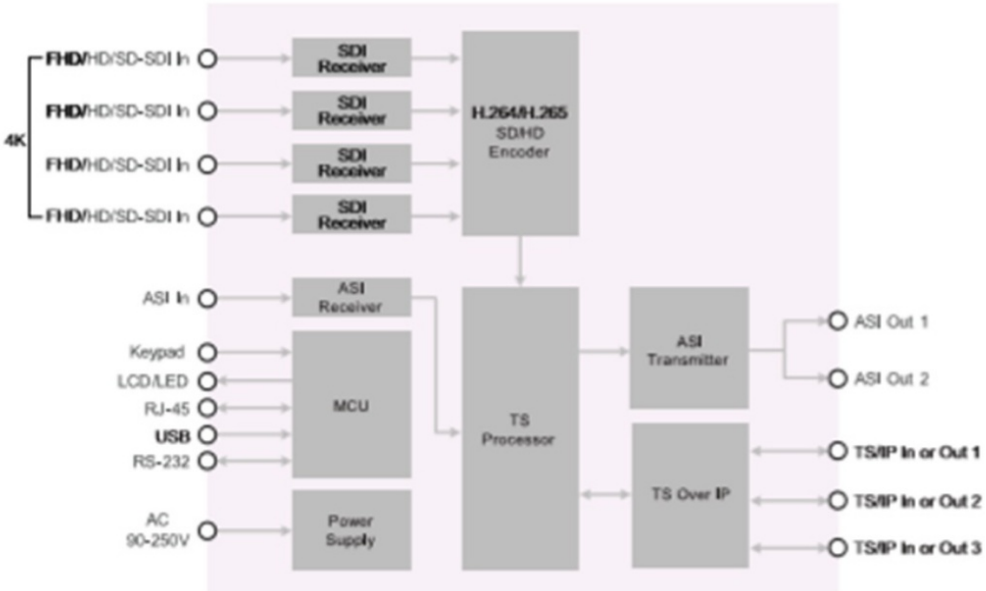
DCH-6000EC
4K UHD HEVC Encoder

The DCH-6000EC is a high-quality H.264 (MPEG-4/AVC) and H.265 (HEVC) encoder. It features 4 HD-SDI input ports to encode SD, HD, and 4K signals. The built-in TBC ensures stable encoding. The re-multiplexing function allows the creation of a TS (SPTS or MPTS) from the encoded streams and ASI and IP inputs. This TS stream is available on ASI and IP outputs. The DCH-6000EC is one of the best solutions for supporting H.265 migration in the broadcast market.

Main Features

- Supported resolutions: 2160p, 2160i, 1080p, 1080i, 720p, and 720i
- HEVC encoding: 1 channel 4K or 4 channels HD
- Encoding modes: CBR and VBR
- Audio encoding: MPEG-1 Layer II and AAC-LC
- Built-in re-multiplexer
- Internal time base correction (TBC)
- ASI and TS/IP outputs
- Remote control and monitoring via SNMP & HTTP web interface

Functional Block Diagram



Technical Specifications

Video Input and Encoding	
Video	
Connector Type	HDMIx1; 12G SDI x 1
Encoding Standard	H.265 Main Profile, Level 5.0 H.264 Baseline/Main/High Profile， Level 5.1
Chrominance Sampling Format	YCbCr 4:2:0,4:2:2
Video Resolution	2160P@30Hz,50Hz,60Hz 1080P@50Hz,60Hz 1080P@30Hz 1080I@25Hz,29.97Hz 720P@50Hz,59.94Hz 720P@25Hz,29.97Hz
Special Effects	Logo、Watermark、Text、Timestamp
Aspect Ratio	16:9
Bitrate Control	CBR、VBR、AVBR
Audio	
Connector Type	HDMI embedded x1; SDI embedded x1; Line x2
Encoding Standard	MPEG1 Layer II、MPEG-4 AAC
Sampling Rate	44.1KHz,48KHz
Compression Bit Rate	MPEG1 Layer II :32~256 Kbps(stereo) MPEG-4 AAC-LC: 32~256 Kbps (stereo)
TS/IP Processing	
Connector Type	1 × RJ45(GbE), 1000 Base-T
Standard	IEEE 802.3, 1000 Base-T, Full Duplex
Maximum Bit Rate	64Mb/s
Control Protocol	ICMP, ARP, IGMP V2
Transport Protocol	HTTP, HLS, RTSP, RTMP-Push/-Pull， UDP-Multicast, UDP-Unicast， SRT

Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	Web based management
Upgrade	WEB HTTP
General	
Power Consumption	AC90~250V 50/60Hz
Dimension	483*261*44mm
Weight	3.5kg

Rear Panel

DCH-6000ST
Professional 4K Digital Video Signal Convertor

The DCH-6000ST is a professional 4K digital video signal converter. It features 2 pairs of 4 × 3G SDI and 2 HDMI ports in a 1U chassis, and supports converting 4K HDMI signals to 4K SDI via a 1 × 12G SDI port or 4 × 3G SDI outputs. Additionally, the DCH-6000ST supports converting 4K SDI signals from a 1 × 12G SDI port or 4 × 3G SDI inputs to 4K HDMI. It can also be controlled and monitored via SNMP and HTTP web interface.

