RSAM-5800XT
Analog QAM RF and MPEG Video Probe

Key Benefits

- Eliminate truck rolls to segment RF and video problems
- Guarantee deployment of necessary truck rolls to the right place with the right personnel and equipment
- Increase network availability using notification of forward path degradation before service is disrupted
- Intelligently filter alarms based on severity to appropriately alert local operations and NOC personnel

Applications

- Segments problems to a master headend, local headend/hub, or outside plant by comparing RF and MPEG trends from a common edge device or across multiple headends/hubs
- Monitors TR 101 290 MPEG parameters for both DVB and ATSC providing worldwide support
- Remotely troubleshoots problems using Web-based access to live and historical RF and MPEG measurements

Key Features

- Monitor and troubleshoot analog and digital video as well as DOCSIS® services
- Web-based access to live and historical MPEG and RF measurements
- Simple network management protocol (SNMP) trap forwarding to up to five destinations
- Monitor MPEG stream errors (TR 101 290 Priority 1, 2, and 3) and drill down to analyze individual program performance
- Easily access performance history (RF, QAM, and MPEG) stored in MySQL relational database

The JDSU RSAM-5800XT Remote Service Analyzer Module provides remote analysis of forward path digital and analog signals. It is specifically designed for deployment in remote, unmanned hub sites or headend locations.

The RSAM-5800XT combines the extensive knowledge of JDSU in both RF and MPEG analysis to quickly identify real customer-affecting issues down to the individual program without having to deploy specialists to remote hub sites. The RSAM RF and MPEG probes provide remote monitoring and analysis with detailed views of channel performance to the field, headend, and network operations center (NOC) technicians using Windows® Internet Explorer®.

Simply viewing the QAM (quadrature amplitude modulation) stack with a spectrum analyzer or measuring and monitoring MER and BER (modulation and bit error ratio) on QAM carriers provides absolutely no insight into MPEG video payloads. It is critical for cable network operators to have system-wide visibility into the underlying content or MPEG protocol layer to ensure the quality of programming content and other MPEG parameters such as PCR jitter (timing) and continuity count for both digital video broadcasting (DVB) and Advanced Television Systems Committee (ATSC).

The award winning RSAM-5800XT helps segment video problems in minutes—not hours—by proactively monitoring video, voice over Internet Protocol (VoIP), and high-speed data (HSD) carriers for RF and MPEG impairments.

Specifications

Frequency

Range	50 to 1,000 MHz
Accuracy	±10 ppm at 25℃ (77°F)
Tuning resolution	Analog 10 kHz, Digital 50 kHz
Channel bandwidth	RSAM-5800A 8 MHz
	RSAM-5800B 6 MHz

Level Measurement, Analog

Signal types	CW, Video, and Single and Dual Audio (NTSC, PAL and SECAM)
Range	−40 to +60 dBmV[1]
Resolution	0.1 dB
Resolution bandwidth	280 kHz
Accuracy[2]	±1.5 dB typical @ 25℃

Level Measurement, Digital

Modulation types	QPSK, (16, 64, 256) QAM DVB/ATSC
Range	−20 to +50 dBmV[1]
Resolution	0.1 dB
Resolution bandwidth	280 kHz
Accuracy[3]	±1.5 dB typical @ 25℃

Downstream QAM Demodulation

Modulation types	64 and 256 QAM, ITU-T J.83
Input range	0 to +50 dBmV[1] for 256 QAM
MER[4]	256 QAM: 28 to 35 dB
	64 QAM: 21 to 35 dB
Accuracy[4]	±2.0 dB typical

EVM[3]	64 QAM: 1.2 to 5.8%
Accuracy	±0.5% (1.2 to 2.0%)
	±1.0% (2.1 to 4.0%)
	±1.4% (4.1 to 5.8%)
Range	256 QAM: 1.1 to 2.4%
Accuracy	±0.6%
Symbol rate	Annex A: 5.057 to 6.952 Msps for 64 and 256 QAM
	Annex B: 5.057 Msps for 64 QAM; 5.361 Msps for 256 QAM
	Annex C: 5.274 Msps for 64 QAM; 5.361 Msps for 256 QAM

Standards Compliance

Shock and vibration	IEC 60068
Drop	IEC 61010
Handle stress	IEC 61010
Safety—emissions	EN 55022
Safety—immunity	EN 61000

