RM900 IP Matrix

RM900

The RM900 IP Stream Matrix is a broadcast-level professional equipment independently developed by Realmagic,based on years of experience in video and audio development, which is applied to large-scale IP stream signal routing and intelligent switching function of TV stations, network companies,etc.It has abundant input and output options, comprehensive switching mode, super switching ability, complete security management mechanism and so on.

RM900 supports fast and seamless manual switching and automatic switching between multi-input and multi-output (TS over UDP/TS over HTTP/FLV over RTMP/NDI and other protocols), and supports TS stream program automatic analysis and wizard program adding mode.Supports TS stream synchronization header detection, continuous count detection, and automatic switching based on scheduling.

The RM900 supports 1+1 and N+M backup at the devices level.

Features & Benefits

- Up to 2048 input and 2048 output
- Completely seamless smooth switching without triggering the monitoring system alarm
- Supports automatic, manual, and schedule switch modes
- Users can customize the number of input and output matrix routes
- A single device supports a maximum of 2048 input streams and 2048 output streams
- Support x in 1 out, each output can choose any one of 2048 inputs as the main input source, and choose any other two as the backup input source.When the main input source turns into invalid, the system seamlessly switches to the backup input source.When the main input source recovers, it seamlessly switches back to the main input source
- Support 1 in x out, a single real-time stream can be distribute to a maximum of 2048 different destination addresses

Specifications

Inputs and Outputs:

- Network Interfaces:Up to 16 Gigabit Ethernet ports
- The network ports support bypass.Input/output can be specified upon the power-off

- Supports multiple input protocols: TS over UDP/TS over HTTP/FLV over RTMP/ RTSP;Supports the NDI FULL protocol
- Supports multiple output protocols: TS over UDP/TS over HTTP/FLV over RTMP/ RTSP;Supports the NDI FULL protocol
- Supports multiple encode formats: MPEG2/ h.264/h.265/AVS/AVS+/AVS2
- Other input and output protocols can be flexibly expanded as required
- Supports PID detection and TR101 290 detection of input

Switch Modes:

- Supports automatic, manual, and schedule switch modes for each output
- Supports arbitrary and quick manual switch with a visualized 2048x2048 dot matrix
- Support the full display of the main and backup programs status of each channel, and quickly switch the main and backup settings based on the dot matrix interface
- Each output supports automatic switch of the main,backup and 3rd streams. The switch strategy can be customized
- Each output supports scheduled switch and play-out based on customized program schedule
- Scheduled routing supports 3x1 switch.

Switch Abilities:

- Use the GOP boundary as the stream switch timing to achieve the seamless switch completely.
- During the stream switch, PCR and PTS remained smooth.The continuous count is kept correct.
- Support PID remain or automatic mapping, the output PID can be maintained during the stream switch.
- Support scheduled routing: The switch time is accurate to the GOP unit time
- Low latency: The minimum routing delay is one GOP unit time

Security&Management

- Highly integrated alarm display, centralized display matrix working state
- Supports full interfaces display and management of visualized dot matrix based on B/S or C/S.
- Real-time display of input and output flow status: including program name, stream rate, GOP count, etc
- Real-time analysis and monitoring of synchronization loss and continuous counting errors
- Supports centralized management of multiple matrixes
- Supports setting in batches
- Supports channel group
- Support monitoring mode and operation mode
- upport web UI and SNMP software to control, manage, and query logs

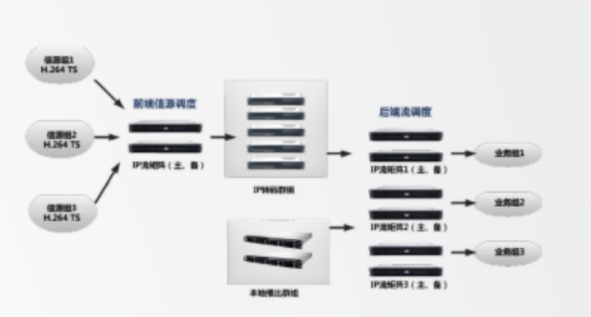
Typical Applications

- Intelligent backup and routing of IP streams of TV stations and network operators
- Security switchover of the IP broadcast system

Physical Fertures

- Size: Standard 1U Rack（777mmx437mmx43mm）
- Weight:15KG
- Voltage: Auto ranging 100—240 VAC,50/60Hz.
- Redundant power supply
- Power: Up to 300W

Topology Structure



Ordering Infomation

Product Name	Product Model	Configuration	Max Channel	Interface Specification
IP Matrix	Frame	1RU,with main board,redundancy PS	1	Standard 3-core AC input interface
	Interface Model(optional)	Electrical port,Optical port NIC	3	1 Gigabit,10 Gigabit
	RM900-32	32X32 Inputs&Outputs route	I/O Flexible Configuration	Inputs:IP(1G,10G) Outputs:IP(1G,10G) Max:Up to 16 Gigabit NIC
	RM900-256	256X256 Inputs&Outputs route		
	RM900-512	512X512 Inputs&Outputs route		
	RM900-1024	1024X1024 Inputs&Outputs route		
	RM900-2048	2048X2048 Inputs&Outputs route		