RSS1-ASI Digital ASI/SDI Automatic Redundancy Switch

The RSS1-ASI station incorporates an Automatic A/B switches to monitor independently digital Video feeds in DVB-ASI, with automatic switchover to the backup feed and return the main feed. It offers high isolation environment between the ASI input feeds.

The RSS1-ASI monitors independently and continuously the main & backup ASI input feeds to the switch for automatic switching and alarming. The threshold level at which it switches to the backup feed can be separately adjusted for each input. The additional monitoring of the backup input is intended to prevent blind switching to the backup input while that input is in alarm condition, and to send snmp-trap and email alarms to alert the operator of the backup input condition. It is also designed with fail-safe mechanism to prevent service interruption during power loss, as it will pass the main input to the output on power loss to the unit.
The RSS1-ASI offers high isolation environment between the ASI input feeds.

A TCP/IP port is available at the back of the chassis for remote monitoring, alarm & control over the Network. While the SNMP protocol is used for alarming to and remote monitor/control by NOC "Network Operation Center", with automatic email text-message alerts. An embedded Web-Server is also available to allow regional & local technical personal remote access (password protected) for status monitoring, switch override/control and to change some internal settings from a Web-page using any standard Web browser.

Remote control functions over the IP-Network include settings of switching Hysteresis & delays, and commands to disable automatic-return that would allow technical staff to resolve an ASI feed intermittent problem before returning to normal automatic switch operation. Monitoring the backup input feed can also be set remotely set to alarm only, thus preventing it from affecting the automatic switch operation.

The Hysteresis & delays between switchover to the backup input and switching back to the main input are designed for reliable automatic switching, and are remotely modifiable to allow the operator to set them to suit their particular system condition.

Local indication of the two input feeds and switch status are also available at the front panel, with a locking toggle for emergency switch override & control, with the capability for remote access via SNMP & Web-page to override the toggle switch.

Tekron Communication manufactures a complete line of automatic switching RSS products for the Redundancy & Monitoring of CATV RF-Broadband & LNB/L-Band feeds, analog Video & audio/4.5 or RF channels in disaster recovery applications. Some models are also suitable and in use for community (PEG) channel automation/sharing or redundancy applications.

Switch Control:

Monitoring Threshold switch adjustment: Front panel fine adjustment available to set the level at which the input feed monitoring circuits switch automatically to the backup input ASI feed. The threshold for each input is separately adjustable from the front panel.

Disabling switch-back to main input: In normal condition, the RSS1-ASI sensing mechanism automatically switches to the backup input when the main input drops to its pre-set (adjustable threshold) level, with automatic switch return to the main input upon its level restoration, with an internal adjustable Hysteresis. Remote (Web-page & SNMP) control allows the operator however to disable the automatic return of the switch. This is intended to allow technical staff to investigate the cause of an intermittent problem before resuming automatic return switching (front-panel or remotely) to the main input.

Manual switch: A front panel 3-way toggle switch is available to disable automatic switch operation, and force the switch to either the main or the backup position. Front panel LED indicates if the unit is in manual or automatic mode, and the switch status.

Remote Control: The TCP/IP back-chassis connection allows operator remote access for switch control , disabling the switch automatic operation and override the front panel toggle switch, to force the switch to either input.

Monitoring and alarm:

Remote alarm: Alarms are sent as snmp traps and email text messages to selected recipient as set by the supervisor from the Web-page Network Setup menu.
Alarms are sent with any change of status of the main input, backup inputs, switch position, and status of switch (auto or manual) mode.

Remote status monitoring: Monitoring is available via snmp and from Web-page. Status indication is available for main & back inputs, switch position & mode.

Remote settings:

The following parameters can be set remotely over the Network:
Unit Network settings and access passwords.
Web-page monitor/control & alarm input names.
Switch operation setting of Hysteresis & delays, and disabling backup input status & automatic return.

SPECIFICATIONS

The RSS1-ASI incorporates a 2X1 automatic switch with two (2) buffered outputs to provide redundancy to DVB-ASI digital TV channel feeds.

