

# INGRON1301IH HD Professional IRD



### Features

- Tuner input mode available for DVB-T/DVB-T2/ DVB-S2/DVB-S/DVB-C/ATSC-T/ISDB-T/DTMB
- Input available with Tuner, ASI, IP(100M, UDP)
- SD/HD MPEG-2 and MPEG-4 AVC/H.264 digital video decoding
- Diversified choices of output interfaces, including ASI, CVBS, YPbPr, HDMI, SD/HD-SDI, 10/100M TS over IP(1\*MPTS & 8/32\*SPTS) output
- 2\*DVB-CI slots for multi-program decryption
- 16APSK, 32 APSK constellation optional for DVB-S/S2 RF in
- BISS-1 and BISS-E decryption modes supported
- Closed Caption(CC) support
- Built-in de-multiplexer
- Unicast and multicast modes supported for IP out
- PCM audio embedded in SDI and HDMI, SPDIF and analog Audio XLR, RCA outputs
- Audio decoding in MPEG-2 Layer II, AC3, HE-AAC(v2), LC-AAC
- Monitoring working state by network system
- Software upgrading through IP
- Easy-operation by LCD and keyboard on front panel

### Specifications

#### Tuner Input

DVB-C Mode	Input Frequency	47 ~ 860 MHz
	Input Level	45 ~ 75 dBuv
	Symbol Rate	1~7 Mbaud
	Constellation	16/32/64/128/256 QAM
	Bandwidth	6 MHz / 7 MHz / 8 MHz
	Connector Type	1*F type female, 75Ω for input; 1*F type female, 75Ω for loop through output
DVB-S/S2 Mode	Connector Type	1*F type female, 75Ω for input; 1*F type female, 75Ω for loop through output
	Input Frequency	950 ~ 2150 MHz
	Symbol Rate	1 ~ 45 MBaud (for DVB-S, DVB-S2/QPSK, 8PSK); 1 ~ 35 Mbaud (for 16APSK, for option); 1 ~ 28 Mbaud (for 32APSK, for option)
	Input Level	-65 ~ -25 dBm
	Roll-off Factor	(DVB-S) 0.35; (DVB-S2) -0.35, 0.25, 0.2
DVB-T Mode	Connector Type	1*F type female 75Ω for input; 1*F type female 75Ω for loop through output
	Input Frequency	146~862MHz
	Input Level	-70~-20dBm
	Bandwidth	6/7/8MHz
	FFT Mode	2k/8k

DVB-T2 Mode	Connector Type	1*F type female 75Ω for input; 1*F type female 75Ω for loop through output
	Input frequency	44~1002MHz
	Input Level	-70~-20dBm
	Bandwidth	6/7/8MHz
	FFT mode	2k/8k
ATSC-T Mode	Connector Type	1*F type female, 75Ω for input; 1*F type female, 75Ω for loop through output
	Input frequency	54~864MHz
	Input Level	-70~-20dBm
	Bandwidth	6MHz
	Constellation	8VSB
ISDB-T Mode	Connector Type	1*F type female, 75Ω for input; 1*F type female, 75Ω for loop through output
	Input frequency	153 ~ 862 MHz
	Input Level	-70 ~ -20 dBm
	Bandwidth	6 MHz / 7 MHz / 8 MHz
DTMB	Connector Type	1*F type female, 75Ω for input; 1*F type female, 75Ω for loop through output
	Input frequency	146 ~ 862 MHz
	Input Level	-70 ~ -20 dBm
	Bandwidth	6 MHz / 7 MHz / 8 MHz
	FEC Code Rate	0.4, 0.6, 0.8
	Constellation	4QAM-NR,4QAM,16QAM,32QAM,64QAM
	Interleaving Depth	240,720

#### ASI Input

Standard	DVB-ASI, EN50083-9
Bit-Rate	≤49 Mbps
Connector Type	1*BNC female, 75Ω

#### IP Input

Protocols	TS over IP, UDP
Bit-Rate	≤70 Mbps
Connector Type	RJ45, 10/100M Base-T

#### DVB-CI Module

Descrambling Processing	DVB-CAS
Smart Card Interface	ISO7816
Interface Card Separation	PCMCIA
BISS Mode	BISS-1, BISS-E

#### Output

ASI Output	Number	2*ASI+2*ASI(for pass through)
	Standard	EN 50083-9 ASI
	Output Bit Rate	Max. 54 Mbps
	MPEG Frame	188/204 byte
	Reflection Loss	>10 dB
	Connector Type	75 Ω, BNC interface

IP Output	Transport Protocol	TS over IP output, UDP protocol
	Connector Type	RJ45, 10/100M Base-T
	Mode	Multicast/Unicast
	Output TS	1*MPTS/8*SPTS; 1*MPTS/32*SPTS for option
Video Output	CVBS	1*CVBS, BNC interface 576i@25fps, 480i@29.97
	YPbPr(BNC)	1*YPbPr, BNC interface 1080i@25,29.97, 30fps; 720P@50, 59.94fps
	SDI(BNC)	1*SDI, BNC interface 1080i@25, 29.97, 30fps; 720P@50, 59.94fps; 576@25fps, 480i@29.97
	HDMI	1*HDMI 1080i@25,29.97, 30fps; 720P@50, 59.94fps
	Video Decoding	MPEG-2, H.264 HD/SD
Audio Output	Stereo Unbalanced Audio	1*RCA, BNC interface
	Stereo Balanced Audio	1*XLR
	Digital Audio	1*S/PDIF
	PCM Audio Embedded	1*SDI, 1*HDMI
	Audio Decoding	MPEG-1 Layer II, AC3, HE-AAC(V2), LC-AAC

