MUX-12A-IP (Multiplexer; 12:1 ASI-to-IP)

BLONDER TONGUE LABORATORIES, INC.

The Blonder Tongue MUX-12A-IP (Multiplexer; 12:1 ASI-to-IP) is designed for cherry-picking applications, allowing operators to create custom-made channel lineups by grooming standard and high-definition (SD/HD) programs on an as-needed basis.

The MUX-12A-IP accepts up to twelve inputs in ASI format, and multiplexes them into to one MPEG-2/H.264 multi-program transport stream, which is then encapsulated and assigned to a single IP address in 1000Base-T Ethernet (GbE) format suitable for distribution over Cat-5 networks.

An identical output transport stream is also available in ASI format. Each ASI input stream can contain up to 12 programs, for a total of 144 input programs. The GbE output (single IPv4 address) can contain up to 20 programs, groomed from any of the available 144 input programs, not to exceed 214 Mbps.

MUX-12A-IP (Multiplexer; 12:1 ASI-to-IP - Front and Rear Panels:
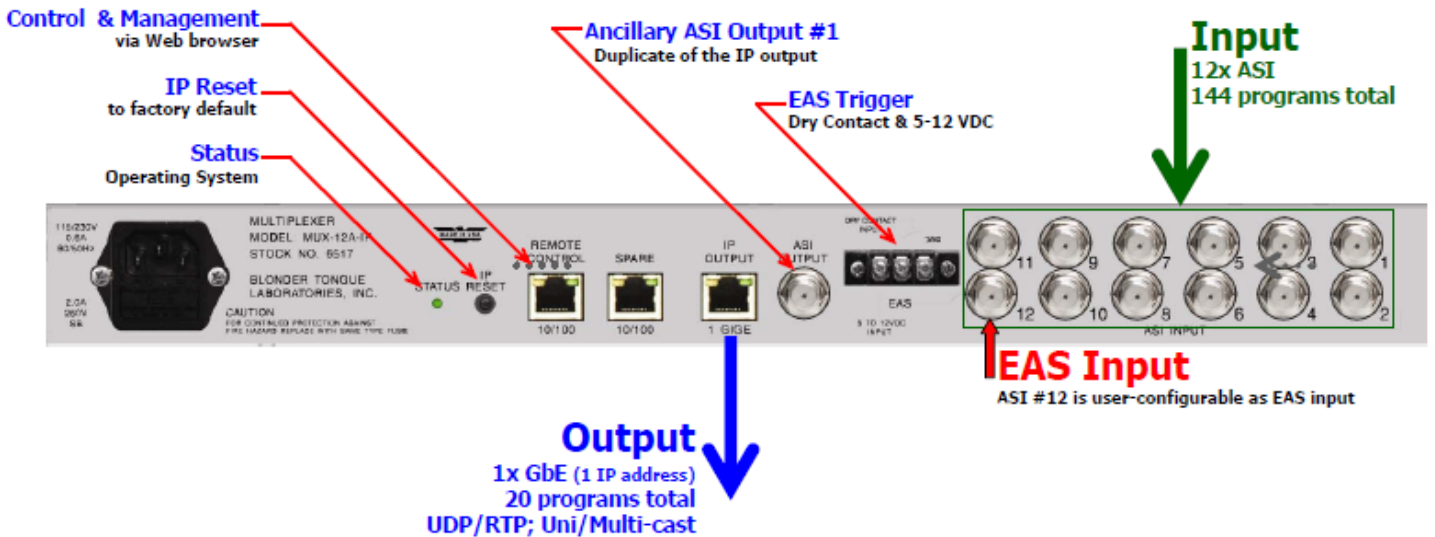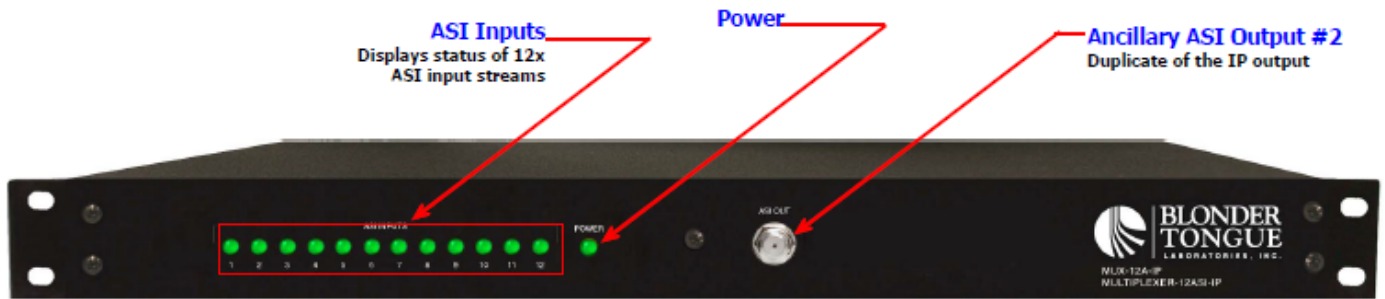
The multiplexer is EAS-compliant (Emergency Alert System) – operator can assign ASI port #12 as an EAS input which, when activated, will override the content of all other ASI inputs. Comprehensive remote monitoring and control is accomplished via a GUI-based interface using any standard Web.

