



# VISIONETICS

INTERNATIONAL

**Au service de votre Numérique**

**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 TS/IP. 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.



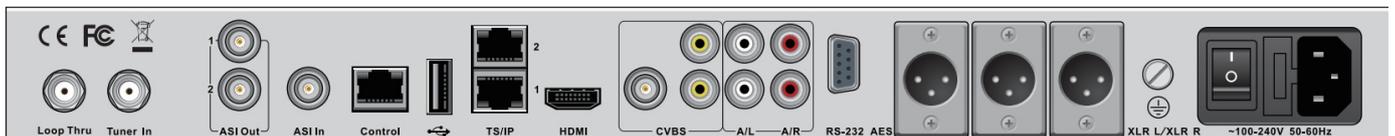
### Main Features

- ✓ 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<br>Factory default: x=S2 |               |               |               |
|           | ASI In x1  |           | option   | option        | •             | •             |
|           | CI x2      |           | •  | •             | •             | •             |
| Output    | ASI Out x2 |           |  |               | •             | •             |
|           | HDMI       |           | •  | •             | •             | •             |
|           | CVBS       | BNC + RCA | •  | •             | •             | •             |
|           |            | Audio     | RCA(L&R) x2  | •             | •             | •             |
|           |            | XLR x1    | •  | •             | •             | •             |
| TS/IP     | GbE        | RJ45 x2   |  | •             | •             |               |
| USB       | USB x1     |           | •  | •             | •             | •             |
| Control   | RJ45 x1    |           | •  | •             | •             | •             |

### Rear Panel





## Technical Specifications

| <b>TUNER INPUT</b>                 |  |
|------------------------------------|--|
| Connector Type                     | 1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output   |
| <b>TS Input and Output</b>         |  |
| <b>ASI</b>                         |  |
| Connector Type                     | Input: 1×BNC, 75Ω; Output: 2× 2 BNC, 75Ω   |
| Standard                           | DVB-ASI, EN50083-9   |
| Bit Rate                           | Input ≤ 200Mb/s; Output ≤ 200Mb/s  |
| <b>TS over IP</b>                  |  |
| 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  |
| <b>TS Processing</b>               |  |
| TS Descrambler                     | Dual PCMCIA: DVB-CI, BISS-1, BISS-E  |
| <b>Audio and video output</b>      |  |
| <b>Audio Video Coding Standard</b> |  |
| 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<br>AAC-LC, HE AAC V1/V2, Dolby Digital   |
| <b>HDMI Output</b>                 |  |
| 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   |

| <b>Digital Audio Output</b>          |   |
|--------------------------------------|---|
| Number of Output                     | Decoded or passed through 1 channel   |
| Output Format                        | AES/EBU   |
| Load Impedance                       | 110Ω  |
| Output Level                         | 1Vp-p   |
| <b>Analog Audio and video output</b> |   |
| CVBS Connector                       | 1×BNC 75Ω; 1×RCA 75Ω  |
| CVBS Standard                        | NTSC, PAL and SECAM   |
| Audio Connector                      | 1 XLR Male Socket, 2 pairs of RCA   |
| <b>Ancillary Data Processing</b>     |   |
| Subtitle                             | DVB, EBU  |
| VBI                                  | Teletext, WSS   |
| Closed Caption                       | EIA 608, EIA 708, EIA 608-to-708  |
| <b>Control and Monitoring</b>        |   |
| 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.

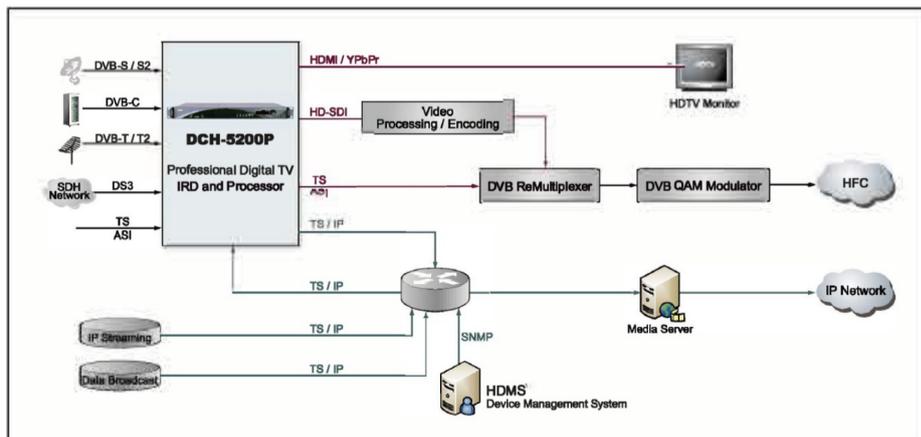
The device also performs HD down-conversion and aspect ratio adjustment for HD programs to generate professional-quality analog baseband video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the DCH-5200P ideal for distribution and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

|                               |  |
|-------------------------------|--|
| <b>Tuner Input</b>            |  |
| <b>DVB-S2X/S2 Tuner Input</b> |  |
| 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<br>8PSK 1 ~ 60 MSps<br>16APSK 1 ~ 58 MSps<br>32APSK 1 ~ 55 MSps<br>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  |
| <b>DVB-C Tuner Input</b>      |  |
| 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.)   |
| <b>DVB-T Tuner Input</b>      |  |
| 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.)   |
| <b>DTMB Tuner Input</b>       |  |
| 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  |
| <b>ATSC Tuner Input</b>       |  |
| 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   |
| <b>ASI Input</b>              |  |
| Connector Type                | 2×BNC female, 75Ω  |
| Standard                      | DVB-ASI, EN50083-9   |
| Input Bit Rate                | ≤ 100Mb/s  |
| <b>DS3 Input (Option)</b>     |  |
| Connector Type                | 2×BNC female, 75Ω, including loop through  |

