

DCH-4000P Professional IRD and Processor

DCH-4000P is a professional integrated receiver decoder together with a built-in transport stream processor. Equipped with a wide range of inputs of DVB-T/ T2,S/S2,C tuner, ASI and TS/IP, it can be used in the satellite, cable, terrestrial and IP networks. It provides a powerful transport stream processing engine for re-multiple \times ing, descrambling, TS over IP encapsulation. It has 2 DVB common interface slots capable of working with most of well known CAS in the market to de-crypt multiple pay TV services. Its re-multiple \times ing capability enables creation of customized SPTS and MPTS output to IP and ASI ports. The DCH-4000P is also a professional a broadcast quality decoder for MPEG-2 Standard Definition format, and provides a wide range of industry standard digital analog video and audio outputs, CVBS, Component, AES/EBU, and SDI. This unique multi function architecture makes the DCH-4000P an ideal product for digital TV broadcast network.



Main Feature

- Multiple inputs DVB-S2/S/C/T, TS/IP, ASI, DS3(optional)
- SD MPEG-2 (MP@ML) digital Video decoding
- Digital audio embedded in SDI output
- Multiple Analog and Digital Outputs, ASI, CVBS, YPbPr, SD-SDI, AES/EBU, TS/IP
- Flexible re-multiple \times ing between ASI, Tuner and TS/IP Inputs
- RSSI, received Eb/No & BER monitoring
- 2 \times DVB-CI Slots, multiple TV programs decryption
- Dynamic PMT detection and automatic updating
- Support VBI TELETEXT, EBU/ DVB Subtitle
- UDP/RTP & Unicast/Multicast SPTS and MPTS over IP I/O
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software

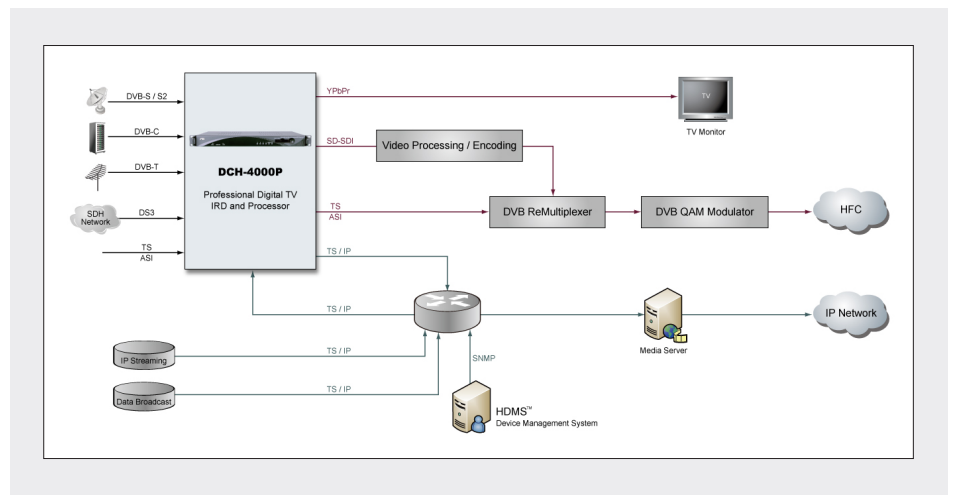
A variety of industry standard digital and analog outputs