Main Features

- √ The HDMI 2.0a port supports a maximum video resolution of up to 2160p60
- √ 4K HDMI output to 1 × 12G SDI or 4 × 3G SDI
- √ HDMI output from 1 × 12G SDI or 4 × 3G SDI to 4K
- √ Supports 12G SDI to 4 × 3G SDI or 12G SDI to 4 × 3G SDI
- √ Supports 4 × multi-view and dual sampling interval
- √ Genlock support
- √ 8 modified audio channels

Technical Specifications

HDMI input	
Connector Type	1×HDMI 2.0a (up to 2160p60)
Video Resolution	2160p60, 2160p59.94, 2160p50, 2160p30, 2160p29.97, 2160p25, 2160p24, 2160p23.98, 1080p60, 1080p50, 1080p30, 1080p29.97, 1080p25, 1080i30, 1080i29.97, 1080i25, 720p60, 720p59.94, 720p50, 720p29.97, 720p25, 480p60, 576p50, 576i25, 480i29.97
Emended audio	Sampling rate 48KHz, 24bit
HDMI output	
Connector Type	1×HDMI 2.0a (up to 2160p60)
Video Resolution	2160p23.98, 2160p24, 2160p25, 2160p60, 2160p59.94, 2160p50, 2160p30, 2160p29.97, 2160p25, 2160p24, 2160p23.98, 1080p60, 1080p50, 1080p30, 1080p29.97, 1080p25, 1080i30, 1080i29.97, 1080i25, 720p60, 720p59.94, 720p50, 720p29.97, 720p25, 480p60, 576p50, 576i25, 480i29.97
Emended audio	Sampling rate 48Khz, 24bit
SDI input	
Connector Type	4 x BNC, female, 75Ω
Video Resolution	2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 1080i×30, 1080i×29.97, 1080i×25, 720p×60, 720p×59.94, 720p×50, 720p×29.97, 720p×25, 480p×60, 576p×50, 576i×25, 480i×29.97
Standard	SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 425M
SDI output	
Connector Type	4xBNC, female, 75Ω
Video Resolution	2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 1080i×30, 1080i×29.97, 1080i×25, 720p×60, 720p×59.94, 720p×50, 720p×29.97, 720p×25, 480p×60, 576p×50, 576i×25, 480i×29.97
Standard	SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 425M
Emended audio	8 channels PCM audio
Level	800mV p-p
Genlock	
Connector Type	1 x BNC, 75Ω
Signal input	Analog SD (black & burst)
Control & Monitoring	
Local control	LCD display, 6 button on front panel
RS-232	1×RS-232 D-sub female, for debug
Upgrade	USB or FTP Telnet (1×RJ-45, 10/100 Base-T)
Physical	
Dimension	1U 19" Full-rack size
Weight	NW3.0kg, GW3.7kg
Power Supply	AC 90V ~ 250V, 50/60Hz
Power Consumption	24W
Operating temperature	0~45°C
Storage temperate	-10~60°C
Operating Humidity	10~90%, non-condensed

Rear Panel

DCH-5100TM
IP to QAM Modulator

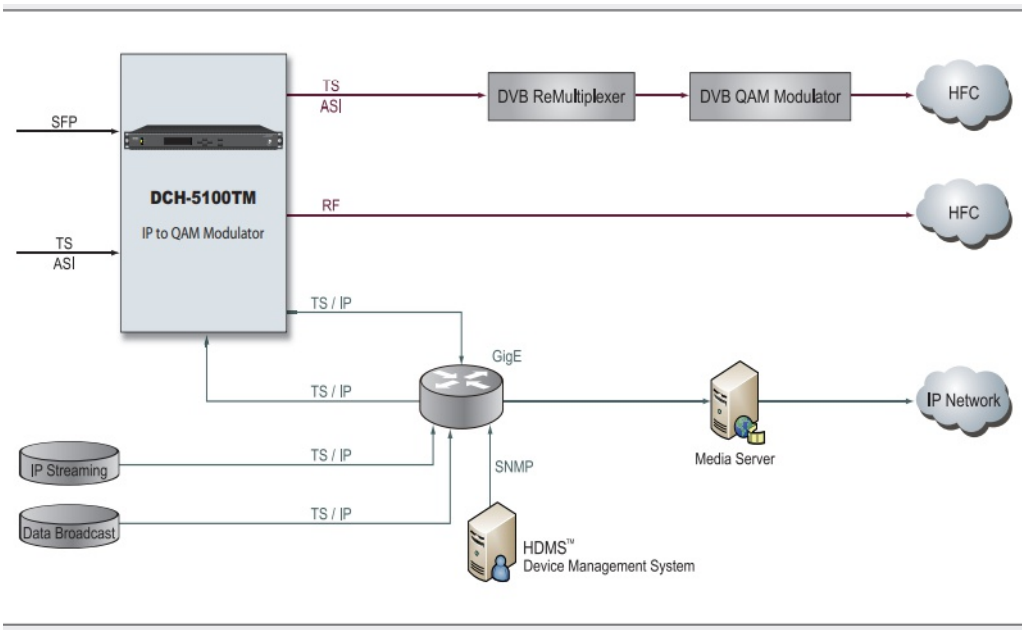
The DCH-5100TM is a professional high-density IP-to-DVB-C QAM modulator. It can receive up to 64 or 160 digital TV transport streams via Gigabit Ethernet and ASI ports. After processing, it can modulate these transport streams into 16- or 32-channel QAM RF carriers.