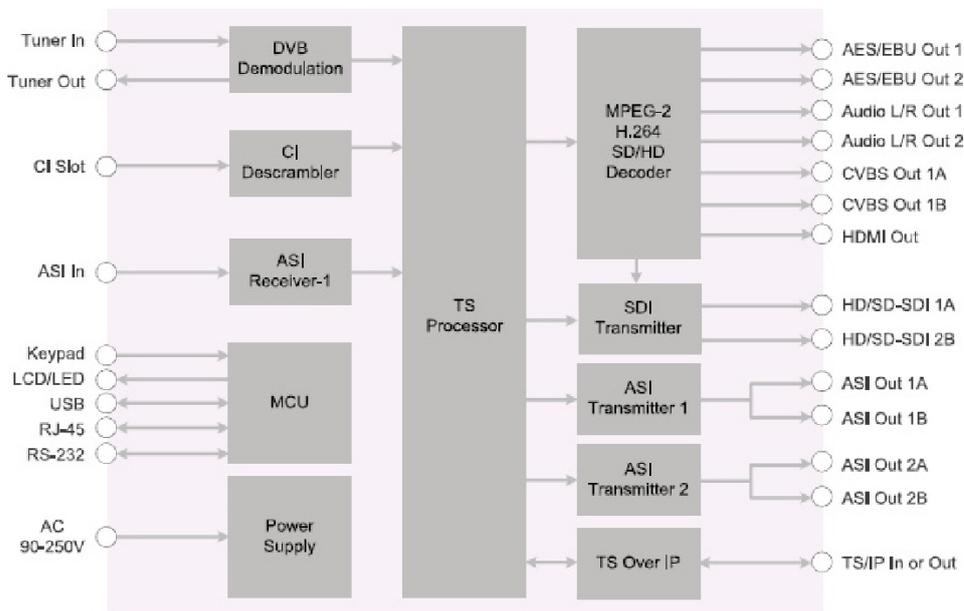
|                                     |  |
|-------------------------------------|--|
| Standard                            | Compliant with ITU-T G.703   |
| Frame Structure                     | Compliant with ITU-T G.752 and ITU-T G.804   |
| Bit Rate                            | 44.736Mb/s   |
| <b>TS over IP</b>                   |  |
| 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<br>32-CH IPTV/DVB mode output, Total 500Mb/s, Spare mirror output  |
| <b>TS Processing</b>                |  |
| 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 table regeneration, NIT and SDT edition, LCN Edition and Regeneration  |
| PSI/SI                              | DVB Common Scrambling Algorithm (CSA)  |
| Descrambler                         | BISS-1, BISS-E   |
| BISS Mode                           | Double PCMCIA slots, compatible with major CA CAMs in the market   |
| Common Interface                    |  |
| <b>ASI Output</b>                   |  |
| 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   |
| <b>HDMI Output</b>                  |  |
| 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   |
| <b>Digital Video Processing</b>     |  |
| Video Standard                      | MPEG-2(MP@ ML for SD, MP@HL for HD)<br>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   |
| <b>HD/SD-SDI Output</b>             |  |
| 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  |
| <b>Digital Audio Processing</b>     |  |
| 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)   |



| <b>Analog Video Output</b>       |   |
|----------------------------------|---|
| 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)  |
| <b>Analog Audio Output</b>       |   |
| 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 ±10dB                               |
| <b>Ancillary Data Processing</b> |   |
| Subtitle                         | DVB, EBU  |
| VBI                              | Teletext, WSS   |

| Closed Caption  | EIA 608, EIA 708, EIA 608-to-708  |
|---|---|
| <b>Redundancy</b>   |   |
| Redundancy Port   | among Tuner, ASI input and TS/IP input  |
| Switching Condition   | TS Sync Loss  |
| Switching Mode  | Main, Spare   |
| <b>Control &amp; Monitoring</b>   |   |
| 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  |
| <b>Physical</b>   |   |
| 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°C  |
| Storage temperature   | -10~60°C  |
| Operating Humidity  | 10~90%, non-condensed   |
| <b>Certification</b>  |   |
| 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/<br>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



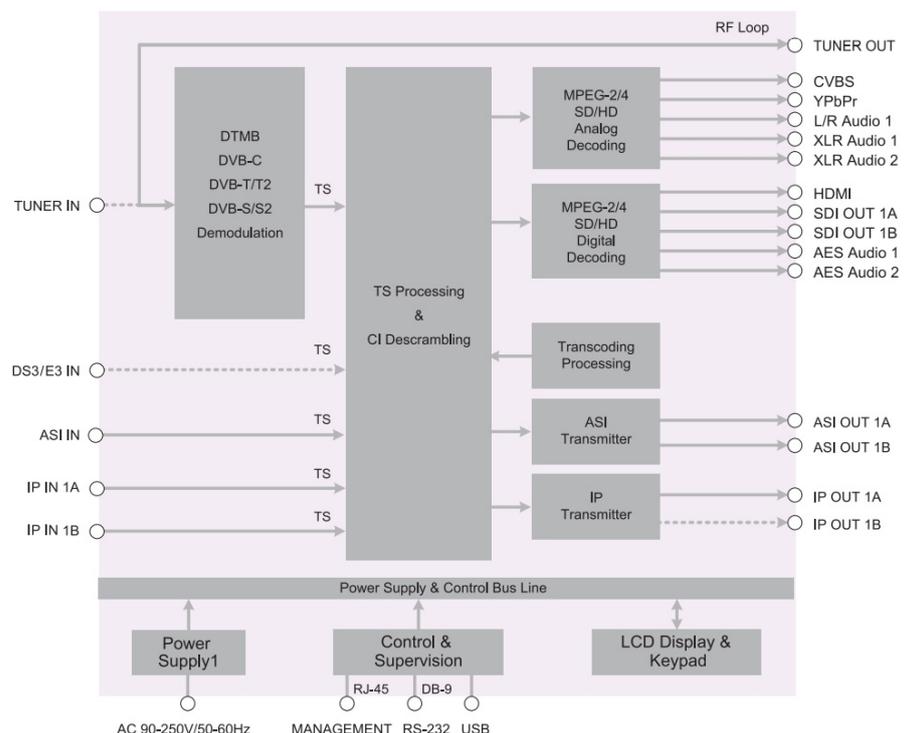
The DCH-5300P is the newest model in the IRD product family. It provides operators with an ideal solution for reception, remultiplexing, descrambling, and decoding operations. Equipped with a variety of inputs, it ensures compatibility with all transmission media. The remultiplexing capabilities of the 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                  | 2×BNC   |
| Standard                        | SD: SMPTE 259M, 270 Mb/s (10bit)<br>HD: SMPTE 292M, 1.485 Gbit/s (10bit)      |
| Video Resolution                | 1080I60, 1080I59.94, 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<br>2×DB9, 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

