

# IRD1511Plus

Pristine Dual Channels 4K@60fps 12G-SDI  
H.265 Decoder and IRD



With the significant increase in 4K/UHD TV sets hitting the Head-end market, content providers and TV broadcasters are looking for Pristine **4K** video quality and **60fps** motion fluency solution to address the needs of Collect the UHD H264, H265, MPEG2, AVS+ Channels from Cable, Terrestrial, Satellite and IPTV Networks

the IRD1511Plus real-time professional decoder is design to ensure high performance, delivers pristine UHD for an immersive, ultra high-resolution experience. Additionally, the decoder supports DVB/SMPTE standards and is interoperable with professional Broadcast H.264/HEVC encoders model ENC3511.

IRD1511Plus offers Main, Main 10 High Definition decoding in all industry-standard compression formats combined with optional one Tuners in DVB-S2, **DVB-S2X(optional)**, DVB-T2, DVB-C, works as ASI and TS/IP together. Up to 2 CI slots capable of working with most of well-known CAS in the market to de-encrypt multiple pay TV services. The unit ingests is through DVB-ASI or GigE and output is through 12G SDI, HD-MI2.0, AV ports. This efficient and flexible configuration enhances the use cases and overall effectiveness of the product.

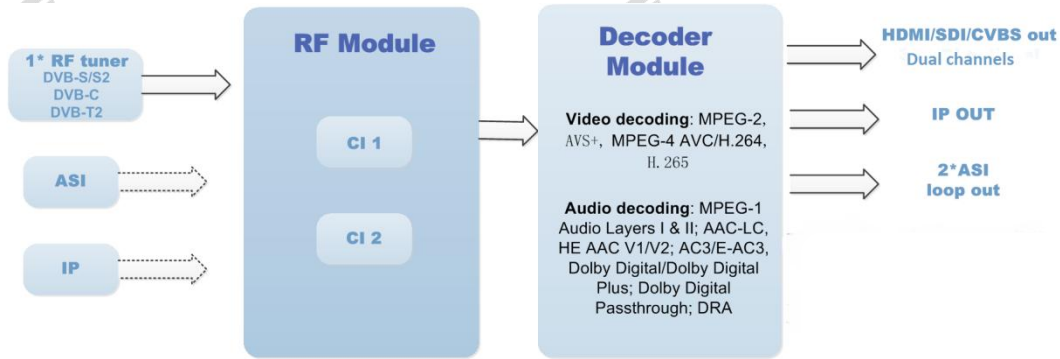
## Key Features

- MPEG2, H.264, AVS+, HEVC Decoded in UHD/4K,HD and SD
- Locking Inputs signals: IP, ASI and Tuners simultaneously
- 60fps 4K Ultra HD decoding
- **Dual channels 12G-SDI/ HD-MI output**
- Optional Tuners DVB-S2, DVB-S2X(optional), DVB-T2 or DVB-C inputs
- Teletext and DVB subtitle supported
- Support **GenLock**, used to synchronize video and audio systems
- 1\*MPTS and 8\*SPTS UDP/RTP over Gbe IP out
- Up to 2 CI slots, Biss 1/Biss E decryption
- MPEG-TS of Tuners ingest through DVB-ASI 1/GbE Ports, TS of ASI ingest through DVB-ASI 2 /GbE Ports
- Low Latency decode
- Image enhancement, denoising, sharpening, deinterlace, anti-sawtooth flicker
- Audio decoding: AC3/E-AC3/AAC/MPEG1 L2
- Front-panel and web-based user interfaces

## Application

- Video Contribution and Distribution in TV studio Station
- Satellite digital TV, Terrestrial digital TV, Cable TV broadcasting
- Contribution decode of high bitrate 4K/UHD HEVC/H.264 video service
- Downscale contribution services to 1080P for distribution

Principle Chart



TECHNICAL SPECIFICATIONS

**DVB-S/S2 Tuner input**

DVB-S/S2 Tuner Input 1\*RF input, 1\*RF loop out 75Ω  
 Input frequency 950~2150MHz  
 Input level -25~-65 dbm  
 Symbol Rate 1 ~ 45msps  
 Roll-off Factor 0.2, 0.25, 0.35  
 FEC Code Rate All rates compatible with the standard  
 LNB power supply 13V, 18V selectable, 22KHz selectable  
 Constellation QPSK, 8PSK

**DVB-S2X (optional)**

Input Frequency 950-2150MHz  
 Symbol rate QPSK/8PSK /16APSK :0.5~45 Msps  
 32APSK: 0.5~34Msps;  
 FEC Demodulation QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10  
 8PSK: 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10  
 8APSK: 5/9-L, 26/45-L  
 16APSK:2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L,  
 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45,  
 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90  
 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 2/3-L,  
 32/45, 11/15, 7/9  
 Demodulation Mode QPSK, 8PSK, 8APSK, 16APSK, 32APSK  
 Max input bitrate ≤125 Mbps