For the 16-channel QAM modulator option, the TS can be generated and re-multiplexed from 160 SPTS/MPTS from ASI/IP inputs. For the 32-channel QAM modulator option, the re-multiplexing function must be disabled, and each QAM carrier is directly converted from one of the 64 TS from the IP or ASI input. These QAM RF carriers are independently upconverted using a Speed DAC to deliver excellent RF performance across the full spectrum up to 1 GHz. The equipment is housed in a 1RU chassis with dual redundant AC power supplies.

Main Features

- Compliant with ITU J.83 Annex A & C and DVB-C EN300429 standards
- Transport stream decapsulation from IP via GbE port
- 4 TS/IP GbE ports with 2 × RJ-45 and 2 × SFP, 2+2 redundancy mode
- Input TS/IP jitter reduction ≤ 200 ms
- Up to 64 or 160 TS inputs via GbE
- 16 or 32 independent QAM modulators
- RF output backup port for 1+1 redundancy
- Redundant power supply
- Network management via SNMP, HTTP, CLI

Typical Application

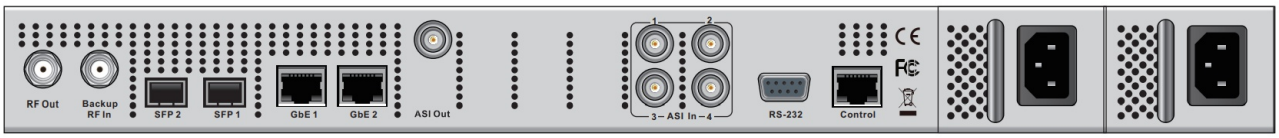


Technical Specifications

IP Input	
Connector Type	(1000Base-T + SFP) x 2, IEEE803.2, 2+2 redundant
Protocol	IPv4, IGMPv2, IGMPv3, ARP, UDP, RTP
Operating Mode	Full duplex, Auto negotiable
Streaming addressing Type	Multicast or Unicast
Number of Streaming Input	64 or 160 (software option)
Type of TS Streaming	SPTS or MPTS
TTL	1~256 (adjustable)
De-jitter	≤200ms
Effective Input Bit Rate	≤950Mb/s
ASI Input	
Connector Type	4×BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Input Return Loss	15dB
Minimum Input Level	200mV
Input Data Mode	Burst or Byte, 188 or 204 Byte/Packet
Input Data Rate	≤216Mb/s
Re-Multiplexing (applicable to DCH-5100TM-16X)	
TS Input Management	Remultiplexing up to 4 DVB-ASI inputs and 160 MPTS/SPTS inputs
Service and PID management	Service or component based Remultiplexing, filtering and PID remapping
PSI/SI	PSI/SI table regeneration, NIT and SDT edition, LCN Edition and Re-generation
QAM Modulation	
Standard	DVB-C EN300 429, J.83 Annex A & C
Symbol Rate	3.6MBauds~7MBauds
Roll-off Factor	12%, 15%, 18%
MER	>36dB (with Tester Equalizer = off)
Number of QAM Carrier	16 or 32 (software option)
RF Output	
Connector Type	1×F type Female, 75Ω
Channel Spacing	6MHz, 8MHz
Output Frequency Range	49 ~ 1000 MHz
Output Frequency Adjustment Step	1MHz
Output Frequency Accuracy	±25ppm
Output Level	105dBuV (per channel)
Output Level Attenuation	30dB (step by 1dB)