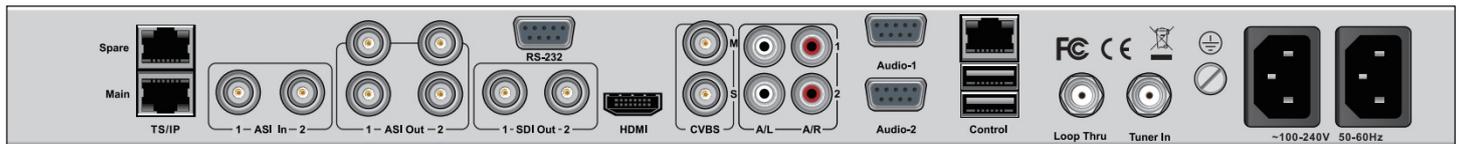
| Interface |                       | Model   | DCH-5300P |      | DCH-5300PE |      |
|-----------|-----------------------|---|-----------|------|------------|------|
|           |                       |   | 230x      | 232x | 230x       | 232x |
| Input     | Tuner                 | x is tuner options: DVB-S2/S, DVB-T/C, ISDB, ATSC, DTMB, DS3<br>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

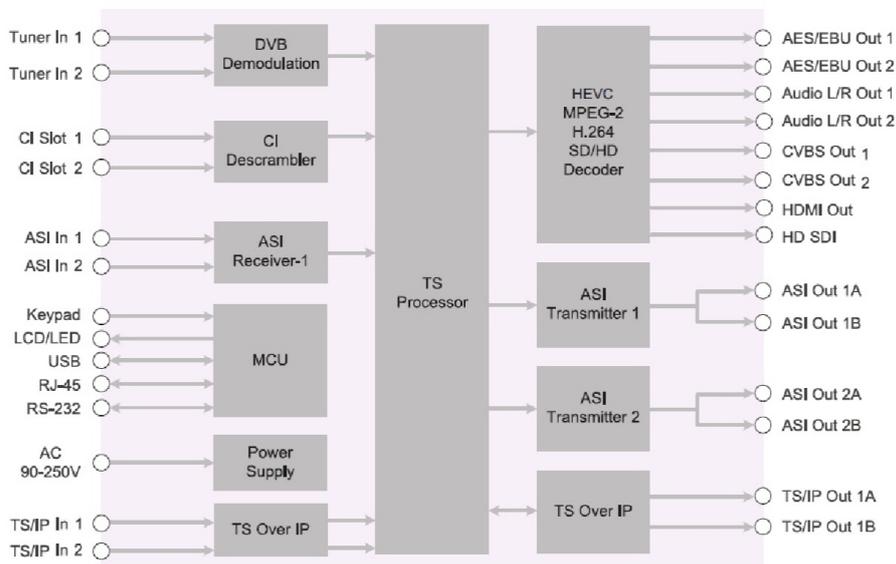
The DCH-5500P is the latest model and the flagship product of the IRD family. It provides operators with the ideal solution for reception, remultiplexing, descrambling, and decoding operations, with maximum support for 1080i decoding at 60 frames/second. Equipped with a variety of inputs, it ensures 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)<br>HD: SMPTE 292M, 1.485 Gbit/s (10bit)      |
| Video Resolution                | 1080I60, 1080I59.94, 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<br>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

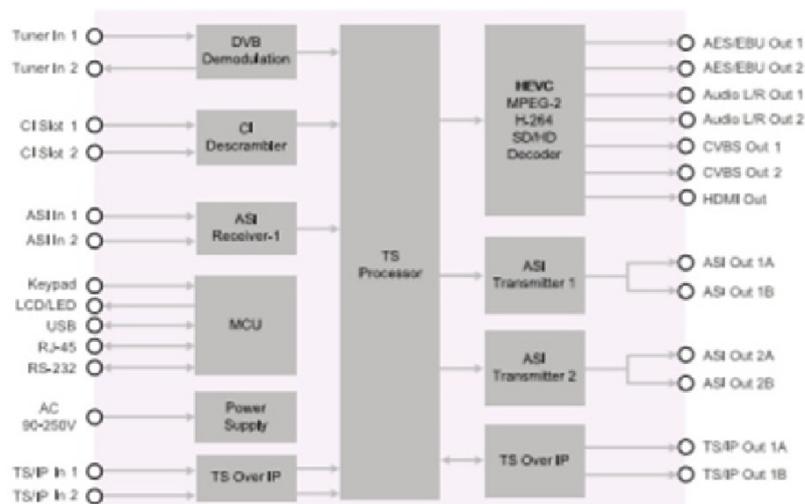
The DCH-6000P is our very latest IRD model. It provides operators with an ideal solution for reception, remultiplexing, descrambling, and decoding up to 4K\*2K@60fps 10-bit. Equipped with a variety of inputs, it ensures compatibility with all transmission media. The remultiplexing capabilities of the 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, 2x6G, or 4x3G), 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)<br>HD: SMPTE 292M, 1.485 Gbit/s (10bit)      |
| Video Resolution                | 1080I60, 1080I59.94, 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<br>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.

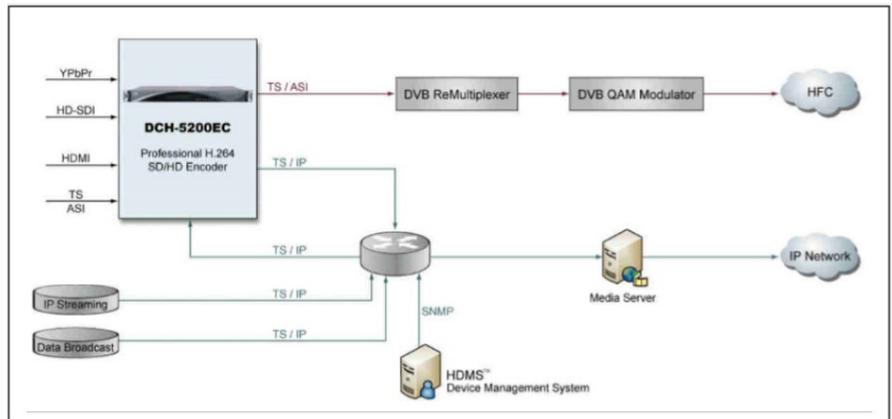
The remultiplexing function of the DCH-5200EC enables the creation of a new transport stream between the encoder's TS and the ASI or IP input TS. The encoder/transcoder output can be multiple SPTS or MPTS over IP, as well as over ASI. In transcoding mode, digital audio is passed through and timestamping 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.



