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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde and Schwarz ESMI EMI Test Receiver

Rohde & Schwarz ESMI EMI Test Receiver 20 Hz to 26.5 GHz The R&S ESMI combines a high-end CISPR EMI test receiver with the speed of an R&S spectrum analyzer. Frequency range is 20 Hz to 26.5 GHz, extendable toward 110 GHz with external mixers. A second input handles high-energy pulses from 20 Hz to 200 MHz. Refined preselection (1 lowpass, 11 fixed bandpass, 4 tunable bandpass, 1 YIG), a low-noise wide-dynamic preamplifier, and additional IF filters protect against broadband overload. Five parallel detectors, 70 dB envelope-detector dynamic range, and a tracking generator to 5 GHz support commercial and military EMI. The R&S ESMI combines a high-end CISPR EMI test receiver with the speed of an R&S spectrum analyzer. Frequency range is 20 Hz to 26.5 GHz, extendable toward 110 GHz with external mixers. A second input handles high-energy pulses from 20 Hz to 200 MHz. Refined preselection (1 lowpass, 11 fixed bandpass, 4 tunable bandpass, 1 YIG), a low-noise wide-dynamic preamplifier, and additional IF filters protect against broadband overload. Five parallel detectors, 70 dB envelope-detector dynamic range, and a tracking generator to 5 GHz support commercial and military EMI.



MODEL

Rohde & Schwarz ESMI

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ESMI

LISTING

<https://aumictechlabs.com/products/esmi-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz ESMI is an EMI test receiver that merges high-specification EMI measurement capabilities with spectrum analyzer functionality. It delivers compliance testing

across CISPR, VDE, FCC, EN, VCCI, MIL-STD, VG, DEF-STAN, BS, and DO 160 standards while supporting general laboratory signal analysis. The instrument integrates measurement and analysis functions optimized to accelerate testing procedures.

Technical Specifications

Frequency range: 20 Hz to 26.5 GHz (110 GHz with external mixers) Resolution: 1 Hz Frequency scale: Selectable LIN/LOG Frequency span: 10 Hz to 2/5.2/26.5 GHz RF attenuation: Switchable across wide range in small steps Preselection: Refined preselection filters Preamplifier: Low-noise design with wide dynamic range Mixer: High-level mixer for IF conversion with overload detection Envelope detector: 70 dB dynamic range, highly linear Logarithmic converter (analyzer path): 110 dB range DC logarithmic converter: 70 dB dynamic range Detectors: Five parallel channels for peak, minimum, quasi-peak, average, and RMS weighting Measurement standards: CISPR 16-1 and VDE 0876 compliant Tracking generator: Integrated for EMC measurements Demodulators: AM/FM for audio monitoring Calibration: Pulse and sine calibration sources with CISPR weighting verification Transducer compensation: Automatic via correction factor tables (up to four, combinable) Display: Split-screen capability for simultaneous trace memories and detector results Limit lines: Eight supported with automatic out-of-limit detection

Key Features

OVERVIEW mode displays full interference spectrum with CISPR-standard IF resolution bandwidths and quasi-analog selectivity tuning for optimized sweep time **SCAN mode** enables frequency-specific measurements with automated scanning between start/stop frequencies at selectable step sizes **Broadband interference rejection** through filters ahead of IF preamplifier **Overload detection** at mixer and test channel stages

Typical Applications

EMI/RFI compliance testing Signal monitoring and analysis Laboratory measurements requiring dual receiver/analyzer capability **Compatibility & Integration** Designed for environments requiring conformance to international commercial and military EMC standards.

Features & description

From manufacturer datasheet

Applications

- Compliance EMI to CISPR, VDE, FCC, EN, VCCI, MIL, VG, DEF-STAN, BS, DO-160, GAM-EG-13 •
- Spectrum analysis with 9 inch color display • Tracking-generator scalar measurements to 5 GHz •
- Pulse-protected conducted/radiated tests on the second input • AM/FM audio monitoring of interferers

ESMI Characteristics / Specifications

PARAMETER	VALUE
Model	ESMI
Manufacturer	Rohde & Schwarz
Instrument Type	EMI test receiver / spectrum analyzer
Alias	ESMI; R&S ESMI
Frequency Range	20 Hz to 26.5 GHz
External Mixer Extension	to 110 GHz
Second Input Pulse Range	20 Hz to 200 MHz
Frequency Resolution	1 Hz
Frequency Error	less than 1e-7
IF Filters	6 Hz to 3 MHz plus 9 EMI bandwidths
Video Filters	1 Hz to 3 MHz
Preselection	1 lowpass, 11 fixed bandpass, 4 tunable bandpass, 1 YIG
Tracking Generator	to 5 GHz
Detectors Parallel	peak, minimum, quasi-peak, average, RMS (five)
Envelope Detector Dynamic	70 dB
Log Converter Dynamic Analyzer Path	110 dB
DC Log Converter Dynamic	70 dB
Demodulation	AM and FM with audio monitor
Display	9 inch color CRT, printable via IEEE488 or video printer
Dimensions	435 mm x 457 mm x 590 mm (WxHxD)
Weight	68 kg
RF Attenuation	wide range, small steps
Preamplifier	low-noise, high-overload, after preselector
Calibration Sources	sine plus pulse source for CISPR weighting curves
Overload Detectors	mixers and test channel

PARAMETER	VALUE
CISPR Conformance	CISPR 16-1 (08.93) and VDE 0876
Trace Functions	curve arithmetic, limit masks, averaging, peak hold
Scan Mode	SCAN comparable with spectrum analyzer in speed
Form Factor	large two-box class EMI receiver / analyzer
Sibling ESAI Role	related ESAI/ESMI family EMI receiver/analyzer Notes Specs from R&S ESMI/ESAI EMI test receiver literature. Confirm tracking-generator, mixer, and firmware fit. Do not confuse ESMI (20 Hz to 26.5 GHz) with later ESIB/ESU/ESW families.
Attenuation	wide range, small steps

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.