

The D2Flex OG-5220 for openGear® is a broadcast quality full duplex IP/ASI multiplexing gateway that can send or receive multiple services over IP with any ASI or network source. Transmission of high quality video with low latency across the public internet is supported with the Secure Reliable Transport (SRT) protocol.

Broadcasters and video professionals can optionally insert emergency alerts (EAS) or add a dynamic PSIP electronic program guide (EPG) with local channel branding into a reliable MPEG transport stream. The D2Flex OG-5220 is an essential building block of any distributed transmission system where value, security and reliability are needed.

## **Applications**

**Public Internet Transmission:** Leverage the power of a Secure Reliable Transport (SRT) to deliver broadcast quality video with low latency across the public internet.

**Regionalization:** Regionalize at head-ends and transmitter sites with advanced channel branding and dynamic PSIP insertion.

**Emergency Alert Insertion:** Maintain FCC compliance with essential EAS insertion in any of your broadcast channels.

## **Key Benefits**

**Internet Streaming with SRT:** The D2Flex features the standard Secure Reliable Transport (SRT) that provides end to end security and optimized streaming performance across unpredictable networks for the best quality video possible. The integrity and quality of the video is maintained by accounting for packet loss, latency, jitter and dynamically adjusting for bandwidth between each endpoint. Now you can reliably deliver low latency video over any network including the public internet.

**Easily Rebrand Channels with EPG:** Set the major and minor channel numbers on each output stream and pass through or regenerate the necessary PSIP tables. The optional D2Guide can insert an Electronic Program Guide (EPG) from services like Titan TV and Gracenote (TMS) or from a spreadsheet with programming for the next several weeks so your customers can find the programs they want.

**Emergency Alert (EAS) Compliance:** The D2Alert option is the answer for inserting a signal from the Emergency Alert System (EAS) into all of the programs of your ATSC digital transport stream. D2Alert constantly monitors the EAS signal and when a valid alert is found, it is automatically inserted into all of the configured programs until the alert is complete. Rest assured that with D2Alert, you can comply with FCC requirements and quickly inform your viewers in the event of an emergency.

## **Features**

- Reliable public internet transmission of broadcast video with the Secure Reliable Transport (SRT) protocol.
- IP encapsulation of up to 8 independent output streams on a Gigabit Ethernet link.
- Secure AES 128/256 bit encryption between each endpoint, critical for public internet transmission.
- ASI to IP (TSolP) conversion for transporting digital video content over IP networks.
- IP (TSolP) to ASI conversion provides a full duplex network video gateway.
- Network jitter correction and adaptation for transport of MPEG TSolP.
- Configurable PSIP/SI major and minor channel numbers.
- Automatic failover switch between primary and configurable backup transport streams.
- Optional D2Alert for insertion of EAS Emergency Alerts in your digital channels.
- Optional D2Guide for dynamic PSIP guide generation from Titan TV, Gracenote (TMS) or a spreadsheet.
- openGear 3.0 compatible with up to 10 cards in a 2RU frame.

## Specifications

### ASI Inputs

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

### ASI Outputs

- Two ASI outputs, 75Ω  
Output up to 213 Mbps constant bit rate
- Programmable unique MPTS or SPTS
- PCR regeneration

### Gigabit Ethernet (TSoIP)

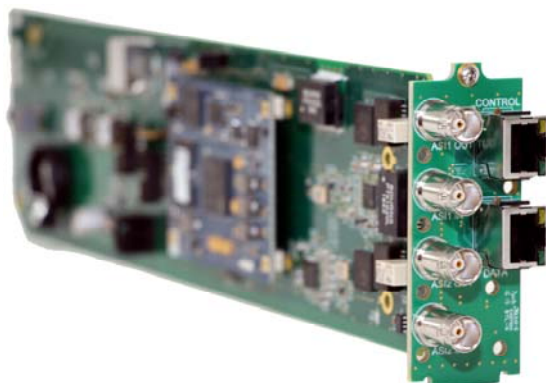
- Two independent Gigabit Ethernet (GigE)
- 10/100/1000Base-T auto-sensing
- Half and full duplex

### 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

### Management

- Control over Ethernet, RJ45
- D2Flex Control browser interface
- SNMP remote monitoring with configurable traps



### Payload Processing

- Forward Error Correction (FEC) compliant to SMPTE 2022-1/2
- Maximum aggregate data rate: 64Mbps with up to 8 services
- Multicast: IGMP v1, IGMP v2, IP/UDP and IP/UDP/RTP multicast or unicast.
- Configurable packet format of 188 or 204 bytes per packet

### Secure Reliable Transport (SRT)

- Protocols: TS over SRT (UDP)
- Encryption: Advanced Encryption Standard AES-128, AES-256.
- Modes: Source (Caller), Destination (Listener) or Rendezvous.

### Table Processing

- Advanced component/service/TS analysis and bit rate measurements
- MPEG/PSI Tables: PAT, PMT, CAT
- ATSC/PSIP Tables: MGT, VCT, STT, RTT, EIT, ETT
- DVB/SI Tables: NIT, SDT, TDT, EIT

### PSIP Processing

- Pass-through and dynamic regeneration of PSIP tables.
- EPG Guide Services (D2Guide Option):
  - Titan TV MediaStar PSIP Data Service
  - Gracenote (TMS)
  - Spreadsheet



### openGear®

- Compatibility: openGear, openGear 3.0
- Capacity: 10 cards in a 2RU frame

### Environmental Conditions

- Operating Temperature: 5°C to +40°C
- Storage Temperature: -5°C to +45°C
- Relative Humidity: 10 to 90% (non-condensing)

### Ordering Information

- D2Flex OG-5221: Gateway with 1 input and output stream, 2 ASI input and 2 ASI output
- D2Flex OG-5224: Gateway with 4 input and output streams, 2 ASI input and 2 ASI output
- D2Flex OG-5228: Gateway with 8 input and output streams, 2 ASI input and 2 ASI output
- D2Alert: Optional D2Alert for insertion of Emergency Alert System in transport stream.
- D2Guide: Optional D2Guide dynamic PSIP Guide generation from Titan TV, Gracenote or spreadsheet.

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