PBI

Integrated Receiver Decoders

Brighten Your Digital View!

DCH-3100P
Multi-format SD/HD Integrated Receiver Decoder

The DCH-3100P is a cost effective professional integrated receiver decoder. It is widely used in the satellite, cable and terrestrial TV network with different tuner frontend DVB-S2/S, DVB-C and DVB-T. It demodulates the RF signal to the transport stream with ASI and TS over IP outputs. With dual DVB common slots, DCH-3100P works with most of the well known CAS in the market and decrypts multiple services in a transport stream. The on board decoder can process a variety of digital video and audio formats in MPEG-4 AVC/H.264 and MPEG-2, in Standard Definition and in High Definition. The TV channel is decoded to digital and analog outputs, SDI, HDMI, YPbPr, CVBS, balanced and un-balanced audio. The powerful demodulation, decryption and decoding capabilities, combined with user friendly WEB GUI and SNMP based remote control makes this equipment one of the most competitive professional IRD in the market.

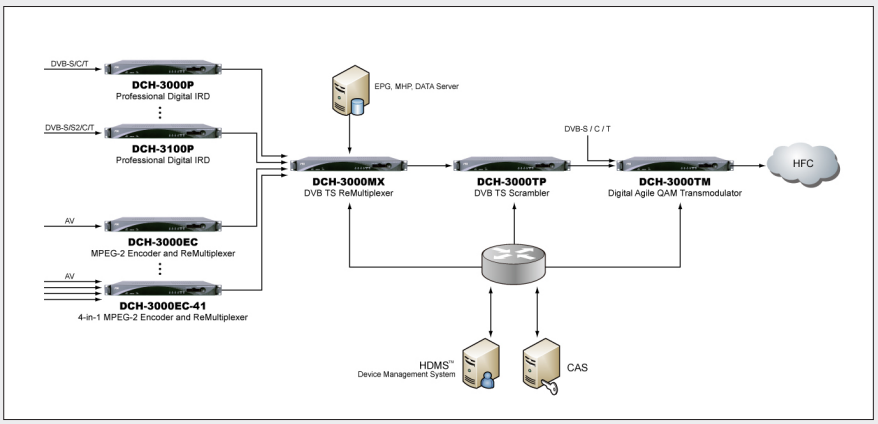
Main Feature

- Multiple tuner inputs DVB-S2/S, DVB-C, and DVB-T
- 2x DVB-CI Slots, Multi Programs, BISS-1 and BISS-E decryption
- Transport stream output from ASI and IP
- SD/HD MPEG-2 and MPEG-4/H.264 digital video decoding
- Two digital audio channel decoding of MPEG1 Layer II and AAC
- Rich Analog and Digital Outputs including, CVBS, YPbPr, HDMI, XLR
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- Dynamic PMT auto detection and updating
- Support VBI TELETEXT, EBU/ DVB Subtitle, Closed Caption
- Configuration save and load after power off