Dual DVB Common Interface and Multi Programs decryption



Multiple RF signal input selectable among DVB-S/ S2/C/T/DS3

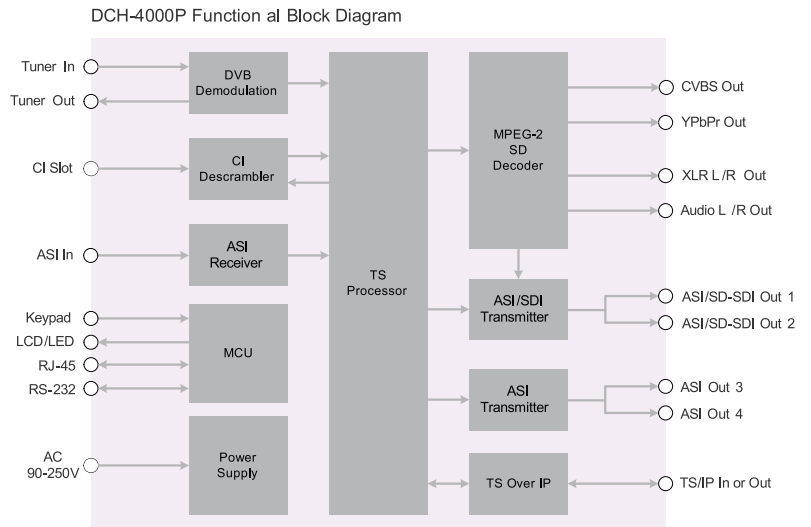


Specification

Tuner Input	
DVB-S/S2 Tuner Input	
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	5~45MBaud/s for QPSK
	10~31MBaud/s for 8PSK
Roll off factor	DVB-S QPSK: 0.35
	DVB-S2 8PSK: 0.35, 0.25, 0.2
Punctured rates	DVB-S QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10
	DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
LNB Polarization selection voltage	0, 13V, 18V selectable
LNB Band selection tone	0/22KHz selectable
Satellite selection command	DiSEqC 1.0
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	48~860MHz
Input level	45~75dB μV
Symbol rate	1~7MBaud (ITU J.83 Anne × A)
Constellation	16/32/64/128/256QAM
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 range	104~862MHz (VHF/UHF)
Input level	-20~-70dBm (Quasi Error Free, QEF)
Constellation	DVB-T: QPSK/16-QAM/64-QAM
	DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
Bandwidth	6MHz/7MHz/8MHz
FFT mode	DVB-T: 2K/8K
Guard 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.)
ASI Input	
Connector type	1 × BNC, 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, 10/100M for TS/IP
Useful bit rate	70Mb/s for 10/100M
Protocol	UDP / RTP, Multicast / Unicast, IGMPv2, ARP
TS Processing	
TS Input Management	Remux and demux among Tuner / DS3 (optional) /, ASI and TS/IP Inputs
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	Dual PCMCIA slots, compatible with major CA CAMs in the market
ASI Output	
Connector type	2 × BNC Female, 75Ω
Standard	DVB-ASI, EN50083-9
TS processing	2 TS Re-multiplexing from tuner, TS/IP and ASI input (1 for mirror)
Digital Video Processing	
Video Standard	MPEG-2(MP@ ML)
SDI Video Resolution	PAL, NTSC, SECAM
Video Bit Rate	< 80Mb/s
SD-SDI Output	
Connector type	1 × SDI output, BNC Female, 75Ω
Serial interface	SMPTE 259M, 270 Mb/s (10bit)
Single level	800mV p-p
Analog Video Output	
YPbPr Connector	1 set of RCA, 75Ω
CVBS Connector	1 × BNC 75Ω, 1 × RCA 75Ω
Video Standard	NTSC, PAL, and SECAM
Signal Level	1.0 Vp-p ± 5%
Frequency Response	< ± 1 dB at 5.5 MHz
Chroma-Luma Delay	< ± 30 ns
Field Time Distortion	< 2%
Line Time Distortion	< 1%
Short Time distortion	< 2%
Differential Gain	< 4%
Differential Phase	< 2°
Signal to Noise Ratio	> 55 dB (luminance weighted)
Analog Audio Output	
Connector type	XLR Male Socket
Output Impedance	600Ω (balanced)
Output mode	Left, Right, Dual Mono, Stereo
Number of Outputs	1 pair of stereo audio output
Ancillary Data Processing	
Subtitle	DVB/EBU
VBI	Teletext, WSS, VFD, VPS
Control & Monitoring	
Connector type	1 × RJ-45, 10/100M, for equipment IP Control
Remote control	SNMP, HTTP Web, Proprietary HDMS Network System Management Software
Local control	LCD display and 6-key keypad
Serial port	1 × RS-232 9-pin D-sub, for debug use only
Equipment upgrade	FTP loader
Physical	
Dimension	44mm × 483mm × 255mm
Weight	3.4Kg Net, 5.4Kg Gross
Power Supply	AC 90V~250V, 50/60Hz
Power Consumption	24W
Operating temperature	0~45°C
Storage temperature	-10~50°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



Order Information

Functionality	Model	DCH-4000P-30X	DCH-4000P-43X	DCH-4000P-44X
Tuner Input		X = Tuner option: <input type="checkbox"/> -T: DVB-T <input type="checkbox"/> -C: DVB-C <input type="checkbox"/> -S: DVB-S <input type="checkbox"/> -S2: DVB-S2 <input type="checkbox"/> -D: DS3		
ASI Input		× 1	× 1	× 1
DVB Common Interface		× 2	× 2	× 2
Built-in Remultiplexer		•	•	•
ASI Output (mirrored)		× 2	× 2	× 2
SDI Output (mirrored)		× 2	× 2	× 2
Audio L/R (RCA)		•	•	•
YUV/RGB (RCA)		•	•	•
CVBS (BNC)		× 1	× 1	× 1
CVBS (RCA)		× 1	× 1	× 1
10/100M TS/IP Extension board (Dual RJ-45, 6 Channel)			•	
10/100M TS/IP Extension board (Single RJ-45, 32 Channel)				•

• Standard configuration

Back panel Interface

