

## Professional Quad HDTV IRD / IPTV Gateway



The ADV-6410 provides operators with ideal solution for multi receiving, descrambling, remultiplexing and decoding operations. By the quad DVB common interfaces, ADV-6410 could decrypt multiple services in 4 transport streams. ADV-6410 is also a professional IRD that features a broadcast quality decoding for MPEG-2, MPEG-4 AVC/H.264, H.265/HEVC and AVS+ in both Standard Definition and High Definition formats, and provides a variety of industry standard digital and analog outputs, including 4 separated CVBS video, analog Audio, SD-SDI and HD-SDI. The unit also performs HD down-conversion and aspect ratio adaptation of HD programs to generate professional quality baseband video and audio outputs (SDI/CVBS) for easy integration with existing cable network infrastructure. This all-in-one architecture makes the ADV-6410 an ideal product for distribution and contribution networks.

### Main Features

- Quad Tuner Input, supports variety of input options DVB-S2X/S2/S/T2/T/C/DTMB
- SD/HD MPEG-2, MPEG-4 AVC/H.264, H.265/HEVC and AVS+ digital video decoding
- Outputs: 4 SDI, 4 Composite, ASI, IP
- Audio Outputs:
  - 2 SDI embedded stereo pairs per video
  - Analog stereo pair per video
- IP output: up to 64 IPTV streams (TV programs)
- Built-in TS re-multiplexer
- 4×DVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption
- Dynamic PMT detection and automatic updating
- Remote Control and Supervision by SNMP and HTTP WEB
- AC3 and AC3+audio can be passed through by SDI
- On Site software update through IP or USB
- RSSI, received Eb/No & BER monitoring
- EBU Subtitle and DVB Subtitle embedded in SDI
- Redundant power supply

