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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz ESU8 EMI Test Receiver

Rohde & Schwarz ESU8 EMI Test Receiver 20 Hz to 8 GHz The R&S ESU8 is the 8 GHz member of the CISPR 16-1-1 compliant ESU EMI test receiver family (ESU8/26/40). RF input 1 covers 20 Hz to 8 GHz DC-coupled or 1 MHz to 8 GHz AC-coupled; input 2 covers 20 Hz to 1 GHz DC (9 kHz to 1 GHz AC) with pulse protection. Twelve preselection filters to 3.6 GHz (switchable off in analyzer mode) and a 20 dB preamplifier from 1 kHz to 3.6 GHz support commercial and military EMI. FFT time-domain scan (ESU-K53) accelerates overview measurements.

Frequency resolution is 0.01 Hz. The R&S ESU8 is the 8 GHz member of the CISPR 16-1-1 compliant ESU EMI test receiver family (ESU8/26/40). RF input 1 covers 20 Hz to 8 GHz DC-coupled or 1 MHz to 8 GHz AC-coupled; input 2 covers 20 Hz to 1 GHz DC (9 kHz to 1 GHz AC) with pulse protection. Twelve preselection filters to 3.6 GHz (switchable off in analyzer mode) and a 20 dB preamplifier from 1 kHz to 3.6 GHz support commercial and military EMI. FFT time-domain scan (ESU-K53) accelerates overview measurements. Frequency resolution is 0.01 Hz.



MODEL

Rohde & Schwarz ESU8

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ESU8

LISTING

<https://aumictechlabs.com/products/esu8-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz ESU8 is a dual-input EMI test receiver combining CISPR 16-1-1 compliance with high-end spectrum analyzer functionality for civil and military standards validation. RF Input 1 spans 20 Hz to 8 GHz; RF Input 2 extends to 1 GHz. The instrument delivers excellent RF characteristics, wide dynamic range, and minimal phase noise with very low measurement

uncertainty - critical for repeatable EMI compliance work.

Technical Specifications

Frequency Coverage & RF Performance RF Input 1: 20 Hz to 8 GHz RF Input 2: 20 Hz to 1 GHz 12 preselection filters from 20 Hz to 3.6 GHz (switchable; disableable in analyzer mode) Integrated 20 dB preamplifier (1 kHz to 3.6 GHz) standard; optional 30 dB low-noise preamplifier to 40 GHz available

Resolution & Bandwidth Resolution Bandwidths: 10 Hz to 10 MHz in 1/2/3/5 steps IF Filter 3 dB bandwidths: 10 Hz to 10 MHz in 1/2/3/5 steps IF Filter 6 dB bandwidths: 10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz

Detection & Measurement Seven detector types: Peak, Min Peak, RMS, Average, CISPR-AVG, CISPR-RMS, Quasi-Peak Digital detector design ensuring stability and reproducibility Time-domain scan with FFT option for accelerated overview measurements Analyzer mode sweep time minimum 2.5 ms Time-domain analysis with 10 μ s resolution; monitoring time >2 h Frequency scan supporting three parallel detectors (up to 2 million test points/trace) Time-domain measurements: up to 2 million test points, ≥ 10 μ s/point

Operational Modes Receiver mode with parallel real-time IF analysis Fully and partially automatic measurements (preview, data reduction, final measurement)

Key Features Dual-input architecture optimized for swept and broadband EMI testing Internal complex preselection minimizes out-of-band interference High measurement speeds via FFT-based time-domain capture Wide detector selection meets CISPR and MIL-STD requirements

Compatibility & Integration GPIB, LAN (Ethernet), and USB interfaces Remote control via GPIB or LAN LabView, LabWindows/CVI, VXI Plug & Play driver support Remote Desktop capable

Features & description

From manufacturer datasheet

Features

- Detectors: max peak, min peak, RMS, average, CISPR-AV, CISPR-RMS, quasi-peak (max 3 in parallel)
- Analyzer 3 dB RBW 10 Hz to 10 MHz in 1/2/3/5 steps • CISPR 6 dB bandwidths 10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz • Up to 2 million test points per trace in scan • Optional FSU-B4 OCXO (2e-8 per year class)

