# MPEG Re-Multiplexer Series

## FNJ-RMX-04


**Version 1**

**Summer 2020**

# Description

FNJ-RMX is an innovative, feature rich MPEG-TS Re-multiplexer for broadcast applications. This modular re-multiplexer is equipped with a variety of inputs that ensure compatibility with all transmission media. Typically it consists of RF cards for DVB-T/T2 and DVB-S/S2 signal reception. It generally receives up to eight transport streams through its RF interfaces or external ASI inputs. All the input streams are thoroughly analyzed 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 independent transport streams by re-multiplexing of TS services.

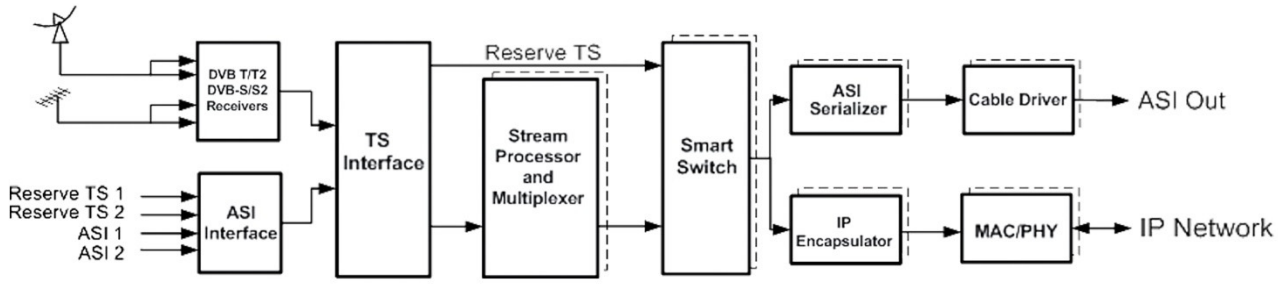
FNJ-RMX is capable to perform component level multiplexing. Component re-multiplexing makes it a distinctive re-multiplexer in comparison with similar products available in the market. Another noteworthy feature is the ability to perform BISS decryption of encrypted services.

FNJ-RMX has a smart switch mechanism. The locally multiplexed TS and a reserve TS signal, are inputs of switch. The reserve TS has the same content as multiplexed signal but is provided from a different distribution network. The smart switch continuously analyzes its inputs for detection of errors, defined by TR101290 and dynamically outputs the signal with fewer errors. Monitoring and control could be done either locally or remotely via Web.

# Features

- Modular design
- Two independent multiplex cores
- TS analysis module for all inputs
- BISS-1 decoding
- Component and service level multiplexing
- Automatic PID remapping
- Supporting EIT, NIT, SDT, TDT and TOT tables
- Supporting DiseqC standard
- Supporting up to 150 Mb/s bit rate for each multiplexed output
- Supporting DVB-T/T2/S/S2 RF inputs
- Equipped with cable driver for ASI outputs
- Remote control and monitoring through IP network
- Software upgrade through IP network and USB port
- Equipped with redundant power supply

## Block Diagram




## Technical Descriptions

### ➢ Back Panel

### ➢ Technical Specifications

- **Input**
  - **Terrestrial**

| | | |
|---|---|---|
| Connector | | 2x F-Type, 75 Ohm (up to 4) |
| Input Level | | -92dBm ~ -25dBm |
| Frequency Range | | 50MHz ~ 1GHz |
| Supported DVB-T Modes: | | |
| | Bandwidth | 6, 7, 8MHz |
| | FFT size | 2K, 8K |
| | Guard Interval | 1/32, 1/16, 1/8, 1/4 |
| | Constellation | QPSK, 16QAM, 64QAM |
| | Code Rate | 1/2, 2/3, 3/4, 5/6, 7/8 |
| Supported DVB-T2 Modes: | | |
| | Bandwidth | 1.7, 5, 6, 7, 8MHz |
| | 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, 64QAM, 256QAM |
| | Code Rate | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 |

### Satellite

| | | |
|---|---|---|
| Connector | | 2x F-Type, 75 Ohm (up to 4) |
| Input Level | | -70dBm ~ -25dBm |
| Frequency Range | | 950MHz ~ 2.15GHz |
| LNB Power | | 13V, 18V or off, 22 kHz on/off |
| Supported DVB-S Modes: | | |
| | Symbol Rate | 1Msym/s to 45Msym/s |
| | FEC | 1/2, 2/3, 3/4, 5/6, 7/8 |
| Supported DVB-S2/S2X Modes: | | |
| | Symbol Rate | 1Msym/s to 60Msym/s (40Msym/s in 32 APSK) |
| | 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 (8 PSK) | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 |
| | FEC (16 APSK) | 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 |
| | FEC (32 APSK) | 3/4, 4/5, 5/6, 8/9, 9/10 |

## Output

| | |
|---|---|
| DVB-ASI: | |
| Connector | 2x BNC 75 Ohm |
| ASI Standard | EN50083-9 |
| TSOIP: | |
| Connection Port | 1x Gigabit Ethernet outputs, 10/100/1000 auto-sensing |
| TSOIP Standards | Complying ETSI TS102034 and SMPTE 2022-n family |

## Control & Monitoring

| | |
|---|---|
| Local User Interface | Character LCD and keypad |
| Remote Connection Port | 1x RJ45 (10/100 Base-T) |
| Remote User Interface | WEB, SNMP v1/v2/v3 |

## Physical

### Power Requirement

| | |
|---|---|
| Operating Voltage | 85~264VAC |
| Power Consumption | 15W max |

### Dimension & Weight

| | |
|---|---|
| Weight | 4 kg |
| Dimensions (W x H x D) | 48 cm x 4.4 cm x 35 cm (Width: 19 in, Height: 1RU) |

### Environmental

| | |
|---|---|
| Operating Temperature | -5 ~ +55 °C |
| Storage Temperature | -25 ~ +55 °C |
| Relative Humidity | 95% (Non-condensing) |

### Compliance

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

## ➢ Ordering

**FNJ– RMX– W– X X X X X**

1 2 3 4 5 6

**1: Product Version**

**04**=Slot Remux

**2: Slot 1 Input**

**0**=Blank
**1**= Up to 2 Input T/T2
**2**= Up to 2 Input S/S2
**3**= Up to 1 Input T / Up to 1 Input S
**4**= Up to 4 Input ASI

**3: Slot 2 Input**

**0**=Blank
**1**= Up to 2 Input T/T2
**2**= Up to 2 Input S/S2
**3**= Up to 1 Input T / Up to 1 Input S
**4**= Up to 4 Input ASI

**4:TSoIP Output**

**A**= Available TSoIP Outputs
**N**= Not Available TSoIP Outputs

**5:ASI Output**

No. of ASI Outputs (0~4)

**6: Smart Switch**

A= Available Smart Switch
**N**= Not Available Smart Switch

For Example: **FNJ-RMX-04-22N1A**

## Contact Information



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