Output Return Loss	15dB min.
Shoulder Attenuation	50dBc (typical.) @ BW±10%
Spurious Rejection	60dBc (typical.)
Spectrum Flatness	4dB (over full output frequency range)
Useful Output Bit Rate	800Mb/s
Control & Monitoring	
Connector Type	1×RJ-45, 10/100 Base-T (for remote control)
Remote Control	HDMS, HTTP 1.1
Protocol	SNMP v1 & v2, HTTP 1.1
Local Control	LCD and 6-key on front panel
Serial Port	1×RS-232 D-sub 9-pin (for debug use only)
RF Monitor Port	1×F type female, 75Ω, -20dB lower than the main RF output
Alarm and Contact Relay	
Connector Type	1×D-sub 9-pin
Alarm & Warning Indicator	Dual colors LED on Front panel, Contact Relay on Rear panel
Trap	SNMP v1 & v2
Event Log	last 100 events logged in non-volatile memory
Sensors & Indicators	
Temperature Sensor	Yes
Fan Status Sensor	Yes
Alarm Buzzer	Yes
Bit rate Capacity Indication	Yes (For each QAM)
Power Supply	
Power Supply	AC 90V ~ 250V, 50/60Hz
Power Consumption	50Watts Max.
Physicals	
Dimension	445mmx543mmx44mm
Weight	8Kg Net, 12Kg Gross
Operating Temperature	0 ~ 45℃
Storage Temperature	-10 ~ 60℃
Operating Humidity	10 ~ 90%, non-condensing
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	
Environment: RoHS, WEEE	

Rear Panel

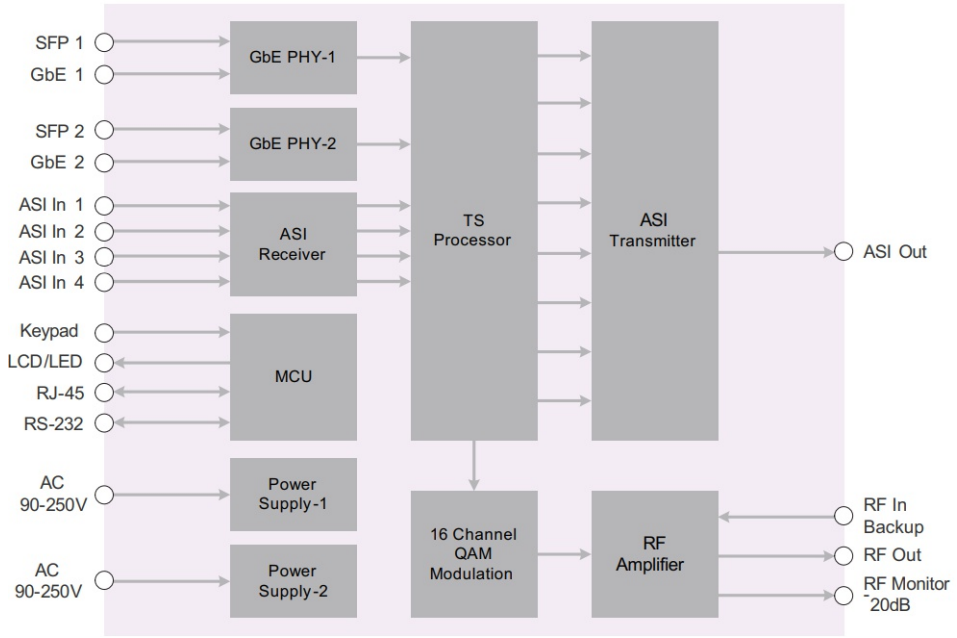


Order Information

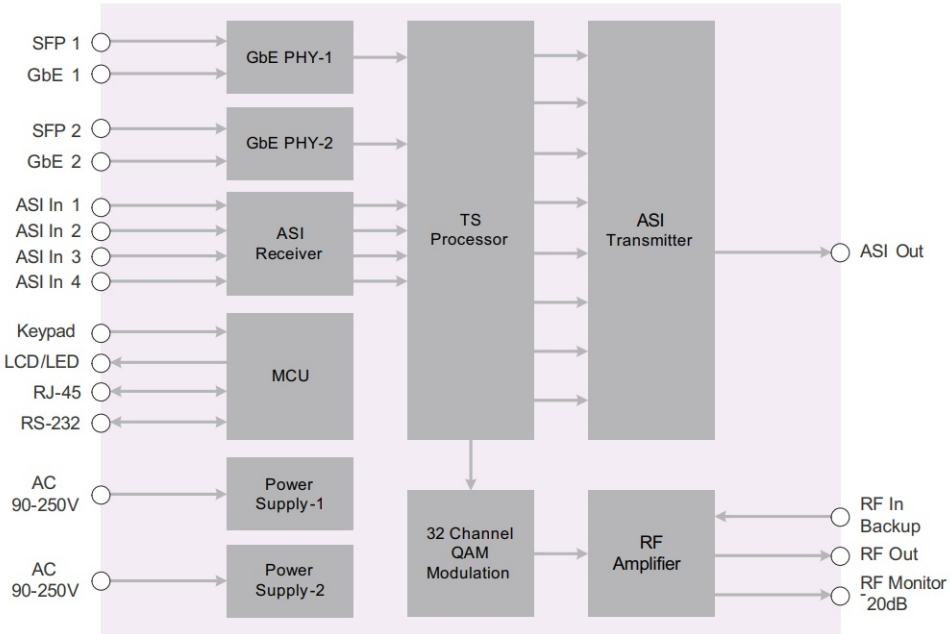
Interface \ Model	DCH-5100TM-16X	DCH-5100TM-32
ASI-In	x4	x4
Built-in Remux	YES	NO
TS/IP In	x160	x64
RF-In Backup	x1	x1
RF-Out	x1	x1
ASI-Out	x1	x1
Modulation	16 channel QAM	32 channel QAM

