FEATURES

- Variety of input options DVB-S/S2, TS/IP and ASI

- Supports DVB-S2 Input Stream Identifier (ISI, optional)

- Redundant backup among Tuner, ASI and TS/IP with configurable priority

- SD/HD/ MPEG-2, MPEG-4 AVC/H.264, HEVC/H.265 video decoding

- Analog and Digital Outputs, ASI, CVBS, HDMI, SDI, TS/IP

- Built-in 2×re-multiplexer

- 2×DVB-CI Slots, multi-program decryption

- Multi-program decryption with BISS, support BISS-1 and BISS-E mode

- Dynamic PMT detection and automatic updating

- Supports VBI TELETEXT, EBU/DVB Subtitle, Closed Caption

- UDP/RTP, Unicast/Multicast, and double full duplex SPTS/MPTS over IP

- Remote Control and Supervision by SNMP, HTTP WEB and TRAP

- TFT monitor and headphone socket

- On Site software update through IP and USB

- RSSI, received C/N, Eb/No & BER monitoring

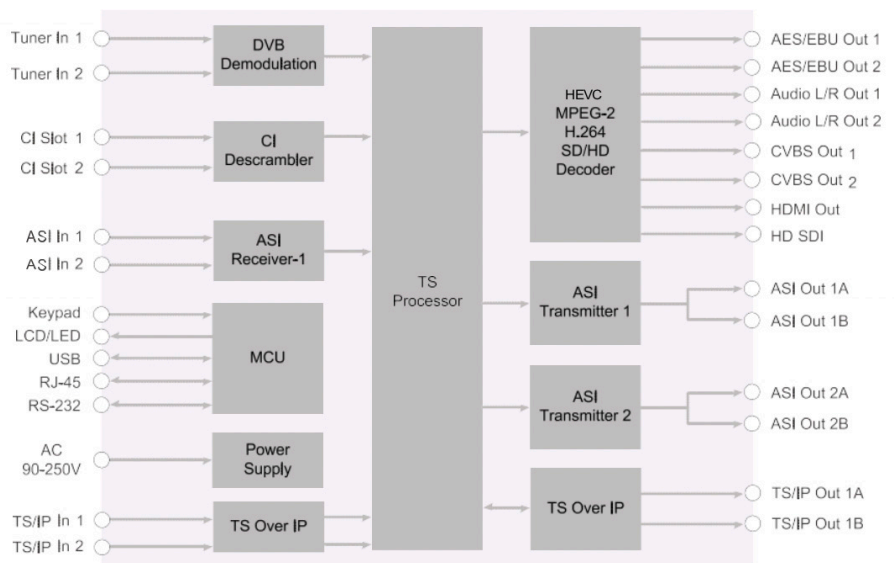**1.5" LCD Monitor on front panel**

DEC 5005-3

Professional HEVC IRD and Processor

The **DEC 5005-3** is the latest model of this advanced IRD product line. It offers operators an excellent solution for receiving, remultiplexing, descrambling and decoding support up to 1080i@60fps. This professional IRD features a broadcast quality decoder for MPEG-2 and MPEG-4 AVC/H.264 HEVC/H.265 in Standard Definition and High Definition formats, with a variety of industry standard digital and analog outputs, including CVBS video, HDMI, and SDI interfaces.
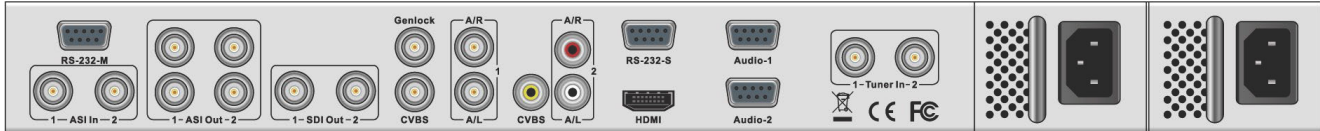
The **DEC 5005-3**'s re-multiplexing capabilities enable creation of new transport streams that are subsets of the original stream. Customized services may be output as multiple SPTS or MPTS over IP, as well as over ASI. Its dual DVB common interfaces can each decrypt multiple services in one transport stream independently.

The unit also performs aspect ratio adaptation of HD programs to generate professional quality base- band analog video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the **DEC5003-3** an ideal option for distribution and contribution networks.

