

IP Multiplexing & Scrambling Solution

MS3100 Series

- **Modular MUX and Scrambler**
- **1GE port input supports 256 IP input and network de-jittering**
- **1GE port output UDP**
- **Up to 24 output and multiplexing channel per RU**
- **DVB scrambling and simulcrypt standards**
- **PSI/SI inserting and editing**
- **Web GUI and front panel**
- **Universal management through craft interface**



ACT MS3100 series IP Mux-Scrambler is the high density, full featured multiplexing and scrambling device with high integration functionality. The modular design provides flexibility for the operator to expand the network as system scales.

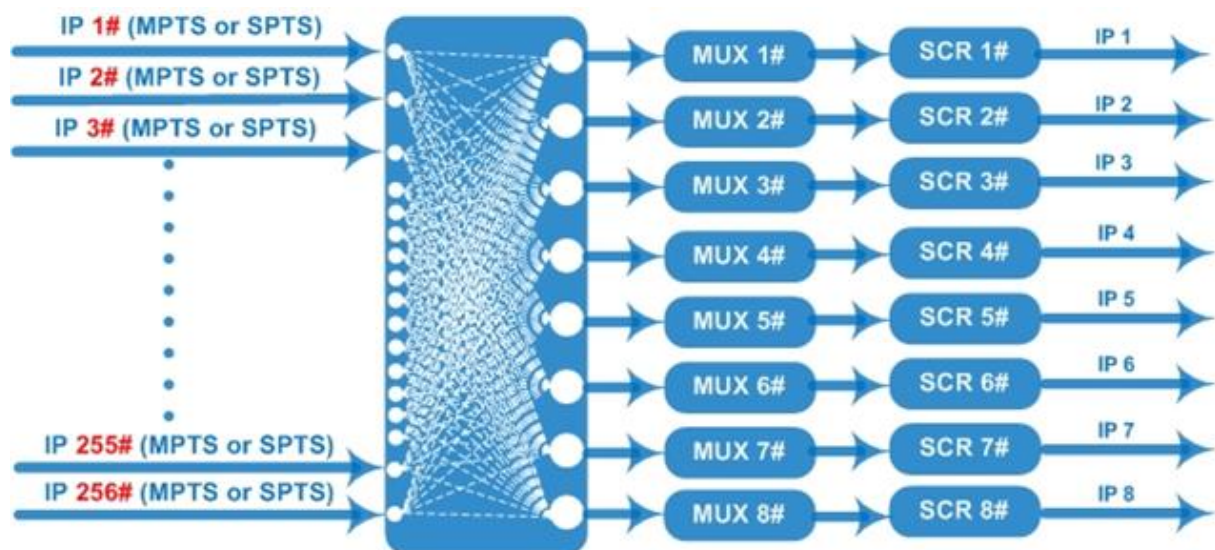
The MS3100 series fits into one standard 19" rack unit (RU), which can host up to 3 application modules. Each module card can receive the UDP format TS through GE port and supports up to 256 different IP address. It integrates 8 multiplexers and 8 scramblers, which can output UDP format TS through the GE port. The 1RU unit can support 24 channels multiplexing and scrambling with fully loaded 3 modular cards.

MS3100 can be deployed in variety of digital distribution systems. It enables an all-IP headend architecture, and provides a more scalable and lower-cost transition to IP-based services. It has intuitive front panel LCD display to make operator's life easier. MS3100 is packaged in a self-contained 19" sub-rack of 1 RU with universal mains power supply and SNMP management.

Key Features

- Module design, 1RU case can support maximum three application modules
- Fully supports DVB general scrambling system, the ETR289, and simulcrypt standards-- ETSI 101 197 and ETSI 103 197
- 1 GE port input support maximum 256 IP input and network de-jittering
- 1 GE port output, support UDP protocol, unicast, multi-cast and IGMP V2/V3
- Maximum bit-rate of single IP input 108Mbps; total input bit-rate 840Mbps
- Supports maximum 8 output and multiplexing channels per module
- Supports any input channel to any output channel multiplexing with 180 PID mapping of each channel
- Supports PCR accurate adjustment
- Supports PSI/SI inserting and editing
- Supports 8 channel scrambling, and each scrambling channel can simultaneously support 4 simulcrypt CA
- Redundancy Power Supply
- Supports NMS operation

Application Diagram



Specifications

Input	Interface	2 GE inputs, RJ45 or SFP interface, hot backup
	Transport Protocol	TS over UDP, Unicast and Multicast, IGMP V2/V3
	Transmission Bit-rate	Max 108Mbps of each channel Max 840Mbps of all channels
Multiplexing	Input channel	256 channels of IP
	Output channel	8
	Maximum PID	180 per channel
	Function	PID re-mapping (automatically or manually)
		PCR accurate adjusting Generate PSI/SI table automatically
Scrambling parameters	Maximum simulcrypt CA	4
	Standard	ETSI 101 197, ETSI 103 197
	Connection mode	Local/ remote connection
IP output	Interface	2 GE output, RJ45 or SFP interface
	Format	TS over UDP
	Code rate	1-64Mbps of each channel
System	Supports NMS	
General	Dimension(WxLxH)	630mm×440mm×44.5mm
	Weight	9 kgs
	Temperature	0~45℃(working), -20~80℃(storage)
	Power supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz
	Power consumption	15.4W

Ordering Information

Model	Description
MS-31-00-Mux-SCM-AC2	MS3100 IP Mux-Scrambler chassis, supports up to 3 MS3108 module cards, up to 24 channels multiplexing and scrambling, Dual AC Power
MS-31-08-Mux-SCM	MS3108 module cards, up to 8 channels multiplexing and scrambling per card

Note: Contact ACT for additional product variations on input & output options

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