Functional Block Diagram

Functional diagram of the DCH-5100TM-16X: 16-channel QAM modulation with re-multiplexing function



Functional diagram of the DCH-5100TM-32: 32-channel QAM modulation without re-multiplexing function



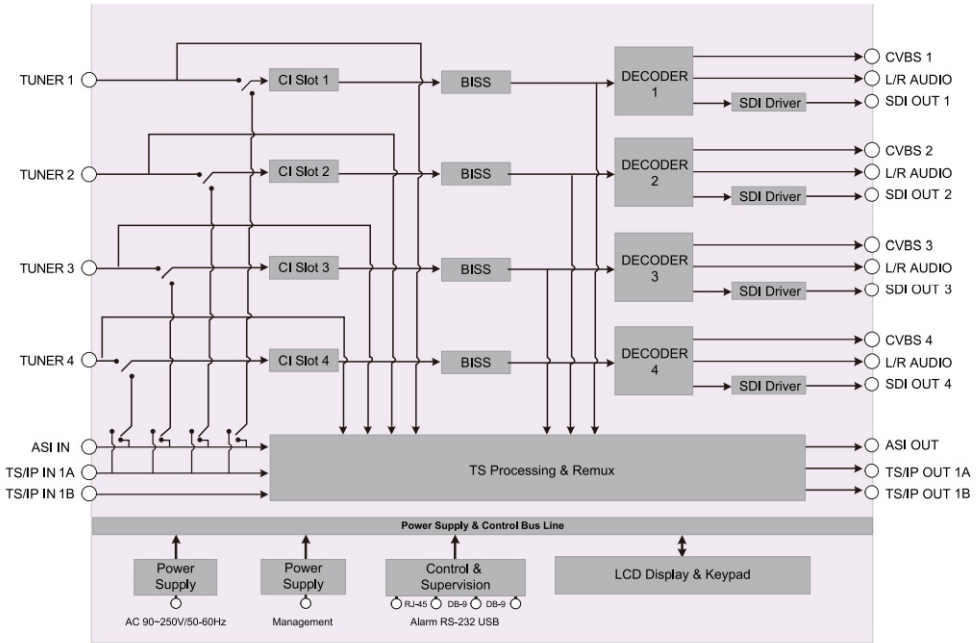
DXP-3400PA
4-Channel HD H.264 IRD

The DXP-3400PA provides operators with an ideal solution for multi-reception, descrambling, re-multiplexing, and decoding operations. With quad DVB common interfaces, the DXP-3400PA can decrypt multiple services across four transport streams. It is also a professional IRD featuring a broadcast-quality decoder for MPEG-2 and MPEG-4 AVC/H.264 in both standard and high-definition formats, offering a variety of standard digital and analog outputs including 4 separate CVBS video outputs, analog audio, SD-SDI, and HD-SDI. The unit also performs HD down-conversion and aspect ratio adaptation for HD programs to generate professional-quality baseband video and analog audio outputs, as well as TS-over-IP operations for easy integration with existing cable network infrastructure. This all-in-one architecture makes the DXP-3400PA ideal for distribution and contribution networks.

Main Features

- Quad tuner input, supporting a variety of DVB-S2/S/C/T/DTMB/ATSC/ISDB-T and DS3/E3 options
- Supports DVB-S2 stream identifier input (ISI, optional) and DVB-T SFN MIP pass-through
- SD/HD digital video decoding for MPEG-2 and MPEG-4 AVC/H.264
- Two audio PIDs decoded or pass-through (compressed) per SDI output
- 2× TS re-multiplexers built-in: one handles inputs from Tuner1, Tuner2, CI1, and CI2; the other handles Tuner3, Tuner4, CI3, and CI4
- Full-duplex mode supporting up to 300 M or 64 IPTV/DVB channels, 300 M
- On-site software updates via IP or USB
- 4 × DVB-CI slots, multi-program descrambling, BISS-1 and BISS-E descrambling
- Dynamic PMT detection and automatic updates
- Remote control and monitoring via SNMP, HTTP web, and proprietary HDMS software
- PCM audio embedded in SDI and HDMI outputs
- AC3 and Dolby E audio can pass through SDI
- RSSI monitoring, including Eb/No & BER
- Redundant power supply