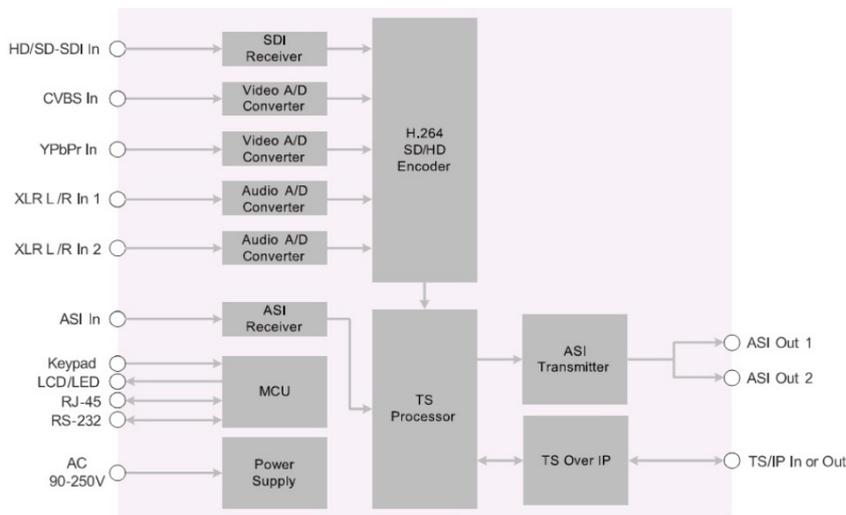
### Main Features

- ✓ 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





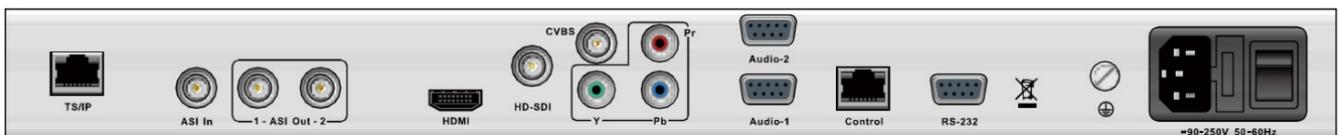
# Technical Specifications

|                                    |   |                               |  |
|------------------------------------|---|-------------------------------|--|
| <b>Video Compression</b>           |   | Service and PID Management    | Remux, Filtering and Remapping   |
| Video Resolution                   | 1080p (1920×1080) @50Hz, 59.94Hz, 60Hz: SMPTE 372M<br>1080i (1920×1080) @25Hz, 29.97Hz, 30Hz: SMPTE 292M<br>720p (1280×720) @50Hz, 59.94Hz, 60Hz: SMPTE 292M<br>480i (720×480) @29.97Hz: SMPTE 259M<br>576i (720×576) @25Hz: SMPTE 259M | PSI/SI                        | PSI/SI table regeneration, NIT and SDT editing   |
| Compression Standard               | H.264 High Profile Level 4.0  | <b>TS Over IP</b>             |  |
| Aspect Ratio                       | 4:3 / 16:9 selectable   | Connector Type                | 1 × RJ-45, 10/100 for TS/IP  |
| Video Encoding Bitrate             | 2 Mb/s – 30 Mb/ss   | Useful Bitrate                | 70 Mb/s for 10/100M  |
| <b>Audio Compression</b>           |   | Protocol                      | UDP/RTP, Multicast/Unicast, IGMPv2, ARP  |
| Audio Input                        | Embedded audio, Analog audio  | Source                        | Built-in remux, ASI input and encoder  |
| Audio Channels                     | Maximum 2 stereo pairs  | <b>ASI Output</b>             |  |
| Audio Sampling Rate                | 48 kHz  | Connector Type                | 6 × BNC Female, 75 Ω   |
| Audio Encoding Bitrate             | 32 – 384 kb/s   | Output Bitrate                | ≤ 99 Mb/s  |
| <b>Audio/Video Interface Input</b> |   | Packet Length                 | 188/204 Bytes  |
| Analog Audio                       | 1 × 9-pin D-sub Female with adapter cables  | Signal Level                  | 800 ± 80 mV3   |
| Analog CVBS                        | 1 × BNC Female, 75 Ω  | <b>Control and Monitoring</b> |  |
| YPbPr                              | 3 × RCA Female, 75 Ω  | Connector Type                | 1 × RJ-45, 10/100 for IP equipment control   |
| HDMI                               | 1 × HDMI 1.3  | Remote Control                | SNMP, HTTP Web   |
| <b>ASI Input</b>                   |   | Local Control                 | LCD screen and 6-key keypad  |
| Connector Type                     | 1 × BNC Female, 75 Ω  | Software Update               | Built-in FTP loader and Telnets  |
| Input Bitrate                      | ≤ 100 Mb/s  | <b>General</b>                |  |
| Packet Mode                        | Byte  | Dimensions                    | 44 mm × 483 mm × 340 mm  |
| Packet Length                      | 188 / 204 Bytes   | Net Weight                    | 3.2 kg   |
| <b>TS Processing</b>               |   | Power Supply                  | AC 90 V – 250 V, 50/60 Hz  |
| TS Input Management                | Remux and Demux for mirrored ASI outputs  | Power Consumption             | Max 20 W   |
| TS Output Management               | Remux and Demux between ASI input and encoded SPTS  | Operating Temperature         | 0 °C – 45 °C   |
|                                    |   | Storage Temperature           | -10 °C – 60 °C   |
|                                    |   | Humidity                      | 10% – 90% non-condensing   |
|                                    |   | <b>Certification</b>          |  |
|                                    |   | EMC                           | EN 55024:1998+A1:2001+A2:2003,<br>EN 55022:2005+A1:2007, EN 61000-3-2:2006,<br>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 Remultiplexer                                |       | •             | •             |
| 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

