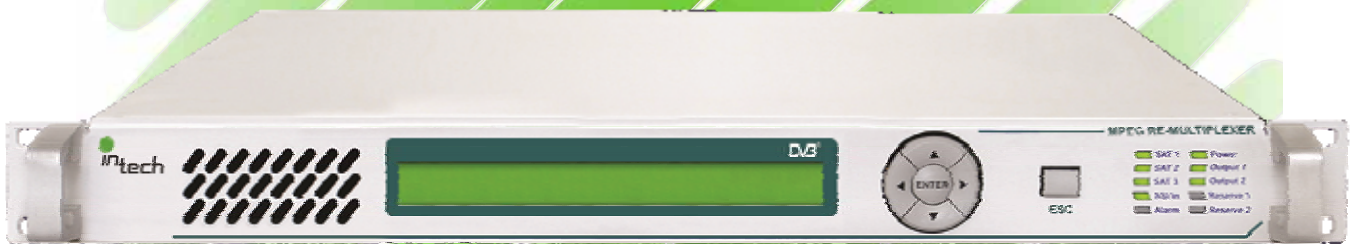# INT-RMX

PROFESSIONAL MPEG REMULTIPLEXER

Key Features

- *Up to two independent multiplexed outputs.*
- *Full analysis and statistics extraction of input streams.*
- *Component as well as service layer multiplexing.*
- *BISS decoding without any limitation in the number of encrypted components.*
- *Automatic PID remapping.*
- *Supporting NIT, SDT, TDT and TOT tables.*
- *Supporting up to 200Mb/s bit rate for each multiplexed output.*
- *Supporting up to 8191 PIDs in each multiplexed output.*
- *Supporting DVB-T/T2/S/S2 RF inputs with superior tuning sensitivity.*
- *Equipped with cable equalizer for ASI inputs and cable driver for ASI outputs.*
- *Remote control and monitoring through IP protocols including HTTP and SNMP.*
- *Software upgrade through IP network and USB port.*
- *Equipped with redundant power supply.*

General information

INT-RMX is an innovative, feature rich re-multiplexer suited to a wide range of re-multiplexing applications including cable and terrestrial regional head-ends and telecom distribution systems. Compactness and efficiency along with high level of flexibility and reliability are considered as main attributes of this product.
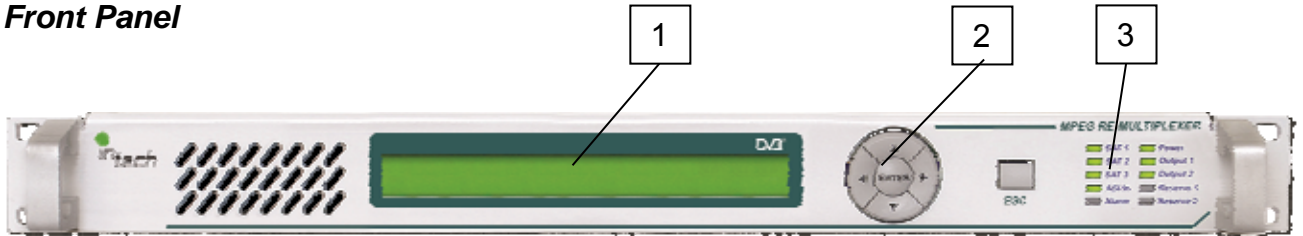
This re-multiplexer is equipped with a variety of inputs that ensure compatibility with all transmission media. It generally receives up to eight transport streams through its RF interface or external ASI inputs. All the input streams are thoroughly analysed and a list of available services is constructed for the user. Thanks to the existence of two independent multiplexing cores the user will be able to generate two dissimilar transport streams by recombining existing input sources.

INT-RMX is capable to perform component layer as well as service layer multiplexing. This ability makes it a distinctive re-multiplexer in comparison with similar products available in the market. Another noteworthy feature of this product is the ability to perform BISS decryption as the most widely used encryption algorithm.

A unique feature of INT-RMX is the smart switch mechanism. The locally multiplexed TS and a reserve TS, fed to the device externally, are inputs of this switch. The reserve TS has actually the same content as multiplexed signal but is provided from a different distribution network. The smart switch continuously analyses theses inputs for detection of any errors defined by TR101290 and dynamically puts the signal with fewer errors to the output. This feature significantly increases distribution chain resiliency by intelligently managing redundant streams.