Functional Block Diagram



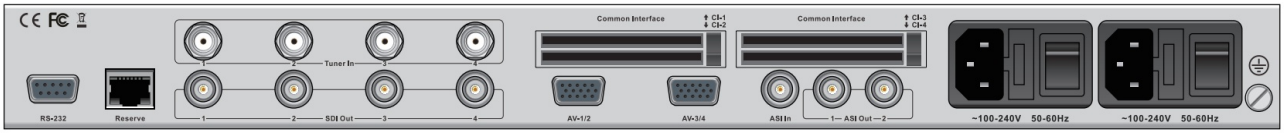
Technical Specifications

Tuner Input	
DVB-S/S2 Tuner Input (ISI Factory Optional)	
Connector Type	4×F type female 75Ω for Input
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rate	2~45MBaud
Roll-off Factor	DVB-S QPSK: 0.35 DVB-S2 8PSK: 0.35, 0.25, 0.2
FEC Code Rate	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	4×F type female 75Ω for Input
Input Frequency Range	51~862MHz
Input Level	45~75dBμV
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 Tuner Input	
Connector Type	4×F type female 75Ω for Input
Input Frequency	104~862MHz (VHF/UHF)
Input Level	-20~-70dBm
Constellation	DVB-T: QPSK, 16QAM, 64QAM
Bandwidth	6MHz, 7MHz, 8MHz
FFT Mode	DVB-T: 2K, 8K
Guarding Interval	DVB-T: 1/4, 1/8, 1/16, 1/32
FEC Code Rate	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8
Input Return Loss	7dB (typ.)
DTMB Tuner Input	
Connector Type	4×F type female 75Ω for Input
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	4×F type female 75Ω for Input
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	Demuxand 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 Input	
Connector Type	1 BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 200Mb/s
ASI Output	
Connector Type	2 independent BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 200Mb/s
Digital Video and Audio Processing	
Video Standard	MPEG-2(MP@ ML for SD, MP@HL forHD), MPEG 4/H.264 AVC Part 10 (MP@L3
SDI Video Resolution	1080P60,1080P50,1080P59.94, 1080P30,1080P29.97,1080P25, 1080P24,1080P23.98,1080i30, 1080i29.97,1080i25,720p60, 720p59.94, 720p50, 576I50, 480I59.97
Video PID Bit Rate	≤ 60Mb/s
Audio Standard	MPEG-1 Layer-I/II, MPEG-2 Layer-IILC-AAC, HE-AAC
Audio Sampling Rate	32, 44.1 and 48KHz
Digital Video output	
Connector Type	4 BNC, female, 75Ω
SD-SDI Standard	SMPTE 259M, 270 Mb/s (10bit)
HD-SDI Standard	SMPTE 292M, 1.485 Gbit/s (10bit)
Level	800mV p-p
Digital Audio output	
Connector Type	SDI Embedded
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
TS over IP	
Connector Type	2*RJ-45, 100/1000 Base-T

Operational mode & Effective Bit Rate	Full duplex mode total 300M or 64 channel IPTV/DVB out mode, 300M
Protocol	UDP/RTP SPTS or MPTS; ICMP, ARP, IGMPv2, IGMPv3
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	
Weight	3.5kg
Power Supply	AC 90V~250V, 50/60Hz
Power Consumption	24W (exclusive of LNB power)
Operating temperature	0~45℃
Storage temperature	-10~60℃
Operating Humidity	10~90%, non-condensed

Rear Panel



DXP-3800MX
8-to-2 DVB Re-multiplexer

The DXP-3800MX is a professional DVB-TS broadcast re-multiplexer with dual independent re-multiplexing units. It can re-multiplex a large number of transport streams received via ASI and GbE interfaces and deliver them through the GbE interface and 2 independent ASI output ports. It supports re-multiplexing of up to 256 services with advanced PSI/SI table management, service filtering, and remapping.

