D2Mux™

5020 and 5021 HD/SD MPEG Multiplexer

D2D TECHNOLOGIES
TRANSFORMING DIGITAL VIDEO

The D2Mux is a cost effective HD/SD MPEG digital video multiplexer that transforms services from ASI and Gigabit Ethernet into a tailored transport stream ready for distribution over ASI, IP and SMPTE-310. Service components from any input can be used to create each output for true flexibility in building your own MPEG-2 or MPEG-4 services.

Once the new services are defined, the D2Mux faithfully handles all of the table processing to ensure a pristine output. With the D2Mux, you get essential control in a compact multiplexer for reliable contribution of live events, production and content delivery with distribution capability for broadcast, cable and IPTV.
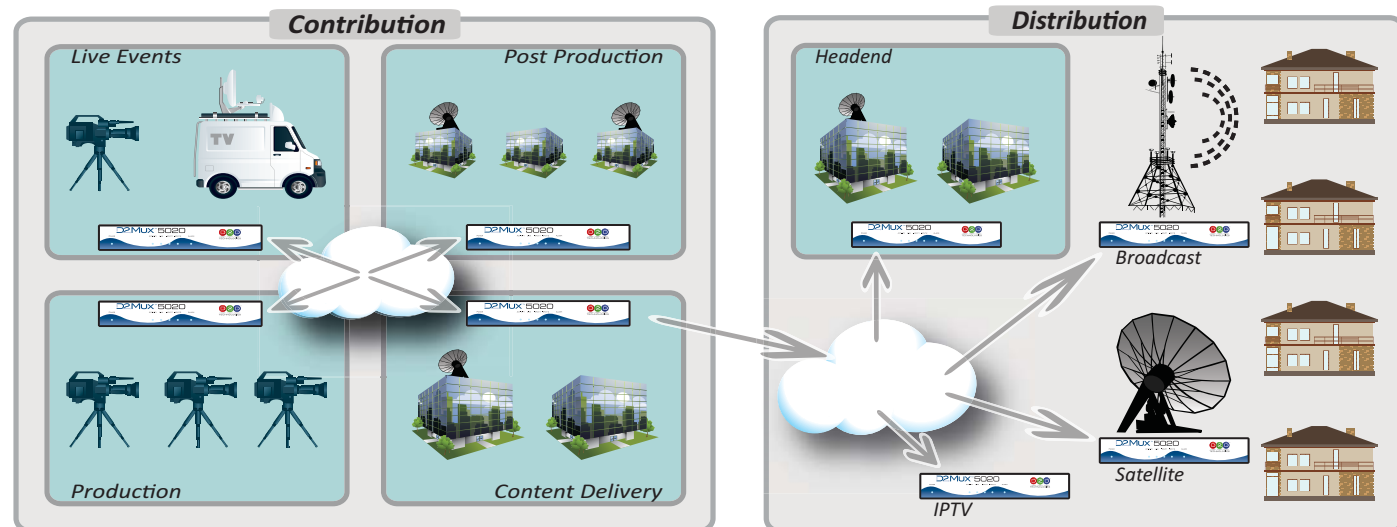
Key Benefits

Optimize Transport Bandwidth: Get the most out of your transport by creating a Multiple Program Transport Stream (MPTS) from all of the service inputs. Satisfy demanding bandwidth constraints by removing unwanted elementary streams like secondary audio or even drop complete programs.

Easily Rebrand Channels: Control the PSIP/SI branding of all your service channels with advanced ATSC table processing required for terrestrial broadcast.

Value you can count on: The D2Mux delivers a strong Return on Investment (ROI) in a compact multiplexer with proven reliability. In just minutes, you can create a custom multiplex ready for the most demanding contribution and distribution requirements.

Features

- PSIP table management, service filtering and remapping.
- Service aggregation and local program insertion.
- Transport Stream (TS) grooming and remultiplexing of any service received over ASI or Gigabit Ethernet.
- ASI to IP (TSoIP) conversion for transporting digital video content over IP networks.
- IP (TSoIP) to ASI conversion provides a full duplex network video gateway.
- Network jitter correction and adaptation for transport of MPEG TS over IP.