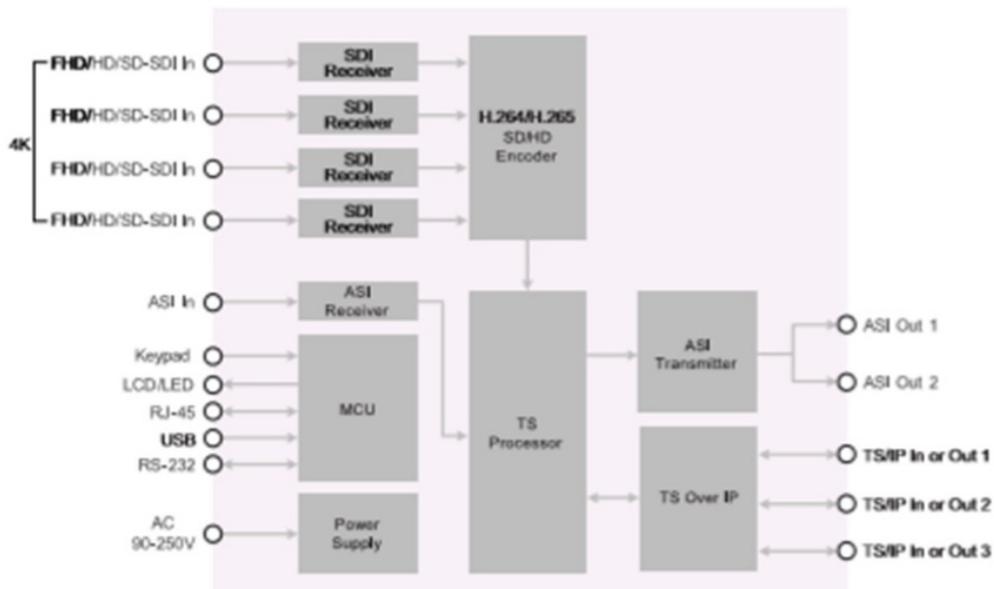
The DCH-6000EC is a high-quality H.264 (MPEG-4/AVC) and H.265 (HEVC) encoder. It features 4 HD-SDI input ports to encode SD, HD, and 4K signals. The built-in TBC ensures stable encoding. The re-multiplexing function allows the creation of a TS (SPTS or MPTS) from the encoded streams and ASI and IP inputs. 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    |   |
|-----------------------------|---|
| <b>Video</b>                |   |
| Connector Type              | HDMIx1; 12G SDI x 1   |
| Encoding Standard           | H.265 Main Profile, Level 5.0<br>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<br>1080P@50Hz,60Hz<br>1080P@30Hz<br>1080i@25Hz,29.97Hz<br>720P@50Hz,59.94Hz<br>720P@25Hz,29.97Hz |
| Special Effects             | Logo, Watermark, Text, Timestamp  |
| Aspect Ratio                | 16:9  |
| Bitrate Control             | CBR, VBR, AVBR  |
| <b>Audio</b>                |   |
| 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)<br>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 Converter



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

|                    |   |
|--------------------|---|
| <b>HDMI input</b>  |   |
| Connector Type     | 1×HDMI 2.0a (up to 2160p60)<br>2160p60, 2160p59.94, 2160p50,<br>2160p30, 2160p29.97, 2160p25,<br>2160p24, 2160p23.98, 1080p60,<br>1080p50, 1080p30, 1080p29.97,<br>1080p25, 1080i30, 1080i29.97,<br>1080i25, 720p60, 720p59.94, 720p50,<br>720p29.97, 720p25, 480p60,<br>576p50, 576i25, 480i29.97                                  |
| Video Resolution   | 1080i25, 720p60, 720p59.94, 720p50,<br>720p29.97, 720p25, 480p60,<br>576p50, 576i25, 480i29.97  |
| Emended audio      | Sampling rate 48KHz, 24bit  |
| <b>HDMI output</b> |   |
| Connector Type     | 1×HDMI 2.0a (up to 2160p60)<br>2160p23.98, 2160p24, 2160p25,<br>2160p60, 2160p59.94, 2160p50,<br>2160p30, 2160p29.97, 2160p25,<br>2160p24, 2160p23.98, 1080p60,<br>1080p50, 1080p30, 1080p29.97,<br>1080p25, 1080i30, 1080i29.97,<br>1080i25, 720p60, 720p59.94, 720p50,<br>720p29.97, 720p25, 480p60,<br>576p50, 576i25, 480i29.97 |
| Video Resolution   | 1080i25, 720p60, 720p59.94, 720p50,<br>720p29.97, 720p25, 480p60,<br>576p50, 576i25, 480i29.97  |
| Emended audio      | Sampling rate 48KHz, 24bit  |
| <b>SDI input</b>   |   |
| Connector Type     | 4 × BNC, female, 75Ω<br>2160p23.98, 2160p24, 2160p25,<br>2160p29.97, 2160p30, 2160p50,<br>2160p59.94, 2160p60, 1080i×30,<br>1080i×29.97, 1080i×25, 720p×60,<br>720p×59.94, 720p×50, 720p×29.97,<br>720p×25, 480p×60, 576p×50, 576i×25,<br>480i×29.97  |
| Video Resolution   | 1080i×29.97, 1080i×25, 720p×60,<br>720p×59.94, 720p×50, 720p×29.97,<br>720p×25, 480p×60, 576p×50, 576i×25,<br>480i×29.97  |

|                                 |  |
|---------------------------------|--|
| Standard                        | SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 425M   |
| <b>SDI output</b>               |  |
| Connector Type                  | 4xBNC, female, 75Ω<br>2160p23.98, 2160p24, 2160p25,<br>2160p29.97, 2160p30, 2160p50,<br>2160p59.94, 2160p60, 1080i×30,<br>1080i×29.97, 1080i×25, 720p×60,<br>720p×59.94, 720p×50, 720p×29.97,<br>720p×25, 480p×60, 576p×50, 576i×25,<br>480i×29.97 |
| Video Resolution                | 1080i×29.97, 1080i×25, 720p×60,<br>720p×59.94, 720p×50, 720p×29.97,<br>720p×25, 480p×60, 576p×50, 576i×25,<br>480i×29.97   |
| Standard                        | SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 425M   |
| Emended audio                   | 8 channels PCM audio   |
| Level                           | 800mV p-p  |
| <b>Genlock</b>                  |  |
| Connector Type                  | 1 × BNC, 75Ω   |
| Signal input                    | Analog SD (black & burst)  |
| <b>Control &amp; Monitoring</b> |  |
| 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)   |
| <b>Physical</b>                 |  |
| 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.