Part#: MUX-12A-IP

Features:

ASI Input

- Supports 12 ASI inputs, each up to 270 Mbps
- Each ASI input can contain up to 12 programs
- Supports MPEG-2/H.264 Single or Multi Protocol Transport Services (SPTS or MPTS)
- ASI port #12 is user-selectable for EAS messaging
- Performs PCR (Program Clock Reference) correction
- Allows Null Packet insertion & deletion

Management

- Comprehensive remote GUI-based monitoring/control via front-panel 10/100Base-T Ethernet interface and any standard Web browser

GbE Output

- Supports up to 20 programs from the total of 144 input programs not to exceed 214 Mbps
- Provides robust protection against IP network jitter and delay
- Supports Uni- and Multi-cast through UDP/RTP protocols
- Supports IPv4, ARP, IGMPv2, and ICMP protocols
- Performs PCR replacement
- Supports variable and constant bitrates
- Provides a single IPv4 address & port

Specifications:

INPUT

Connectors	12 x BNC
Format:	DVB-ASI, 270 Mbps
Standard:	ETSI EN 50083-9

MULTIPLEXING PROFILE

No. of programs per input ASI:	12 Multi-program Transport Stream
No. of programs in GbE output:	20 MPTS max
No. of programs in QAM output:	24 MPTS max over 4 QAM channels (6 MPTS per QAM channel)
No. of PID per program:	6 per SPTS
Packet ID (PID) management:	User-defined editing/re-mapping is allowed
PAT (Program Association Table):	merged if present / created otherwise
PMT (Program Map Table):	merged if present / created otherwise
VCT (Virtual Channel Table):	merged if present / created otherwise
MGT (Management Table):	merged if present / created otherwise
Audio standards:	Dolby® AC3
Audio Services per program:	3 max

GENERAL

Dimensions (W x D x H) :	19.0 x 16.125 x 1.75 inches (483 x 410 x 44 mm)
Power:	117 to 230 VAC/50 to 60 Hz (Fuse: 2.0 amp, 250 VDC, SloBlo)
Power Dissipation:	Less than 40 W
Weight:	10 lbs (4.5 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

ARP	= Address Resolution Protocol
ICMP	= Internet Control Message Protocol
IGMP	= Internet Group Management Protocol
MPTS	= Multi-Protocol Transport Services
PCR	= Program Clock Reference
RTP	= Real-time Transport Protocol
SPTS	= Single-Protocol Transport Services
UDP	= User Datagram Protocol

Part#: MUX-12A-IP

OUTPUT

1000Base-T Ethernet (GbE)	
Connector:	1 x RJ45
Format:	Gigabit Ethernet (GbE)
Standard:	IEEE 802.3 10/100/1000Base-T Ethernet
UDP & UDP/TRP:	Supported and user-selectable

ASI	
Connector:	1 x BNC
Format:	DVB-ASI, 270 Mbps
Standard:	ETSI EN 50083-9

RF QAM	
Connector:	1x "F" Female (4x Adjoining RF QAM channels combined)
Modulation:	QAM 16, 32, 64, 128, and 256
Standard:	ITU-T J.83; Annex A and B
DVB Symbol Rate:	Variable; up to 7 MSymbol/sec (MBaud)
Frequency Range:	54 to 996 MHz
Tuning:	CATV Channel Selectable (CH. 2 to 157)
Channels' Bandwidth:	24 MHz (4x Adjacent 6 MHz)
RF Level:	+35 dBmV ±1 dB (95 dBµV ±1 dB)
RF Level Adjustment Range:	+30 to +37 dBmV, 1 dB increment
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:	-70 dBc (@ +35 dBmV output level, 5.5 MHz bandwidth)
Impedance:	75 Ω
Spectral Inversion:	Auto Recognition
Carrier Suppression:	45 dB
Return Loss:	14 dB typical
Signal-to-Noise Ratio (SNR):	40 dB typical
MER:	39 dB typical
I/Q Phase Error:	Less than 1 degree
I/Q Amplitude Imbalance:	Less than 1%

ALARMS / MONITORING / CONTROL

Indicators:	Power (1x Green LED) ASI Out Status (12x Green LEDs)
Remote Monitoring/Control:	GUI-based menu via Web browser Front-panel RJ45 interface (10/100 Base-TX Ethernet)