Applications

- Full CISPR / EN / FCC / MIL EMI compliance to 8 GHz • Fast time-domain scan overview (K53) • Spectrum analysis with low uncertainty (0.6 dB below 3.6 GHz) • Preview plus final QP / CISPR-average / CISPR-RMS • Realtime IF analysis at the set center frequency

ESU8 Characteristics / Specifications

PARAMETER	VALUE
Model	ESU8
Manufacturer	Rohde & Schwarz
Instrument Type	EMI test receiver / spectrum analyzer
Alias	ESU 8; R&S ESU8
Frequency Range Input 1 DC	20 Hz to 8 GHz
Frequency Range Input 1 AC	1 MHz to 8 GHz
Frequency Range Input 2 DC	20 Hz to 1 GHz
Frequency Range Input 2 AC	9 kHz to 1 GHz
Frequency Resolution	0.01 Hz
Reference Aging Standard	1e-7 per year
OCXO FSU B4 Aging	2e-8 per year class
Preselection Filters	12, 20 Hz to 3.6 GHz (off in analyzer mode)
Preamplifier Gain	20 dB, 1 kHz to 3.6 GHz
Analyzer RBW 3 dB	10 Hz to 10 MHz, 1/2/3/5
EMI Filters 6 dB	10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz
SSB Phase Noise at 10 kHz	less than minus 120 dBc (1 Hz), typ. minus 123 dBc
Display Range	DANL to +30 dBm
Receiver Detectors	max 3 of PK, min PK, RMS, AV, CISPR AV, CISPR RMS, QP
Measurement Time	5 μ s to 100 s
DANL 1 MHz no preamp	less than minus 130 dBm
DANL 10 MHz no preamp	less than minus 143 dBm
DANL 1 GHz no preamp	less than minus 143 dBm
DANL 8 GHz no preamp	less than minus 140 dBm
DANL 1 GHz with preamp	less than minus 150 dBm
DANL 3 GHz with preamp	less than minus 147 dBm

PARAMETER	VALUE
Total Uncertainty below 3.6 GHz	0.6 dB
Total Uncertainty 3.6 to 8 GHz	2.0 dB
Analyzer Sweep Points	155 to 10001 (625 standard)
Sibling ESU26 Range	20 Hz to 26.5 GHz
Sibling ESU40 Range	20 Hz to 40 GHz
Time Domain Scan Option	ESU-K53 FFT overview Notes Specs from the R&S ESU EMI Test Receiver data sheet. Confirm K53 time-domain scan, FSU-B4 OCXO, and firmware. This file is the 8 GHz ESU8; ESU26/40 add microwave bands and different AC-couple starts.
Detectors	max peak, min peak, RMS, average, CISPR-AV, CISPR-RMS, quasi-peak (max 3 in parallel)

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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Instrument Type	EMI test receiver / spectrum analyzer
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Frequency Resolution	0.01 Hz
Reference Aging Standard	1e-7 per year
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Preselection Filters	12, 20 Hz to 3.6 GHz (off in analyzer mode)
Preamplifier Gain	20 dB, 1 kHz to 3.6 GHz
Analyzer RBW 3 dB	10 Hz to 10 MHz, 1/2/3/5
EMI Filters 6 dB	10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz
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Measurement Time	5 μs to 100 s
DANL 1 MHz no preamp	less than minus 130 dBm
DANL 10 MHz no preamp	less than minus 143 dBm
DANL 1 GHz no preamp	less than minus 143 dBm
DANL 8 GHz no preamp	less than minus 140 dBm
DANL 1 GHz with preamp	less than minus 150 dBm
DANL 3 GHz with preamp	less than minus 147 dBm
Total Uncertainty below 3.6 GHz	0.6 dB

PARAMETER	VALUE
Total Uncertainty 3.6 to 8 GHz	2.0 dB
Analyzer Sweep Points	155 to 10001 (625 standard)
Sibling ESU26 Range	20 Hz to 26.5 GHz
Sibling ESU40 Range	20 Hz to 40 GHz
Time Domain Scan Option	ESU-K53 FFT overview

Notes

Specs from the R&S ESU EMI Test Receiver data sheet. Confirm K53 time-domain scan, FSU-B4 OCXO, and firmware. This file is the 8 GHz ESU8; ESU26/40 add microwave bands and different AC-couple starts.

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

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NIST-traceable calibration · SAM registered ·
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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.