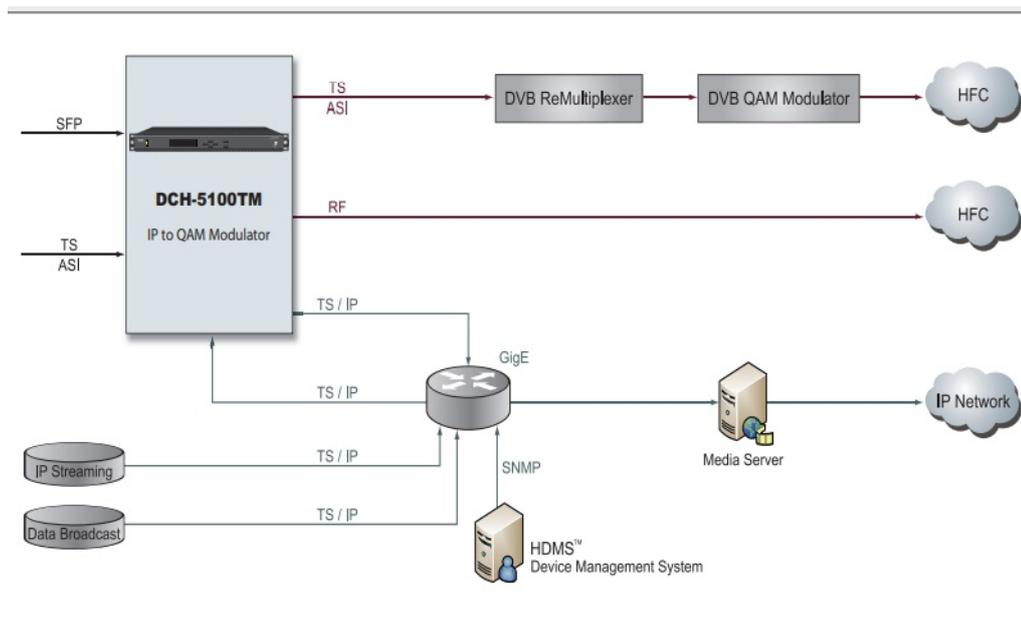
For the 16-channel QAM modulator option, the TS can be generated and re-multiplexed from 160 SPTS/MPTS from ASI/IP inputs. For the 32-channel QAM modulator option, the re-multiplexing function must be disabled, and each QAM carrier is directly converted from one of the 64 TS from the IP or ASI input. 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/Package  |
| 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°C  |
| Storage Temperature   | -10 ~ 60°C  |
| 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

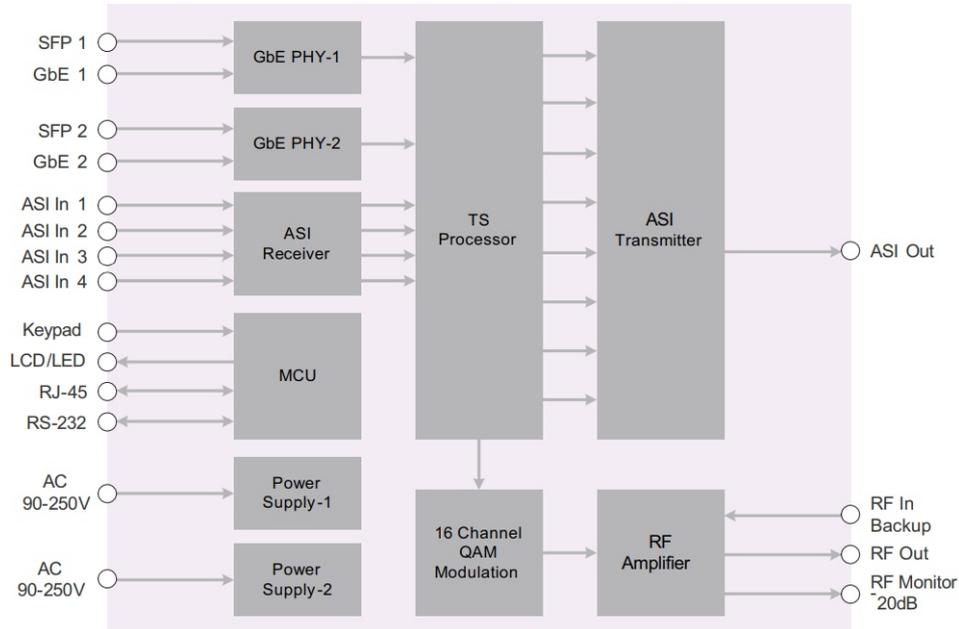


## Order Information

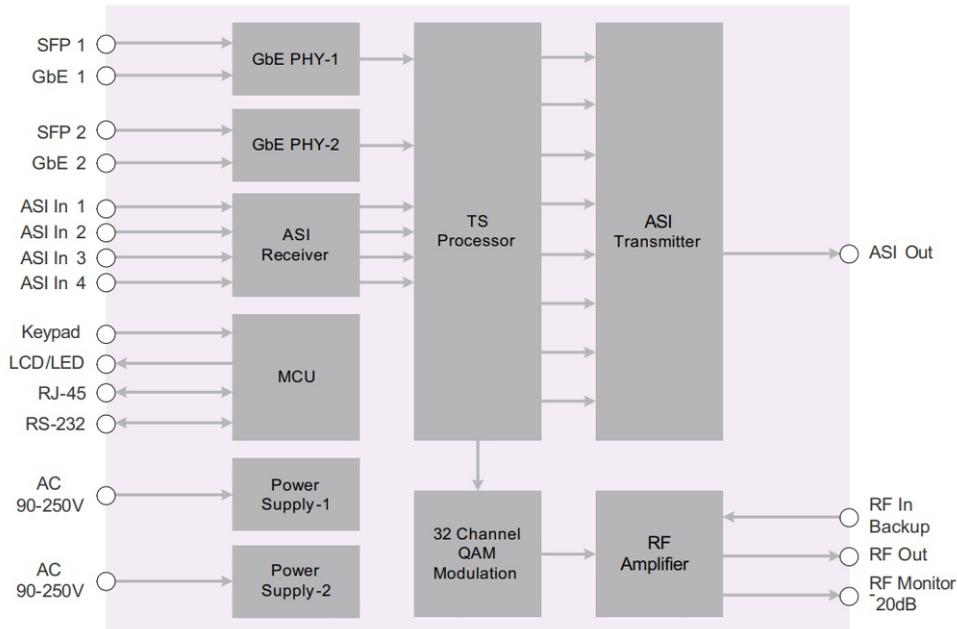
| Interface      | Model | DCH-5100TM-16X | DCH-5100TM-32  |
|----------------|-------|----------------|----------------|
| ASI-In         |       | x4             | x4             |
| Built-in Remux |       | YES            | NO             |
| TS/IP In       |       | x160           | x64            |
| 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