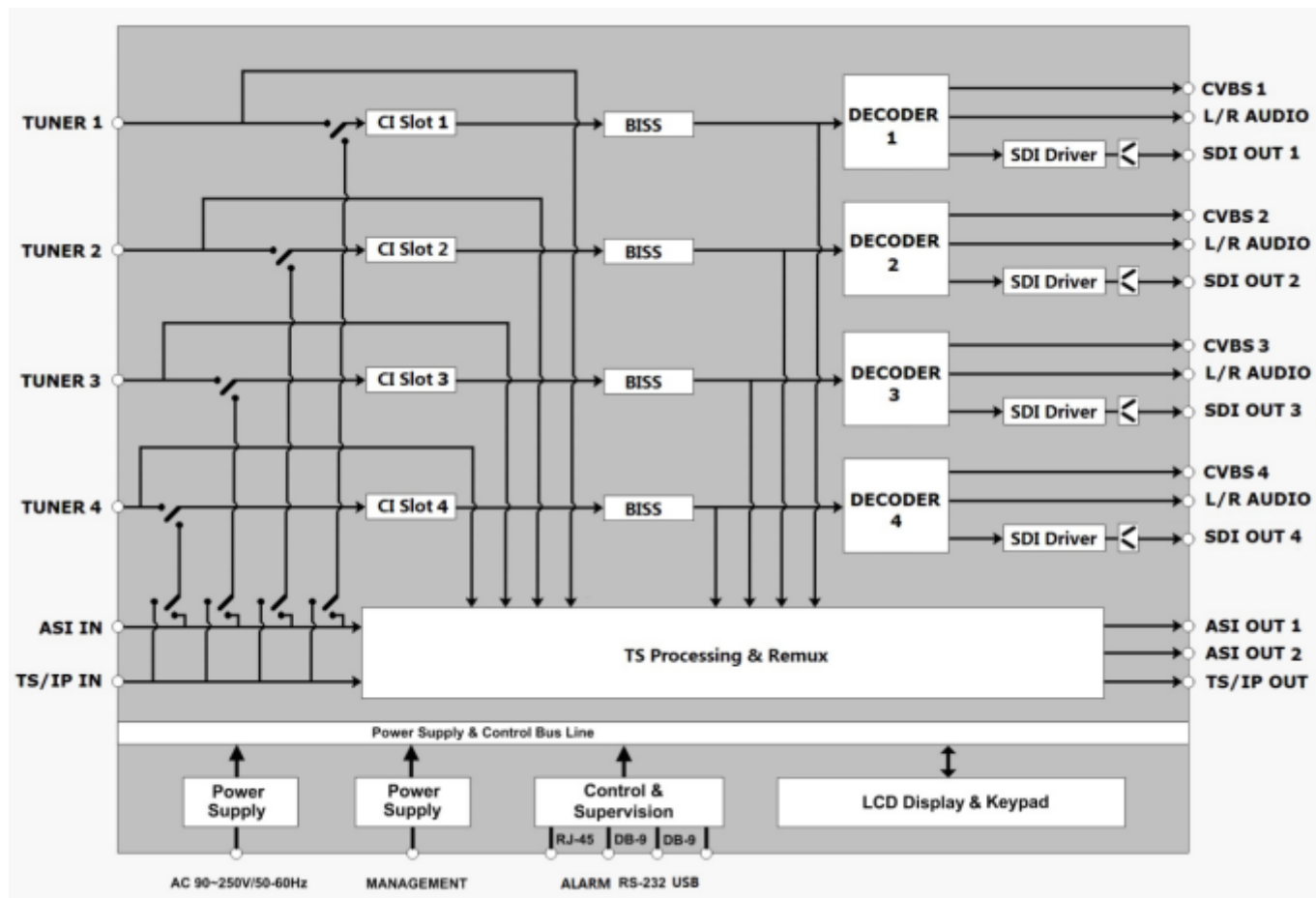
## Specifications

Tuner Input	
DVB-S/S2/S2X Tuner Input (ISI 16APSK/32APSK/64APSK S2X)	
Connector Type	4×F type female 75Ω for Input
Input Frequency Range	950 ~ 2150MHz
Input Level	-25 ~ -65dBm
Symbol Rate	DVB-S: 2 ~ 45MBaud
	DVB-S2X/S2 QPSK 8PSK: 1 ~ 60MBaud
	DVB-S2X/S2 QPSK 16APSK: 1 ~ 58MBaud
	DVB-S2X/S2 QPSK 32APSK: 1 ~ 55MBaud
	DVB-S2X/S2 QPSK 64APSK: 1 ~ 34MBaud
Roll-off Factor	DVB-S: 0.35
	DVB-S2: 0.35, 0.25, 0.2
	DVB-S2X: 0.35, 0.25, 0.2, 0.15, 0.1, 0.05
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
	DVB-S2X: 64800 bits FECFRAME VCM and ACM
LNB Polarity Selection Voltage	0, 13V, 18V selectable
LNB Band Selection Tone	0/22KHz selectable
Satellite Selection Command	DiSEqC 2.0
PLS	0 ~ 262141 user configurable
ISI ID	1 ~ 255 user configurable
DVB-C Tuner Input	
Connector Type	4×F type female 75Ω for Input,
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.)
DVB-T/T2 Tuner Input	
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
	DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
FFT Mode	DVB-T: 2K, 8K
	DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K
Guarding Interval	DVB-T: 1/4, 1/8, 1/16, 1/32
	DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64, 1/128

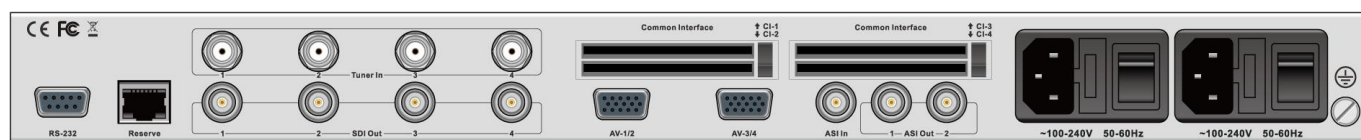
FEC Code Rate	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Input Return Loss	7dB (typ.)
DTMB Tuner Input	
Connector Type	4×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	46.5~866MHz
Input Level	-87~-29dBm
Symbol Rate	7.56Mbaud
Bandwidth	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
TS Processing	
TS Input Management	Demux and Remux among Tuners, CI, ASI and IP Inputs
TS Output Management	Demux and Remux for ASI or IP outputs
Service and PID Management	Remux, filtering and remapping
BISS Mode	BISS-1, BISS-E
Common Interface	2x2 PCMCIA slots, compatible with major CA CAMs in the market
ASI Input	
Connector Type	1* BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 200Mb/s
ASI Output	
Connector Type	2 *BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 200Mb/s
TS Processing	1 Independent TS Re-multiplexer:
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) H.265 Main Profile@L5.0 High-tier AVS Jizhun Profile @ level 6.0 and AVS-P16
SDI Video Resolution	1080i×60, 1080i×30, 1080i×59.94, 1080i×29.97, 1080i×50, 1080i×25, 720p×60, 720p×59.94, 720p×50, 576i×25, 480i×29.97
Video PID Bit Rate	≤ 60Mb/s
HD/SD-SDI	
Connector Type	4 Pairs of SDI output, BNC, female, 75Ω
SD Standard	SMPTE 259M, 270 Mb/s (10bit)
HD Standard	SMPTE 292M, 1.485 Gbit/s (10bit)
Level	800mV p-p
Embedded Audios	MPEG-1 Layer 2 Dolby Digital (AC3) Pass-through

	Dolby Digital Plus(AC3+) Pass-through
	MPEG-2 AAC
	MPEG-4 HE-AAC v1/v2
<b>Analog Video Output</b>	
CVBS Connector	2x DB15 with 4xBNC female 75Ω adaptor cable
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	2x DB15 with 8xBNC female adaptor cable
Output Mode	Left, Right, Dual Mono, Stereo
Number of Output	1 stereo unbalanced pair per video
<b>TS over IP</b>	
Connector Type	2×RJ-45, 100/1000 Base-T
Effective Bit Rate	Max.400Mb/s for 64xchannels, MPTS/SPTS IP out / IP in,
Protocol	UDP/RTP, Multicast/Unicast, IGMPv3, ARP
<b>Control &amp; Monitoring</b>	
Connector Type	1×RJ-45, 10/100 Base-T, for unit IP Control
Remote Control	SNMP, HTTP (Web Interface)
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, WEB HTTP and USB
<b>Physical</b>	
Dimensions	485mm×340mm×45mm
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

## Block Diagram



## Back Panel



## ORDERING INFO

ADV-6410S – IRD with 4 DVB-S/S2/S2X tuners

ADV-6410T – IRD with 4 DVB-C/T/T2 tuners

ADV-6410D – IRD with 4 DTMB tuners