Switch:	**Two inputs to one output** **Automatic and remote controlled switching**
Signal:	**DVB-ASI & SDI format**
Typical Input Level:	**800mv Peak-to-Peak**
Isolation:	**75 dB minimum**
Switch Threshold:	**30dB minimum front panel adjustable**
Built-in:	**Hysteresis & Delays before switching remotely adjustable**
Fail-safe:	**Switches to pass main input on power loss**
Remote Access:	**TC/IP Port that incorporates embedded Web-server for remote monitor & control from any Web-browser, SNMP protocol for NOC monitor & control and to receive SNMP-trap alarms, and configurable Email-alert Text-messages**
Switch Control:	**Front-panel: Toggle manual switch control** **TCP/IP Network: Remote override/switch control**
Status Indication:	**Front-panel: Switch position and signal presence status LED.** **TCP/IP Network: Remote switch & signal monitor/alarm status**
Remote settings:	**Disable automatic return to main input (SNMP & Web-page).** **Limit backup input status to monitoring & alarm functions.** **Set Hysteresis (dB) & delays (seconds) for automatic switching**
IP- Network MnC	**TCP/IP-port incorporates an embedded Web-server for remote Monitor & control from any Web-browser, an SNMP protocol for NOC monitor & control and to receive alarm SNMP-traps and configurable Email-alert Text-messages.**
Chassis:	**1U Rack-mount 19" high X 9.75" deep chassis (Weight 10 lbs)**
Power Supply:	**85-235 Volt-AC (60/50 Hz)** **Optional: NEG 48V-DC supply** **Dual-Redundant power supply** **Max power consumption: 8Watt**

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AUTOMATIC SWITCHING PRODUCTS

TCP/IP Network remote monitor Alarm and Control capabilities

RMS-RSS monitoring & automatic switching products incorporate TCP-IP & RS-232 port for remote monitor/alarm & controls over IP-Networks and dial-up line.

ASI-SDI-SMPTE310M Digital Automatic Redundancy Switch

RSS1-ASI DVB-ASI Dual-Output (1-RU) 2X1 Automatic Switch

RSS-2ASI ASI/SDI/SMPTE Channel Dual-switch Automatic Switching (1-RU) Station

RSS-6ASI ASI/SDI/SMPTE Channel Six-switch Automatic Switching (2-RU) Station

CATV BROADBAND & Channel Redundancy Switching

RSS-2R CATV 1GHz Broadband & QAM channel Automatic Redundancy Switch

RSS-2D CATV 1GHz Split-Band Automatic Redundancy Switch

RSS-3T CATV 1GHz Broadband Triple-switch Automatic Switching (1-RU) Station

RSS2-T CATV 1GHz Broadband dual-switch Automatic Switching (1-RU) Station

RSS6-T CATV 1GHz Broadband six-switch Automatic Switching (2-RU) Station

RMS-2RC Frequency-Agile Dual AGC RF-Pilot Channel Automatic Redundancy Switch

RMS-2V Frequency agile TV channel Signal Monitor/alarm and Control station

Satellite LNB/L-Band Automatic Redundancy Switch

RSS-2L L-Band/LNB Dual-switch Automatic Redundancy Switching (1-RU) Station

RSS-6L L-Band/LNB Six-switch Automatic Redundancy Switching (2-RU) Station

Digital & Analog Video/Audio Channel Automatic Switch

RSS-2B Video/Stereo-audio +SAP (3X1) Digital/analog Channel Automatic Switch

RSS-2VAS Video/Stereo-audio (3X1) Digital Channel Automatic Redundancy Switch

RSS-2VD Video/Stereo-audio (3X1) Digital Channel Automatic Redundancy Switch

RSS-4Eng Video/Stereo-audio (5X1) Digital/analog Channel Automatic Switch

RSS-2AS Stereo-audio (3X1) Automatic Redundancy Switch

Digital & Analog Video/Audio Channel Automatic Switching Stations

RSS-2AV Video/Stereo-audio +SAP Dual-switch Automatic Switching (1-RU) Station

RSS-6AV Video/Stereo-audio +SAP Six-switch Automatic Switching (2-RU) Station

RSS-2B4.5 Video/4.5MHz-audio Dual-switch Automatic Switching (1-RU) Station

RSS-3RV Hybrid Video-Monitor & RF-Channel three-switch Automatic Switch Station