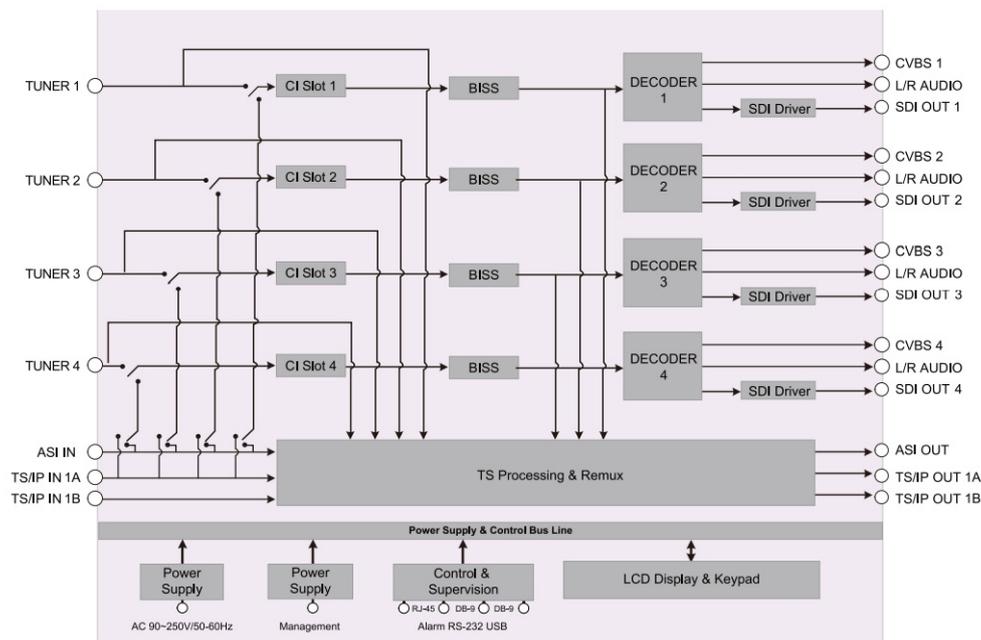
The DXP-3400PA provides operators with an ideal solution for multi-reception, descrambling, re-multiplexing, and decoding operations. With quad DVB common interfaces, the DXP-3400PA can decrypt multiple services across four transport streams. It is also a professional IRD featuring a broadcast-quality 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

|  |   |
|--|---|
| <b>Tuner Input</b>                                 |   |
| <b>DVB-S/S2 Tuner Input (ISI Factory Optional)</b> |   |
| 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<br>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<br>DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10<br>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   |
| <b>DVB-C Tuner Input</b>                           |   |
| 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.)  |
| <b>DVB-T Tuner Input</b>                           |   |
| 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.)  |
| <b>DTMB Tuner Input</b>                            |   |
| 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   |
| <b>ATSC Tuner Input</b>                            |   |
| 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  |
| <b>DS3 Input (Option)</b>                          |   |
| 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  |
| <b>TS Processing</b>                               |   |
| 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  |
| <b>ASI Input</b>                          |   |
| Connector Type                            | 1 BNC female, 75Ω   |
| Standard                                  | DVB-ASI, EN50083-9  |
| Output Bit Rate                           | ≤ 200Mb/s   |
| <b>ASI Output</b>                         |   |
| Connector Type                            | 2 independent BNC female, 75Ω   |
| Standard                                  | DVB-ASI, EN50083-9  |
| Output Bit Rate                           | ≤ 200Mb/s   |
| <b>Digital Video and Audio Processing</b> |   |
| Video Standard                            | MPEG-2(MP@ ML for SD, MP@HL for HD), 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-I/LC-AAC, HE-AAC  |
| Audio Sampling Rate                       | 32, 44.1 and 48KHz  |
| <b>Digital Video output</b>               |   |
| 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   |
| <b>Digital Audio output</b>               |   |
| Connector Type                            | SDI Embedded  |
| <b>Analog Video Output</b>                |   |
| 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±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)  |
| <b>Analog Audio Output</b>                |   |
| 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   |
| <b>TS over IP</b>                         |   |
| 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                   |
| <b>Control &amp; Monitoring</b>                            |   |
| Connector Type   | 1×RJ-45, 10/100 Base-T, for equipment IP Control                  |
| Remote Control   | SNMP, HTTP (Web Interface)  |
| <b>Proprietary HDMS (Headend Device Management System)</b> |   |
| 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            |
| <b>Physical</b>       |   |
| Weight                | 3.5kg                                     |
| 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                     |