**DVB-C Tuner input**

DVB-C Tuner Input 1\*RF input, 1\*RF loop out 75Ω  
 Input Frequency Range 48~862MHz  
 Input Level 45~75dbuV  
 Modulation mode 16/32/64/128/256QAM

**DVB-T/T2 Tuner input**

DVB-T/T2 Tuner Input 2\*RF input, 2\*RF loop out 75Ω  
 Input Frequency 44~1002MHz  
 Input Level -20 ~ -100dbm  
 Modulation mode DVB-T: QPSK, 16/64 QAM  
 DVB-T2: QPSK, 16/64/256 QAM  
 Bandwidth 6MHz, 7MHz, 8MHz  
 Guard Interval DVB-T: 1/4, 1/8, 1/16, 1/32  
 DVB-T2: 1/4, 1/8, 1/16, 1/32, 1/64, 1/128  
 Carrier wave DVB-T: 2K/8K  
 DVB-T2: 1K/2K/4K/8K/16K/32K  
 FEC: DVB-T DVB-T: 1/4, 1/8, 1/16, 1/32  
 DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6

**TS in/output interfaces**

DVB-ASI 1xASI input, 2x ASI outputs. ≤120Mbps  
 Impedance 75Ω  
 IP input URL ip input  
 MPEG over IP Multicast/unicast  
 Connectors 1x100/1000M Base-T, RJ45  
**DVB Mode** MPEG TS DVB-ASI or RTP/UDP  
 The IP stream will include all  
 The programs and will be sent to the  
 specified multicast or unicast IP Address.  
**IPTV Mode** The input transport stream is de-muxed  
 into individual programs, each in a different  
 IP stream. Up to 8 IPTV addresses

**Output Ports**

**HD-MI Output**

Implementation standards 1\* HD-MI 2.0b with HD CP2.2/1.4  
 Resolution up to UHD/4K @60fps, 1080p@60fps

**12G-SDI Output**

Interface 2\*12G-SDI, 75Ω  
 Resolution up to 4K@60fps  
 Output level 800mV+20 p-p

**Analog Video Output**

Connector Type 1\* CVBS , 1 pairs of R/L analog, RCA, 75Ω  
 Output level I.0 Vp-p±5% Standard test stream  
 CVBS Standard PALBDGHI, PALN, NTSCM, PALN-C, NTSCM,  
 NTSCM443, PALM, SECAM, NTSCMJ  
 ≥ 56dB  
 SNR 300±20mVP-P  
 synchronizing amplitude ±0.8 dB ( 4.8MHz); ±1 dB ( 4.8-5MHz );  
 frequency characteristic +0.5/-4 dB` ( 5.5 MHz)

**Output amplitude**

Differential gain 700±30mVP-P  
 ≤ 8%  
**Video Decoding**  
 Video Standard MPEG-2; MPEG 4 AVC/H.264; H.265; AVS+  
 Video Resolution 3840x2160@60(UHD)  
 1920x1080P60, 1920x1080P50  
 1920x1080i60, 1920x 1080i50  
 1080x720p60, 1080x720p50  
 720x 576P, 720x 576I, 720x 480P, 720x 480I  
 4:2:2, 4:2:0

**Chroma Sample**

Bit Depth 8-bit, 10-bit  
 Decoding Latency low latency mode: 300-1000ms  
 HEVC (H.265/MPEG-H) Main @ L4.1 & L5.1  
 Main 10 @ L4.1 & L5.1  
 Main 10 422 @ L4.1 & L5.1

**H.264 Profiles**

MPEG2 Profiles H.264 BP/MP/HP@ level 5.0  
 AVS+ Profiles MPEG2 SP@ML,MP@HL  
 Input mode: IP/ASI/DVB-S2/URL, select one to decode and output  
 AVS-P16(AVS+)

**Audio Decoding**

Audio Standard MPEG-1 Audio Layers I & II, AAC-LC, HE AAC V1/V2  
 AC3/E-AC3 Dolby Digital/Dolby Digital Plus,DRA  
 1 by default, Option 2

**Dual Audio Tracks**

**Data output**  
 Subtitle DVB/EBU/Teletext  
 Closed Caption EIA 608, EIA 708, EIA 608-to-708

**Control & Monitoring**

Interface 1\*RJ-45, 10/100 Base-T, for equipment IP Control  
 Remote Control Web management  
 Local Control LCD display and keypad

**Environment**

Power Supply AC 90V~250V, 50/60Hz  
 Power consumption 24W  
 Dimension 450\*350\*44mm  
 Operating temperature 0 ~ 45℃  
 Storage temperature -10 ~ 60℃  
 Humidity 10 ~ 90% non-condensed  
 Weight 5KG