Optional HDMI for HD output

Dual DVB Common Interface and Multi Programs decryption

Ethernet management

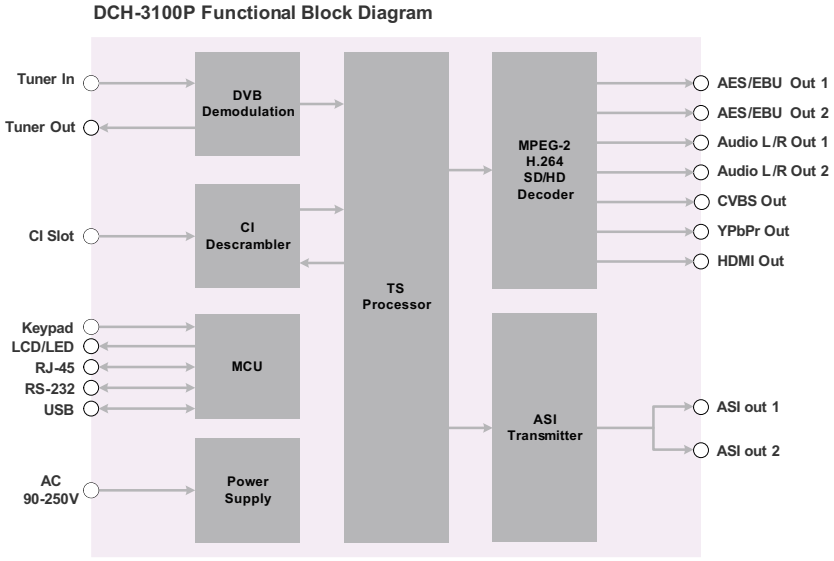


Specification

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 Polarity 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	48~860MHz
Input Level	45 ~ 75dBuV
Symbol Rate	1 ~ 7MBaud (ITU J.83 Annex 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	104 ~ 862MHz (VHF/UHF)
Input Level	-20 ~ -70dBm (Quasi Error Free, QEF)
Constellation	DVB-T: QPSK/16-QAM/64-QAM
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.)
TS Processing	
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
HDMI Output (for 3100P-50xx)	
Standard HDMI	1 × HDMI 1.3 interface (no 1080p)
Video Resolution	1080i × 30, 1080i × 29.97, 1080i × 25, 720p × 60, 720p × 59.94,720p × 50, 480p × 60, 576p × 50, 576i × 25, 480i × 29.97
Audio Embedded	one 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)
Video PID Bit Rate	< 80Mb/s
Digital Audio Processing	
Number of Outputs	2 × digital audio PIDs are decoded*
Sampling Rate	32, 44.1 and 48KHz
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-1Layer II
Analog Video Output	
YPbPr Connector	1 set of RCA, 75Ω
CVBS Connector	1 × BNC 75Ω, 1 × RCA 75Ω
Video Standard	NTSC, PAL, and SECAM
YPbPr Resolution	1080i × 30, 1080i × 29.97, 1080i × 25, 720p × 60, 720p × 59.94,
	720p × 50, 480p × 60, 576p × 50, 576i × 25, 480i × 29.97
Signal Level	I.0 Vp-p ± 5%
Frequency Response	< ± I dB, at 5.5 MHz for PAL/SECAM, 4.2MHz for NTSC and 15MHz for HD YPbPr
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	>55 dB (luminance weighted)
Analog Audio Output	
Connector type	1 × XLR Male Socket, 2 pairs of RCA audio
Output Impedance	600Ω (balanced)
Output mode	Left, Right, Dual Mono, Stereo
Number of Outputs	2 pairs of stereo audio outputs (2 Audio PIDs are decoded).
Baseband Data Output	
Subtitle	DVB/EBU
VBI	Teletext, WSS, VFD, VPS
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, 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 or USB
Physical	
Dimension	44mm × 483mm × 255mm
Weight	2.4Kg Net, 4.4Kg Gross
Power Supply	AC 90V ~ 250V, 50/60Hz
Power Consumption	24W
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	

* For more information about digital audio, please contact our sales representative.

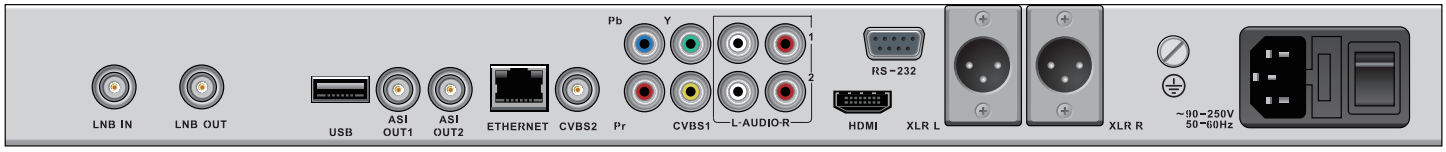
Block Diagram



Order Information

Model / Interface	DCH-3100P-10X				DCH-3100P-20X			
	-10C	-10T	-10S2	-10A	-20C	-20T	-20S2	-20A
Tuner	DVB-C	DVB-T	DVB-S2		DVB-C	DVB-T	DVB-S2	
ASI IN				×1				×1
Common Interface	×2	×2	×2	×2	×2	×2	×2	×2
ASI-Output					×2	×2	×2	×2
HDMI	×1	×1	×1	×1	×1	×1	×1	×1
CVBS	×2	×2	×2	×2	×2	×2	×2	×2
YPbPr	×1	×1	×1	×1	×1	×1	×1	×1
Audio L/R	×2	×2	×2	×2	×2	×2	×2	×2
Balanced audio XLR	×1	×1	×1	×1	×1	×1	×1	×1
USB	×1	×1	×1	×1	×1	×1	×1	×1

Back panel Interface



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