Main Features

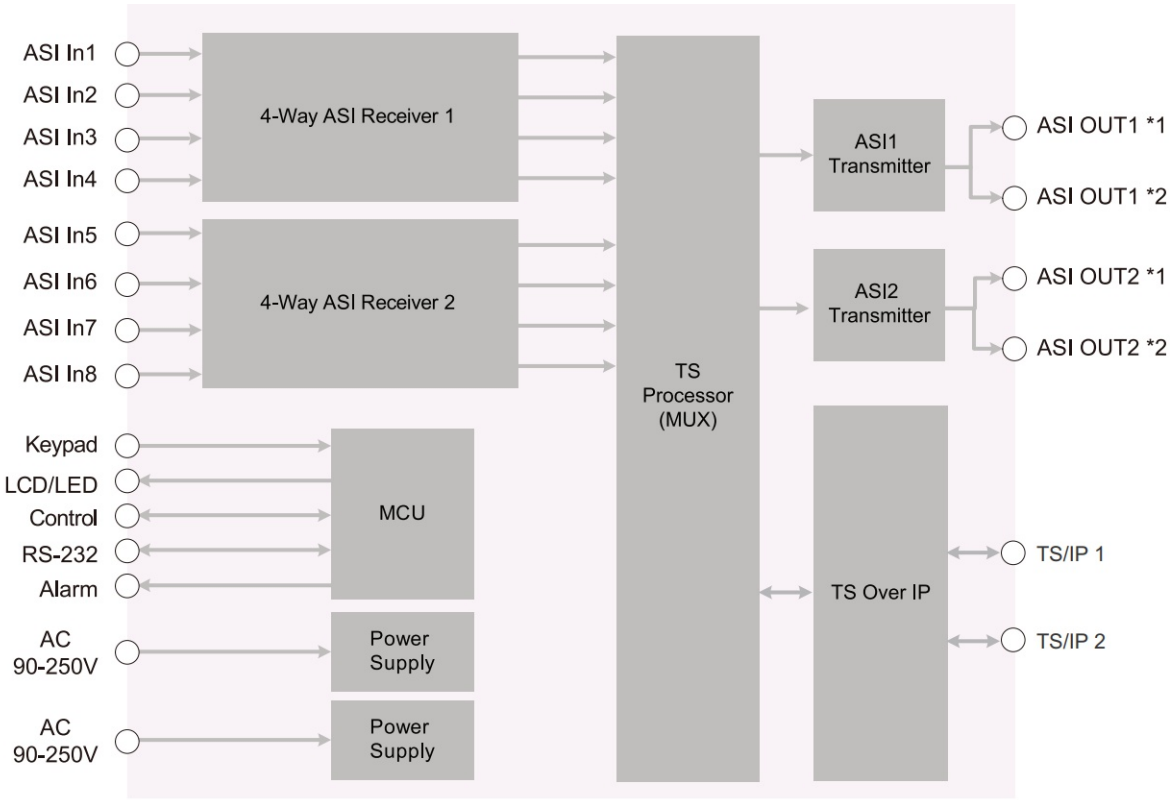
- Fully compliant with ISO13818 and EN300 468 standards
- Dual transport stream re-multiplexing unit for MPEG-2/H.264
- 8 × ASI inputs, up to 216 Mbps per interface
- 2 × independent ASI outputs with backup, up to 216 Mbps per interface
- GbE interface up to 700 Mbps (multichannel output) or 80 Mbps (full duplex)
- Re-multiplexing of up to 256 services
- Advanced PSI/SI table management, service filtering, and remapping
- EIT pass-through or regeneration
- Web and SNMP control and monitoring
- Compact 1RU chassis with two hot-swappable power supplies

Technical Specifications

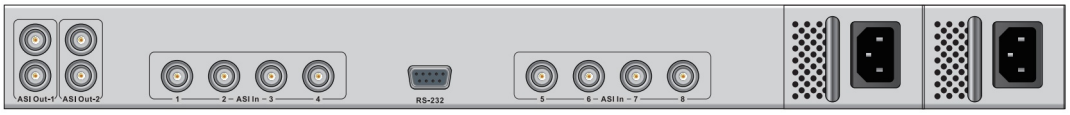
Input and Output	
TS/IP	
Connector Type	2 x RJ-45, 100/1000 Base-T
Protocol	UDP/RTP, Multicast/Unicast, IGMP 2, V3
Work Mode	Full Duplex Mode: 1 x MPTS or SPTS In and Out Multi-Channel Mode: 10 x MPTS out only IPTV Mode: 128 x SPTS out only
Bit Rate	Full Duplex Mode: 80Mb/s Multi-Channel Mode: 500Mb/s IPTV Mode: 500Mb/s
ASI In	
Connector Type	8×BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	≤216Mb/s
TS Processing	
Max. Input Bit Rate	8 x 216Mb/s
Max. Output Bit Rate	2 x 180Mb/s
Package Length	188/204 Bytes
Re-multiplexing	PSI/SI edition, Service and PID filtering, remux, passthrough and re-mapping, NIT and SDT edition, and LCN edition and regeneration, EIT Processing

ASI Output	
Connector Type	2 x BNC female , 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	≤216Mb/s
Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	SNMP，HTTP Web
Local Control	LCD display and Front control 6-key keypad
Upgrade	FTP Loader ,Telnet , USB 和 Web
Serial Port	1×RS-232 D-sub 9-pin, for debug only
General	
Power Supply	AC90~260V 50~60Hz
Power Consumption	50W
Temperature	Storage -10 to 60℃; Operation 0 to 45℃
Operating Humidity	10 to 90%, non-condensed
Dimensions	483mm×504mm×44mm
Weight	7kg