Interfaces

RF	75Ω, F81 or BNC option
	Max. sustained voltage 100 VAC, 140 VDC
RS232	Standard via DB-9
Ethernet	Supports RJ45, 10/100 BaseT, TCP/IP, and UDP
AUX	TTL-compatible output for controlling accessories

General

Dimensions	48.3 x 34.56 x 8.9 cm (19 x 14 x 3.5 in)
Weight	4.4 kg (9.75 lb)

Operating temperature range	5 to +45℃ (41 to 113°F)
Storage temperature range	−20 to +50℃ (0 to 120°F)
Power supply input	47 to 63 Hz, ~110 VA,100 to 265 VAC

MPEG TR101-290 Measurements

Priority 1

– Synch loss error
– Synch byte error
– PAT error
– Continuity count error
– PMT error
– Referenced PID error

Priority 2

– Transport error
– CRC error
– PCR repetition error
– PCR discontinuity error
– PCR accuracy error
– PTS error
– CAT error

Priority 3

– Unreferenced PID error
– Program and system integration protocol (PSIP) error (ATSC)
– SI error (DVB)

[1] Typical detectable range for single channel inputs, maximum integrated input power +50 dBmV for all specifications
[2] Accuracy for levels between −20 to 50 dBmV; additional uncertainty ±0.5 dB across operating temperature range
[3] −20 to 50℃; additional uncertainty ±1.0 dB from 4 to 15 MHz
[4] Accuracy and behavior from 50 to 1,000 MHz for levels between 0 to 50 dBmV (typical)

Ordering Information

Model	Part Number	Description
RSAM-5800A[XT]	RSAM58XTA	Remote Service Analyzer Module—RF Video Probe—Rack-mounted RF/QAM analyzer (8 MHz tuner), including RF monitoring. This unit is field upgradeable to add MPEG
RSAM-5800B[XT]	RSAM58XTB	Remote Service Analyzer Module—RF Video Probe—Rack-mounted RF/QAM analyzer (6 MHz tuner), including RF monitoring. This unit is field upgradeable to add MPEG
RSAM-MPEG	RSAM-MPEG	Factory installed—Add MPEG capability for RSAM-5800 at time of purchase
RSAMMPEG-UG-FLD	RSAMMPEG-UG-FLD	Field upgrade—Add MPEG capability in the field for RSAM-5800, does not include calibration
ISS-5116	1010-00-0906	16x1 RF Input Selector Switch for RSAM—20 MHz to 1 GHz
PVM Software Upgrade to Version 2.0	PVM12UPG	Upgrade from PathTrak Video Monitoring (PVM) 1.2 to 2.0, includes CD
PVM Software Starter Pack	PVM-SERVER-STRT	Consists of server software and 5 client licenses for configuration and enables support for up to 5 RSAMs and 5 MVP-200s
PVM Software Server add 10 RSAM	PVM-SERVER-10RSAM	Add 10 RSAMs and 1 client license to starter pack or existing installation
PVM Software Server add 50 RSAM	PVM-SERVER-50RSAM	Add 50 RSAMs and 5 client licenses to starter pack or existing installation
PVM Software Server add 10 MVP	PVM-SERVER-10MVP2	Add 10 MVP-200s and 1 client license to starter pack or existing installation
PVM Software Server add 50 MVP	PVM-SERVER-50MVP2	Add 50 MVP-200s and 5 client licenses to starter pack or existing installation
PVM Client Software	PVM-CLIENT	PVM Client software—Supports configuration and access to RSAM-5700 and RSAM-5800 probes

Hardware Upgrades

Model	Part Number	Description
RSAM-5800A-UPGX	RSAM58ARFUPGX56	Exchange RSAM-5600A for an RSAM-5800A[XT] with RF ONLY (without the MPEG option)
RSAM-5800B-UPGX	RSAM5800BUPGX57	Exchange RSAM-5700B for an RSAM-5800B[XT] with the MPEG option
RSAM-5800A-UPGX	RSAM5800AUPGX56	Exchange RSAM-5600A for an RSAM-5800A[XT] with the MPEG option
RSAM-5800B-UPGX	RSAM5800BUPGX56	Exchange RSAM-5600B for an RSAM-5800B[XT] with the MPEG option

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