Integrating extensive capabilities in a single enclosure and taking full advantages of IP technology as a means of remote control has made this product a comprehensive and economic re-multiplexing solution suitable for large broadcasting networks.
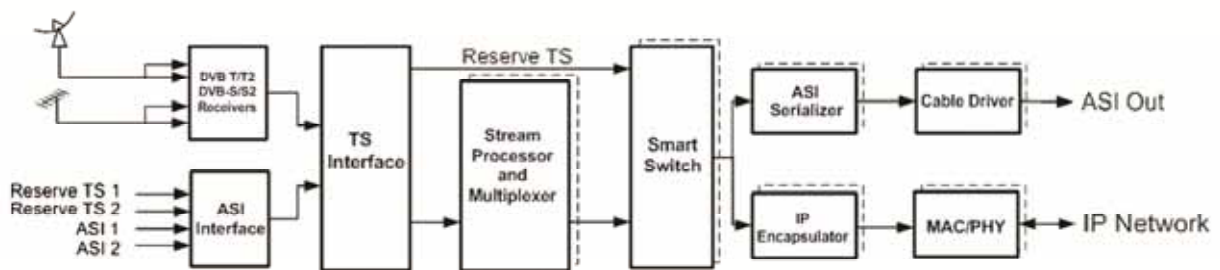
Front Panel

1 – LCD Display: Two-row LCD Display
2 – Control keys
3 – LED Indicators

Rear Panel

1 – AC Mains: Power supply input and on/off button with 2A fuse, input range 85-264 VAC
2 – LAN Connector: WEB Interface for LAN connection
3 – Dual USB port for PC and peripherals connection
4 – RS232 serial port
5 – Input connectors
6 – ASI output connectors

INT-RMX Block Diagram

Technical Specifications:

Terrestrial Input Interface:

- Connector: 1x F-Type, 75 Ohm
- Input Level: -92 dBm ÷ -5 dBm
- Frequency Range: 50MHz – 1GHz
- Supported DVB-T Modes:
  - Bandwidth: 6, 7,8 MHz
  - FFT Size: 2K, 8K
  - Guard Interval: 1/32, 1/16, 1/8, 1/4
  - Constellation: QPSK, 16QAM, 64 QAM
  - Code Rate: 1/2, 2/3, 3/4, 5/6, 7/8
- Supported DVB-T2 Modes:
  - Bandwidth: 1.7, 5, 6, 7,8 MHz
  - FFT Size: 1K, 2K, 4K, 8K, 16K, 32K (including extended modes)
  - Guard Interval: 1/32, 1/16, 1/8, 1/4, 1/128, 19/128, 19/256
  - Constellation: QPSK, 16QAM, 64 QAM, 256QAM
  - Code Rate: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6

Satellite Input Interface:

- Connector: 3x F-Type, 75 Ohm
- Input Level: -70 dBm ÷ -25 dBm
- Frequency Range: 950MHz – 2.15GHz
- LNB Power: 13V, 18V or off, 22 kHz on/off
- Supported DVB-S Modes:
  - Symbol Rate: 1 Msym/s to 45 Msym/s
  - FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- Supported DVB-S2 Modes:
  - Symbol Rate: 5 Msym/s to 60 Msym/s
  - FEC (QPSK):   1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
  - FEC (8PSK):   3/5, 2/3, 3/4, 5/6, 8/9, 9/10
  - FEC (16APSK):   2/3, 3/4, 4/5, 5/6, 8/9, 9/10

Decryption

- BISS: Modes 1 and E

Outputs

- DVB-ASI
  - Connector: 2x BNC 75 Ohm
  - ASI Standard: EN50083-9
- TSOIP
  - Connection Port: 2x Gigabit Ethernet outputs, 100/1000 auto-sensing
  - TSOIP Standards: Complying ETSI TS102034 and SMPTE 2022-n family

Control

- Local User Interface: Character LCD and keypad
- Remote Connection Port: 2 x RJ45 (10/100 Base-T)
- Remote User Interface: WEB, SNMP v1/v2/v3

Power Requirement

- Operating Voltage: 110 VAC / 240 VAC
- Power Consumption: 15W max

Physical Dimensions and Weight

- Weight: 6 kg
- Dimensions (H x W x D): 48 cm x 4.4 cm x 50 cm (Width: 19 in, Height: 1RU)

Environmental Conditions

- Operating Temperature: 0 ÷ + 50 °C
- Storage Temperature: -25 ÷ +55 °C
- Relative Humidity: 5% to 95% (Non-condensing)

Compliance

- EMC Compliance:
  - EN55022, EN61000-3-2, EN61000-3-3, EN55024, CISPR22, FCC CFR47 Part 15B Class A
- Safety Compliance:
  - EN60950-1, IEC60950-1, UL60950-1

How to Order (others version on request)**:**

INT-RMX-XXXX – number of S/S2 inputs, number of T/T2 inputs, number of ASI inputs, number of ASI outputs, Smart Switch Availability

MPEG REMULTIPLEXER