## 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

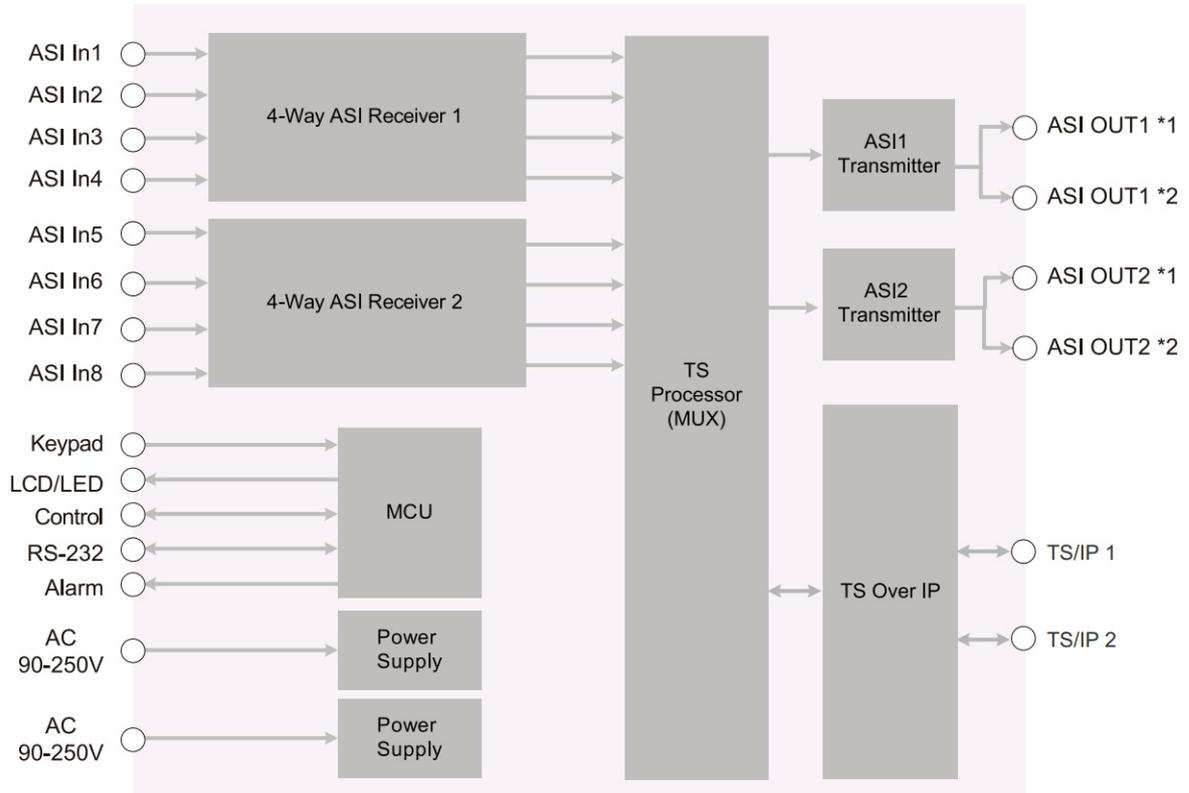
- ✓ Fully compliant with ISO13818 and EN300 468 standards
- ✓ Dual transport stream re-multiplexing unit for MPEG-2/H.264
- ✓ 8 × ASI inputs, up to 216 Mbps per interface
- ✓ 2 × independent ASI outputs with backup, up to 216 Mbps per interface
- ✓ GbE interface up to 700 Mbps (multichannel output) or 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     |   |
|----------------------|---|
| <b>TS/IP</b>         |   |
| 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<br>Multi-Channel Mode: 10 x MPTS out only<br>IPTV Mode: 128 x SPTS out only                           |
| Bit Rate             | Full Duplex Mode: 80Mb/s<br>Multi-Channel Mode: 500Mb/s<br>IPTV Mode: 500Mb/s   |
| <b>ASI In</b>        |   |
| Connector Type       | 8×BNC female, 75Ω   |
| Standard             | DVB-ASI, EN50083-9  |
| Bit Rate             | ≤216Mb/s  |
| <b>TS Processing</b> |   |
| 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 |

|                               |  |
|-------------------------------|--|
| <b>ASI Output</b>             |  |
| Connector Type                | 2 x BNC female , 75Ω                       |
| Standard                      | DVB-ASI, EN50083-9                         |
| Bit Rate                      | ≤216Mb/s                                   |
| <b>Control and Monitoring</b> |  |
| 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       |
| <b>General</b>                |  |
| 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

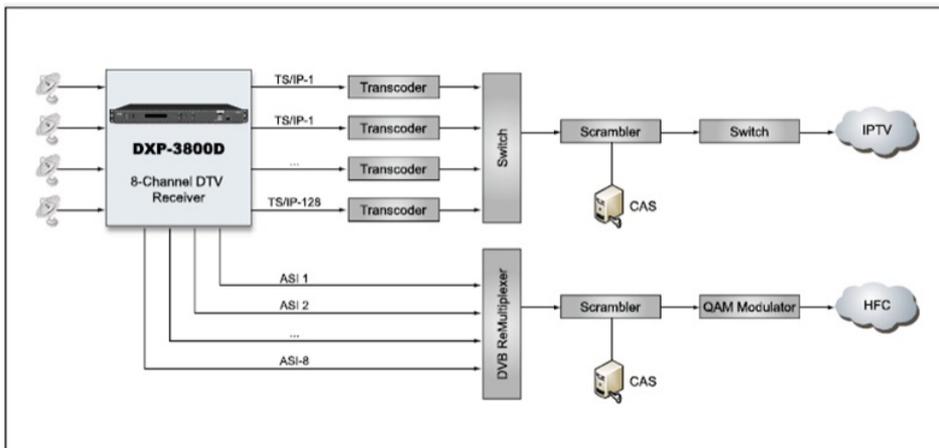
The DXP-3800D is a professional, high-density TS processor with modular CI descrambling, equipped with 8 independent tuners supporting DVB-T/T2, DVB-S2/S, DVB-C, DTMB, ISDB-T, and ATSC. It supports a wide range of applications by combining the processing capabilities of 8 tuners with industry-standard 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.



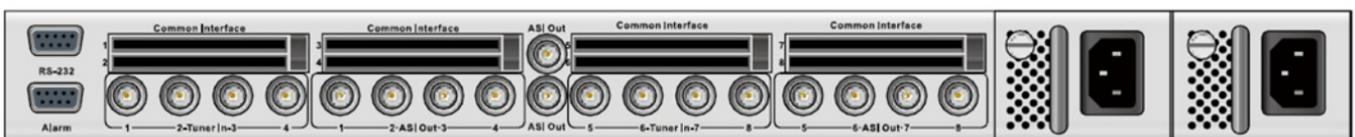
### Main Features

- ❑ 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<br>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