Applications

Contribution: Dynamically adjust services or easily load profiles to customize the ASI or IP feeds and multiplexing functionality for live events, live production, post production and content delivery playout.

Distribution: Easily aggregate services from many sources and local programming with service processing and preparation for transmission over satellite uplinks, terrestrial broadcast, cable and IPTV.

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Specifications

ASI Inputs

- Two ASI BNC female inputs, 75Ω
- 213 Mbps per input
- Receive MPTS and SPTS with service filtering

ASI Outputs

- Two independent ASI BNC outputs
- Output up to 213 Mbps constant bit rate
- Programmable unique MPTS or SPTS
- PCR regeneration

SMPTE 310 Output (Option)

- One SMPTE 310 BNC output at 19.39Mbps
- Programmable unique MPTS or SPTS
- PCR regeneration

Gigabit Ethernet (Option)

- One independent Gigabit Ethernet (GIGE), RJ45
- 10/100/1000Base-T auto-sensing
- Half and full duplex
- Maximum aggregate data rate: 400Mbps with up to 200 services.
- Input and output unique SPTS and MPTS
- IP/UDP and IP/UDP/RTP multicast or unicast Transmission (IGMP)
- PCR regeneration

Management

- Control over Ethernet 100BaseT, RJ45
- D2Mux Control application for MS Windows XP, 2003, 2008, Vista, and 7.

Interoperability

- Video Formats: Transport stream MPEG-2 SD/HD and MPEG-4 (AVC) SD/HD
- Audio Formats: MPEG-1 Layer II and Dolby AC-3 service type control

MPEG Processing

- Service and component PID filtering and remapping
- Advanced component/service/TS analysis and bit rate measurements
- Pass-through of scrambled services on TS level.
- Local and remote logs

PSIP Processing

- Pass-through and dynamic regeneration of PSIP tables.
- PSIP Tables Supported: PAT, PMT, CAT, SDT, NIT, EIT, ETT
- ATSC Tables Supported: MGT, VCT, STT, RTT, EIT, ETT

Multiplexing

- Service and component remapping (route any input to any output port)
- Each output (ASI, GIGE, SMPTE-310) is programmed uniquely
- PCR de-jittering and re-stamping
- PAT/PMT computation band insertion
- Synchronization of data and video
- Configurable packet format of 188 or 204 bytes per packet

Physical Characteristics

- Size: 1.75" high x 9.80" wide x 5.25" deep
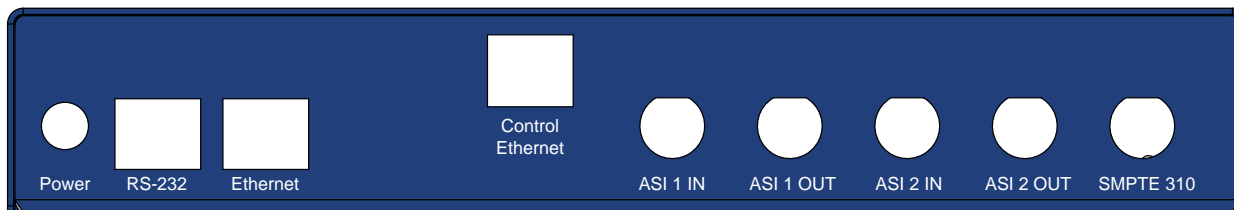- Power: 110V/220V, 50/60Hz. Single external power supply.

Environmental Conditions

- Convection cooled (no fans)
- Operating Temperature: 5˚C to +40˚C
- Storage Temperature: -5˚C to +45˚C
- Maximum Humidity: 90% (non-condensing)

Ordering Information

- D2Mux 5020: Multiplexer with 2 ASI inputs and 2 ASI outputs
- D2Mux 5020i: Multiplexer with 2 ASI inputs, 2 ASI outputs and GIGE.
- D2Mux 5021: Multiplexer with 2 ASI inputs, 2 ASI outputs and 1 SMPTE 310 output
- D2Mux 5021i: Multiplexer with 2 ASI inputs, 2 ASI outputs, 1 SMPTE 310 output and GIGE

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| Power | RS-232 | Ethernet | Control Ethernet | ASI 1 IN | ASI 1 OUT | ASI 2 IN | ASI 2 OUT | SMPTE 310 |