Functional Block Diagram



Rear Panel



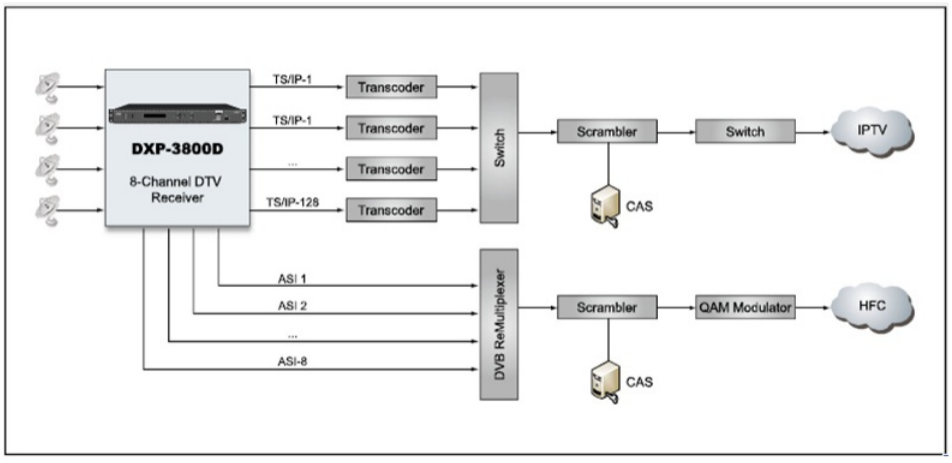
DXP-3800D
8-Channel DTV Receiver

The DXP-3800D is a professional, high-density TS processor with modular CI descrambling, equipped with 8 independent tuners supporting DVB-T/T2, DVB-S2/S, DVB-C, DTMB, ISDB-T, and ATSC. It supports a wide range of applications by combining the processing capabilities of 8 tuners with industry-standard outputs, including ASI and TS/IP. The DXP-3800D features 8 DVB-CI slots capable of working with most widely used CAS systems to descramble multiple pay-TV services. It provides an ideal solution for multi-reception, re-multiplexing, descrambling, and TS-over-IP operations. The 8 compact tuners and 8 DVB-CI slots make the DXP-3800D one of the most competitive headend products on the market.

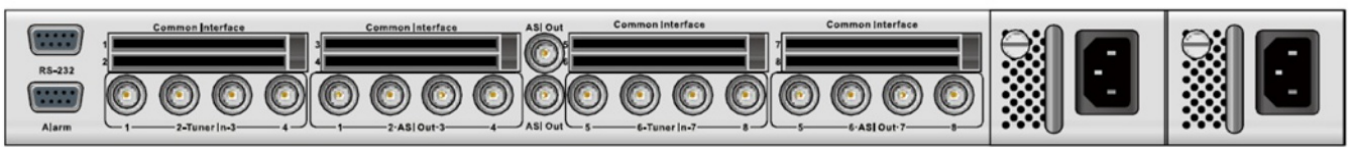
Main Features

- 8× tuner input, supporting a variety of DVB-T2/T, DVB-S2/S, DVB-C, DTMB, ATSC, and ISDB-T options
- Supports DVB-S2 stream identifier input (ISI, optional) and DVB-T2 Multi PLT and SFN MIP pass-through
- Built-in TS re-multiplexer receives inputs from ASI, CI1–CI8 slots, and TS/IP
- 8 DVB-CI slots, multi-program descrambling, BISS-1 and BISS-E descrambling
- 8 ASI outputs for transport streams from CI1–CI8 slots or BISS descrambling
- 1 full-duplex TS-over-IP channel or 128 IP channels without IP input
- Remote software update via IP
- Remote control and monitoring via SNMP v2, HTTP web, and proprietary HDMS software
- RSSI, signal strength, Eb/No, C/N monitoring, and BER checking
- Redundant power supply

Typical Application



Rear Panel



Technical Specifications

TUNER INPUT	
Connector Type	8×F type female 75Ω
TS Input and Output	
ASI Output	
Connector Type	10×BNC, 75Ω
Standard	DVB-ASI, EN50083-9
Bit Rate	≤ 200Mb/s
Output mode	8xASI output pass through the TS from CI 1 to CI8; 1+1ASI output from Remux
TS over IP	
Connector Type	2×RJ45, 100/1000 Base-T, Independent
Effective Bit Rate	1, Full duplex mode, I/O total bit rate 300Mb/s 2, 64CH IPTV/DVB mode output, bit rate 200~350MMb/s
Protocol	UDP/RTP, Multicast / Unicast, IGMPv3, ARP
TS Processing	
TS Descrambler	8×PCMCIA: DVB-CI, BISS-1, BISS-E

Control and Monitoring	
Connector Type	1xRJ45, 10/100M Base-T
Remote Control	SNMP 2.0, HTTP (Web GUI), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and Front control 6-key keypad
Upgrade	FTP loader, WEB HTTP, USB

Functional Block Diagram