MX5600 Series Multiplexers

At the heart of most systems is a good, reliable multiplexer that delivers performance, flexibility and expandability. With video piracy a concern, there is also a need for a reliable scrambling system that is integrated with leading scrambling suppliers. As systems get more complex, a user-friendly method to configure, monitor and control the system is required.

The MX5600 series video, audio and data multiplexers are ideal for mission-critical applications. The powerful stream processing and Reflex™ statistical multiplexing makes them the flexible heart of any MPEG based broadcast system. The MX5600 range of multiplexers are suited for a wide range of multiplexing and re-multiplexing applications - including primary multiplexing in headends for DTH satellite, cable and terrestrial, contribution systems and re-multiplexing applications in cable and terrestrial regional headends. A wide range of options and integration with TANDBERG Television's nCompass Control makes the MX5600 the ideal choice for any MPEG based broadcast system.

PRODUCT OVERVIEW

Efficient Transport Stream Construct

With the combination of Reflex™ statistical multiplexing, video bitrate changing, opportunistic data and advanced multiplexing technology the MX5600 maximises the usage of available bitrates.

Modular Architecture

The modular architecture combined with a wide range of available options, ensures that MX5600 range of multiplexers are ideal for any application that requires reliable and resilient performance and scalability as the system grows.

Full Integration with nCompass Control

The MX5600 range of multiplexers are fully integrated with TANDBERG Television's nCompass Control system to provide easy configuration, monitoring, backup and redundancy architecture.

BASE UNIT FEATURES

M2/MUX/MX5620 and M2/MUX/MX5640

- MX5620 model – 2RU, 4 option slots
- MX5640 model – 4RU, 12 option slots
- 3 DVB ASI copper outputs
- Output rate up to 100 Mbit/s
- Highly efficient multiplexing algorithms
- Advanced remultiplexing
- Reflex™ statistical multiplexing
- Control via TANDBERG nCompass Control
- SNMP remote monitoring

HARDWARE OPTIONS

DVB ASI Input Card (M2/MUX/4ASI-IN-1)

- Provides for input of transport streams for re-multiplexing
- Up to 100 Mbit/s MPTS and SPTS
- 4 inputs per card
- PSI/SI monitoring and processing

DVB Simulcrypt Conditional Access (M2/MUX/DVBCA)

- Provides fully compliant internal DVB scrambling solution
- DVB Simulcrypt and OpenCAS interfaces

BISS (M2/MUX/BISS)

- Up to 32 different BISS keys to be used within any single stream, thus allowing scrambling of different services with different keys

Video Bitrate Changing (M2/MUX/BRC)

- Allows the bitrate of re-multiplexed video services to be groomed
- Separate datasheet available

Opportunistic Data (M2/MUX/OPP-DATA)

- Allows IP encapsulated data to be inserted into spare output capacity
- SMPTE 325 flow control interfacing

Ethernet Data Insertion (M2/MUX/EDI)

- Allows packetization and insertion of various data formats
- Support for both streamed and internally carouseled data

DVB SFN Adaptation (M2/MUX/SFN)

- Provides internal framing and synchronization required for DVB SFN terrestrial networks
- Includes GPS receiver 1pps and 10 MHz interface option card

DVB ASI Optical Interface (M2/MUX/ASI-OPT)

- Allows output of transport streams in DVB ASI optical format
- 2 outputs per option card

DVB SPI Interface (M2/MUX/SPI-OUT)

- Allows output of transport streams on DVB SPI format
- 3 outputs per option card

SMPTE 310 Interface (M2/MUX/SMPTE)

- Allows output of transport streams in DVB ASI optical format
- 2 outputs per option card

GPS (M2/MUX/GPS)

- Allows synchronization to external GPS clock references
- Allows synchronization of other studio equipment deriving clock references from GPS receivers

SPI-IN (M2/MUX/SPI-IN)

- Provides simple mechanism for interfacing transport streams
- Two channels for conversion of DVB SPI input signals to DVB ASI outputs

Return Channel Satellite (M2/MUX/RCS)

- Carries the forward link signaling and interaction paths
- Play out of RCS SI tables

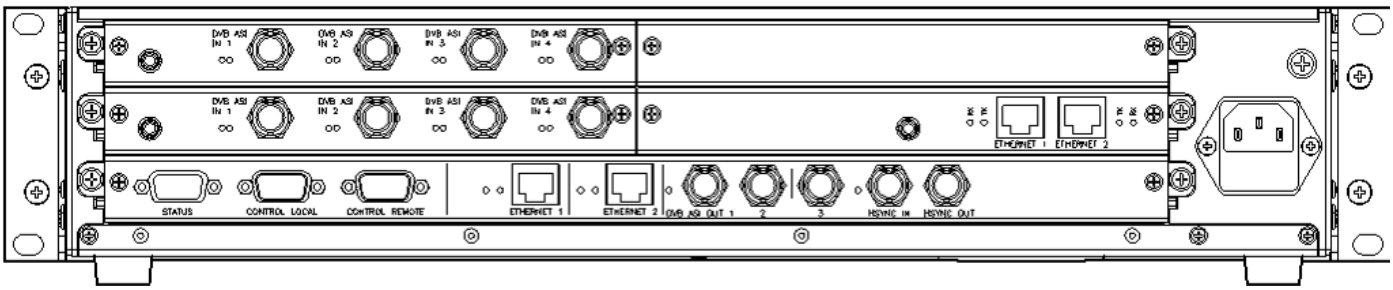
Reed-Solomon FEC (M2/MUX/RSFEC)

- Implements spectral scrambling, Reed-Solomon encoding and interleaving
- Provides two DVB compliant ASI copper transport stream outputs

Remote Boot (M2/MUX/REMBOT)

- Allows the multiplexer to be remotely booted

SAMPLE CONFIGURATION



SPECIFICATIONS

Inputs

MPTS and SPTS Transport Stream Input Options up to 100 Mbit/s

DVB ASI copper (4 per card)

DVB SPI (ASI loop through 2 per card)

Reference Inputs

Internal high specification 27 MHz timing clock reference

External analog video clock reference

GPS Input (10 MHz and 1 Hz from a GPS receiver)

Outputs

Transport Stream Output

1 to 100 Mbit/s

DVB ASI copper (3 as standard)

DVB ASI optical (2 per option card)

DVB SPI (3 per option card)

SMPTE 310 (2 per option card)

Multiplexing

Up to 8191 streams

Full PID remapping

Input PID tracking

Internal over bit-rate protection

High output stream utilization

Control

Control and set-up via TANDBERG nCompass Control

Front panel interface for monitoring and basic set-up

Physical and Power

Dimensions (W x D x H)

MX5620: 440 x 543 x 89mm (17.5” x 21.5” x 2RU)

MX5640: 440 x 543 x 177mm (17.5” x 21.5” x 4RU)

Approximate Weight

MX5620: 10Kg (22lb)
MX5640: 20Kg (44lb)

Power Input

AC wide ranging 100 -120 Vac or 220 -240 Vac 50 – 60 Hz nominal

-40 Vdc to –57 Vdc (option)

Cooling

Fan assisted, front and side vented

Power Consumption

MX5620: 250W nominal
MX5640: 400W nominal

Environmental Conditions

Operating Temperature

0°C to +40°C (32°F to 104°F)

Relative Humidity

5 – 90%