DEC 5005-3 Functional Block Diagram

TECHNICAL

DVB-S/S2 TUNER INPUT	
Connector Type	2xF-Type female 75Ω for Input
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rate	1 ~ 45MBaud
Roll-off Factor	DVB-S: 0.35 DVB-S2: 0.35, 0.25, 0.2
FEC Code Rate	DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9,9/10 DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
LNB Polarity Selection	0V, 13V, 18V selectable voltage
LNB Band Selection Tone	0kHz, 22kHz selectable
Satellite Selection Command	DiSEqC 1.0
PLS	0 - 262141 user configurable
ISI ID	0 - 255 user configurable

ASI INPUT	
Connector Type	2xBNC female, 75 Ω
Standard	DVB-ASI, EN50083-9
Input Bit Rate	≤ 200Mb/s

TS OVER IP	
Connector Type	2×RJ-45 independent, 100/1000 Base-T full duplex for TS/IP
Effective Bit Rate	Input: 200Mb/s for 2xSPTS or 2xMPTS for each IP interface Output: 200Mb/s for 16xSPTS/2xMPTS for each IP interface
Protocol	UDP / RTP, Multicast / Unicast, IGMPv3, ARP

TS PROCESSING	
Re-multiplexer	2×re-multiplexer up to 200Mb/s for each one
Common interface	2×slot for 2 TS multi-program decryption support EN 50221
BISS	One multi-program decryption support BISS-1 and BISS-E mode

ASI OUTPUT	
Connector Type	2 pairs, 4 x BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 200Mb/s

HDMI OUTPUT	
Standard	1×HDMI 1.4 interface (up to 1080i)
Video Resolution and Frame Rate	1080i×60, 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	1×stereo

HD/SD-SDI OUTPUT	
Connector Type	1 pair, 2 x BNC female, 75Ω
SD Standard	SMPTE 259M, 270 Mb/s (10bit)
HD Standard	SMPTE 292M, 1.485 Gb/s (10bit)
Audio Embedded	2×audio PIDs are embedded with PCM or passed through
Level	800mV p-p

GENLOCK	
Connector Type	1 x BNC female, 75Ω
Input Signal	Analog SD (black & burst)

VIDEO DECODE	
Video Profile/Level	MPEG-2 MP@ML MPEG-2 SP@ML, MP@HL MPEG-4 SP@L0-3, ASP@L0-5, GMC H.264 BP/MP/HP@ level 5.0, H.265 Main Profile @L5.0 High-tier H.265 MP10 @L4.0

TECHNICAL

AUDIO DECODE	
Audio Format	**MPEG-1 Layer 2/ MPEG-2 Layer 2** a. 2 stereo pairs (Stereo, Dual Mono, Left, Right) **MPEG-2 AAC** a. 5.1 down-mix to 2.0 (Stereo, Dual, Mono, Left, Right) b. 2.0 (Stereo, Dual, Mono) **MPEG-4 HE-AAC v1/v2** a. 5.1 down-mix to 2.0 (Stereo, Dual, Mono, Left, Right) b. 2.0 (Stereo, Dual Mono, Left, Right)
ANALOG VIDEO OUTPUT	
CVBS Connector	1×BNC female 75Ω for Master 1×RCA female 75Ω for Monitor
CVBS Standard	NTSC, PAL, and SECAM
CVBS Resolution	576i×25, 480i×29.97
Nominal Output Level	1.0 Vp-p±5% (with standard test pattern)
Frequency Response	<±1 dB, at 5.5 MHz for PAL/SECAM, 4.2MHz for NTSC
Chroma-Luma Delay	<±30 nS
Field Time Distortion	<2%
Line Time Distortion	<1%
Short Time Distortion	<2%
Differential Gain	<3%
Differential Phase	<2°
Signal to Noise Ratio	>55dB (luminance weighted)
ANALOG AUDIO OUTPUT	
Decoded Outputs	2 (audio-1, audio-2)
Connector Type	2xBNC female 75Ω unbalanced for audio-1 2xRCA female 75Ω unbalanced for audio-2 2xD-Sub 9 600Ω balanced for audio-1 and audio-2
Output Mode	Left, Right, Dual Mono, Stereo
Crosstalk	>70dB
THD	<0.3% @ 400Hz, 1kHz test tone
Frequency Response	±0.5dB over 20Hz ~ 18kHz
Output Level	0dBm in 600Ω (0dBu), adjustable range 0 ~ 63dB Attenuation

ANCILLARY DATA PROCESSING	
Subtitle	DVB, EBU
VBI	Teletext, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
REDUNDANCY	
Backup Input	Selectable between Tuner, ASI input and TS/IP input
Switching Condition	TS Sync Loss
Switching Mode	Main, Spare
CONTROL & MONITORING	
Connector Type	1×RJ-45, 10/100 Base-T, for equipment IP Control & Monitoring
Remote Control	SNMP 2.0, HTTP (Web GUI)
Local Control	LCD display and Front control 6-key keypad
TFT monitor	Monitor video
Headphone Socket	Monitor audio-1 or audio-2 selectable
Serial Port	1×RS-232-M and 1×RS-232-S D-sub female, for debug use only
Equipment Upgrade	Telnet/FTP, WEB/HTTP or USB
PHYSICAL	
Dimensions	1U 19" Full-rack size, 445mm x 320mm x 45mm
Weight	5.0kg
Power Supply	AC 90V-260V, 47-63Hz
Power Consumption	30W (exclusive of LNB power)
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
LVD	EN 60950-1:2006 + A11:2009