BLONDER TONGUE LABORATORIES, INC.

IPAT

IP - ASI Transcoder
1x GbE ◄► 1x ASI

IPAT (IP ASI Transcoder) is a bi-direction IP ⟺ ASI transcoder that accepts MPEG2/4-encoded input streams in 1000Base-T Ethernet (GbE) and ASI formats simultaneously. GbE input is transcoded to ASI output while ASI input is transcoded to GbE output.

Two factory-installed optional modules (the **RF IN** and the **RF OUT**) allow input/output in QAM & 8VSB formats rendering the product suitable for a wider range of applications.

An integrated web server provides comprehensive GUI-based local and remote control/monitoring thru any standard Web browser via a front-panel 10/100BaseT interface.

Features

ASI Input/Output interface
- Supports Single or Multi Protocol Transport Services (SPTS or MPTS)
- Performs PCR (Program Clock Reference) correction
- Allows Null Packet insertion & deletion

GbE Input/Output interface
- Provides robust protection against IP network jitter and delay
- Performs PCR (Program Clock Reference) replacement
- Supports Uni- and Multi-cast thru RTP/UDP protocols
- Supports IPv4, ARP, IGMPv2, and ICMP protocols
- Supports variable and constant bitrates

Optional RF modules
- RF IN/OUT modules support both 8VSB and Annex A/B QAM modes
- RF IN module accepts 8VSB free-to-air & NTSC CATV standard channels 2-135
- RF OUT module provides NTSC CATV standard/sub-band channels 2-135/T7-T14
- RF OUT module provides output level of +40 dBmV

Ordering Information

Model	Stock #	Description
IPAT	6510	GbE-to-ASI and ASI-to-GbE transcoder
IPAT-RFO	6512	IPAT equipped with RF OUT module
IPAT-RFI	6514	IPAT equipped with RF IN module

Specifications

IPAT (Stock # 6510)

IP Input/Output Interface	
Connector:	1 x RJ45
Format:	Gigabit Ethernet (GbE)
Standard:	IEEE 802.3 10/100/1000Base-T Ethernet
Protocols:	IPv4, RTP/UDP, ARP, IGMPv2, ICMP
ASI Input/Output Interface	
Connector:	1 x BNC
Format:	DVB-ASI, 270 Mbps
Standard:	ETSI EN 50083-9

General

Dimensions (W x D x H):	19.0 x 18.125 x 1.75 inches (483 x 460 x 44 mm)
Power:	117 to 230 VAC/ 50 to 60 Hz (Fuse: 2.0 amp, 250 VDC, Slo Blo)
Power Dissipation:	Less than 40 W
Weight:	6 lbs (2.7 kg)
Operating Temperature:	32 to 122°F (0 to 50 °C)
Storage Temperature:	-13 to 158°F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35°C max, non-condensing
Storage Humidity:	0 to 95% RH @ 35°C max, non-condensing

Alarms/Monitoring/Control

Indicators:	Power (1x Green LED) IP/ASI Input/Output Status (2x Green LEDs) RF IN/RF OUT Module Status (2x Green LEDs)
Monitoring/Control:	GUI-based menu via Web browser Front-panel RJ-45 interface (10/100 Base-TX Ethernet)

RF IN Module (optional)

Connector In/Out:	"F" Female / BNC
INPUT	
8VSB:	ATSC Digital Television Standard A/53E
QAM:	ITU-T J.83 (64 and 256 QAM)
8VSB Mode	
Tuning Range:	UHF (NTSC Ch. 14-78), VHF (NTSC Ch. 2-13)
Symbol Rate:	10.762 Msymbols/sec
Bandwidth:	6 MHz
QAM Mode	
Tuning Range:	CATV (NTSC Ch. 2-135)
Symbol Rate:	5.3606 Msymbols/sec (QAM 256); 5.057 Msymbols/sec (QAM 64) – Auto Detect
Bandwidth:	6 MHz
Single Channel Power Level:	-32 to +45 dBmV
8VSB Power Level:	-20 to +30 dBmV
QAM Power Level:	-20 to +20 dBmV
Return Loss:	12 dB
Impedance:	75 Ω
OUTPUT	
Format:	DVB-ASI, 270 Mbps
Standard:	ETSI EN 50083-9

RF OUT Module (optional)

Connector In/Out:	BNC / "F" Female
INPUT	
Format:	DVB-ASI, 270 Mbps
Standard:	ETSI EN 50083-9
OUTPUT	
QAM Modulation Modes:	16, 32, 64, 128, 256, 512, and 1024
DVB Symbol Rate:	Variable; 1 to 10 MSymbols/sec (MBaud)
Frequency Range:	5.75 to 864 MHz
QAM Tuning:	Per NTSC ch. from 2 to 135 & T7 to T14 Per PAL ch. center-frequency (12.5 kHz increments)
RF Level:	+40 dBmV (100 dBµV)
RF Level LCD Screen Error:	± 2 dB
RF Level Adjustment Range:	30 to 40 dBmV
Frequency Tolerance:	± 0.5 kHz @ 77 °F (25 °C)
Frequency Stability:	± 5 kHz over 32 to 122 °F (0 to 50 °C)
Amplitude Flatness:	± 0.25 dB (over 6 MHz channel)
Phase Noise:	-98 dBc (@ 10 kHz)
Spurious:	-60 dBc
Broadband Noise:	-75 dBc (@ +40 dBmV output level, 4 MHz bandwidth)
Impedance:	75 Ω
Return Loss:	12 dB
Spectral Inversion:	Auto Recognition
Carrier Suppression:	55 dB
SNR:	Greater than 40 dB
MER:	Greater than 40 dB
I/Q Phase Error:	Less than 1 degree
I/Q Amplitude Imbalance:	Less than 1%

Related Products

Model	Description
DQMx	4x1 ASI or 8VSB/QAM-to-QAM Modulator; 1RU
AQM	1x1 ASI-to-QAM Modulator; Six modulators in 2RU