

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.

Optional HDMI for HD output



Dual DVB Common Interface and Multi Programs decryption

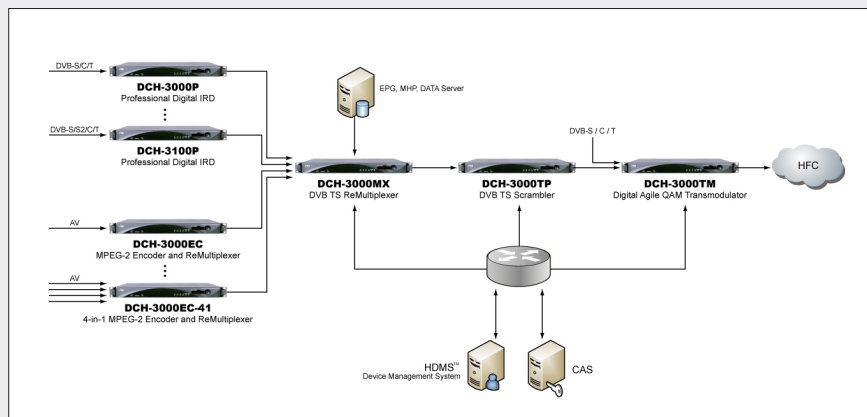


Ethernet management



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



Specification

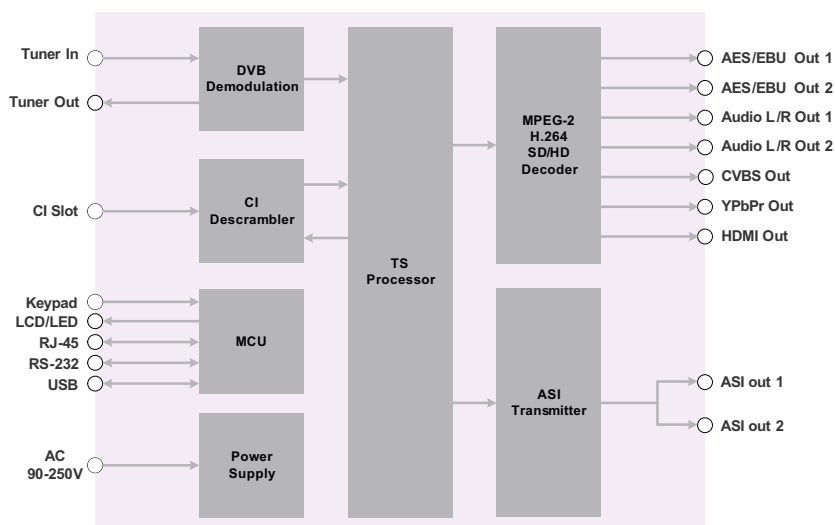
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|-------------------------------------|--|
| Tuner Input | |
| DVB-S/S2 Tuner Input | |
| Connector Type | 1 × F type female 75Ω for Input, 1 × F type female 75Ω for loop through output |
| Input Frequency Range | 950 ~ 2150MHz |
| Input Level | -25 ~ -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* |

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

| | |
|---|--|
| 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-1 Layer 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 | 1.0 Vp-p ± 5% |
| Frequency Response | <±1 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°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

DCH-3100P Functional Block Diagram



Order Information

| Interface | Model | 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