**Management**

Local Control	by keyboard or LCD on front panel
Upgrading	by Ethernet software interface
Remote Control	by web management
Language	English

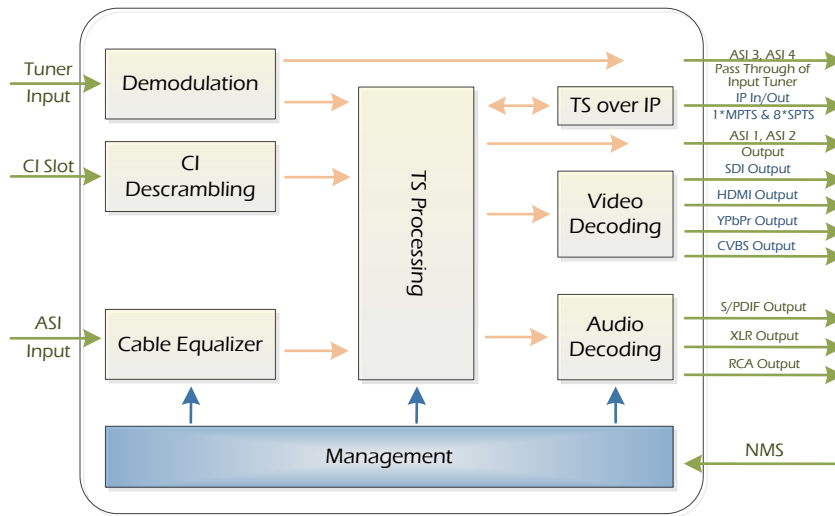
**General**

Voltage	100~240V AC, 50/60Hz
Power Consumption	18.0 W
Environment	0~45°C (Operation), -20~80°C (Storage)
Dimension (W*D*H)	482*405*44 mm
Gross Weight	4.0 KGS

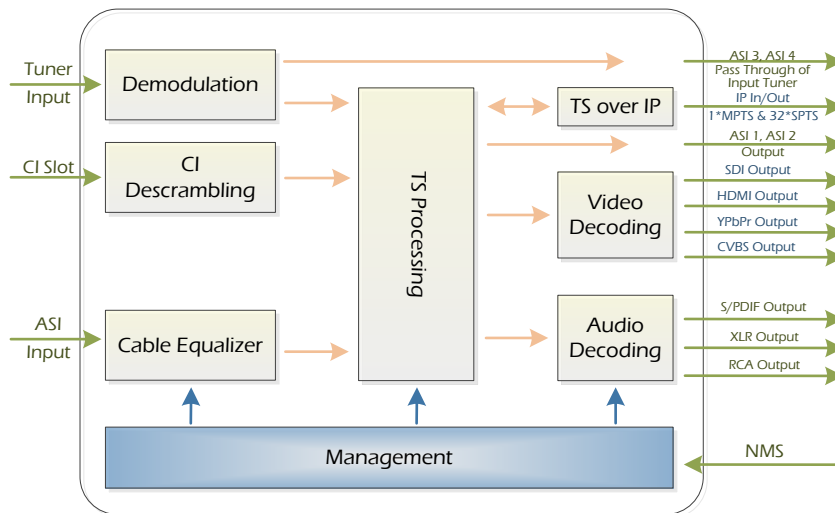
**Introductions**

INGRON1301IH Series HD IRD is a high-integrated professional device, who accepts TS signals from ASI, tuner or IP sources, and decodes them into audio and video signals. Its tuner input mode can be respectively in DVB-C, DVB-S/S2, DVB-T/T2, ATSC-T, and ISDB-T. With the configuration of CAM module, it is workable with various Conditional Access System(CAS). It can also pack the entire TS stream signals into IP packet (UDP) through network transmission, so that users can watch programs on computer directly. INGRON1301IH IRD has the option of de-multiplexing, which realizes selection of entire or part of output signals as is required. The device can be applied to Digital Satellite News Gathering (DSNG), due to the adoption of BISS descrambling function. It provides diversified output interfaces, such as HD-SDI, SD-SDI, YPbPr, HDMI, CVBS, XLR balanced audio, and S/PDIF digital audio. This HD Professional IRD also provides IP output, with 1\*MPTS & 8/32\*SPTS optional, and 1\*ASI+1\*ASI(backup) output and another 2\*ASI for pass through of input Tuner. This feature realizes its wide application in DTV contribution and distribution, and also for IPTV. Operators and users can find the right choice for their systems, no matter what application they are going to take part in.

Diagram



(1\*MPTS & 8\*SPTS output)



(1\*MPTS & 32\*SPTS Output)

Rear Panel



Options

	INGRON1301IH -S2	INGRON1301IH -D	INGRON1301IH -T2	INGRON1301IH -C	INGRON1301IH -A	INGRON1301IH -I
Tuner In Mode	DVB-S/S2	DMB-T	DVB-T/T2	DVB-C	ATSC-T	ISDB-T