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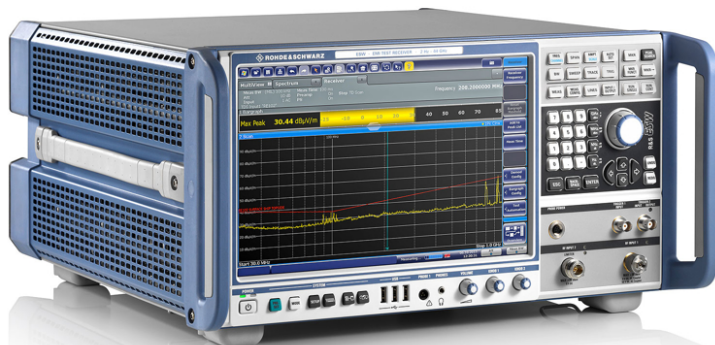
Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz ESW8 EMI Test Receiver, 1Hz to 8GHz

Rohde & Schwarz ESW8 EMI Test Receiver 1 Hz to 8 GHz The R&S ESW8 is the 8 GHz member of the ESW EMI test receiver family. Input 1 covers 1 Hz to 8 GHz DC-coupled or 10 MHz to 8 GHz AC-coupled; input 2 covers 1 Hz to 1 GHz. Frequency resolution is 0.01 Hz. Twenty-one preselection filters and optional 30 dB LNA (150 kHz to 8 GHz) support CISPR 16-1-1 measurements with FFT time-domain scan. Analyzer RBW is 1 Hz to 10 MHz; EMI filters include 200 Hz, 9 kHz, 120 kHz, and 1 MHz. Parallel CISPR detectors and APD are standard. The R&S ESW8 is the 8 GHz member of the ESW EMI test receiver family. Input 1 covers 1 Hz to 8 GHz DC-coupled or 10 MHz to 8 GHz AC-coupled; input 2 covers 1 Hz to 1 GHz. Frequency resolution is 0.01 Hz. Twenty-one preselection filters and optional 30 dB LNA (150 kHz to 8 GHz) support CISPR 16-1-1 measurements with FFT time-domain scan. Analyzer RBW is 1 Hz to 10 MHz; EMI filters include 200 Hz, 9 kHz, 120 kHz, and 1 MHz. Parallel CISPR detectors and APD are standard.



MODEL

Rohde & Schwarz ESW8

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ESW8

LISTING

<https://aumictechlabs.com/products/esw8-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz ESW8 is a EMI test receiver spanning 1 Hz to 8 GHz with measurement accuracy of ± 0.37 dB. It combines EMI receiver and spectrum analyzer functionality in a single

instrument, delivering the sensitivity and dynamic range required for pre-compliance and certification testing. The ESW8 meets CISPR16-1-1, ANSIC63.2, MIL-STD-461, FCC, EN, and DO-160 standards.

Technical Specifications

Frequency and RF Performance

Frequency range: 1 Hz to 8 GHz

Impedance: 50 Ohms

Measurement accuracy: ± 0.37 dB

RF attenuation: 0 to 79 dB, 1 dB steps

Preamplifier gain: 20 dB (switchable)

Optional Low Noise Amplifier: 30 dB gain

P1dB: +15 dBm (nom.)

IP3: +20 to +25 dBm (typ. +25 dBm at $10 \text{ MHz} \leq f_{in} < 1 \text{ GHz}$)

Displayed Average Noise Level (DANL): < -165 dBm, typ. -168 dBm ($1 \text{ MHz} \leq f < 1 \text{ GHz}$, 1 Hz RBW)

VSWR: 2.00:1, 3.00:1

Bandwidth and Filtering

Resolution bandwidths: 1 Hz to 10 MHz (standard); 20 MHz, 50 MHz, 80 MHz (optional)

EMI filters: 1 Hz through 10 MHz; 20 MHz, 50 MHz, 80 MHz with R&S®ESW-B8 option

Preselector: 200 kHz to 2.452 GHz with 21 filters

Highpass filters at 150 kHz and 2 MHz

Notch filters for ISM bands at 2.4 GHz and 5.8 GHz

Key Features

Detection methods: Max. Peak, Min. Peak, Quasi-Peak, RMS, Average, CISPR-average, CISPR RMS AM and FM demodulation

Scan time: 1 μ s to 16000 s

Time Domain Scan (TDS) with FFT-based processing and three optimization modes

Real-time spectrum analysis with 80 MHz bandwidth (optional R&S®ESW-K55)

Spectrogram function

Analysis bandwidth options: 200 Hz, 9 kHz, 120 kHz, 1 MHz

Typical Applications

Pre-compliance and certification testing across aerospace, automotive, industrial, telecommunications, and consumer electronics sectors.

Compatibility & Integration

Meets CISPR, EN, MIL-STD-461, DO-160, and FCC compliance requirements.

Features & description

From manufacturer datasheet

Features

- FFT time-domain scan for CISPR bands
- Optional ESW-B4 OCXO (aging plus/minus 3e-8 per year)
- External mixers (B21) are not available on ESW8
- Up to 200001 EMI sweep points; 100001 analyzer points
- Touchscreen receiver with SCPI / LAN / GPIB

Applications

- Full CISPR / EN / FCC / MIL EMI compliance to 8 GHz
- Fast time-domain scan (ESW-B350 / B1000 options)
- Spectrum analysis with high TOI (typ. 25 dBm, 10 MHz to 3 GHz, preselection off)
- Click-rate analysis (K59) and real-time (K55)
- Conducted and radiated disturbance measurements

ESW8 Characteristics / Specifications

PARAMETER	VALUE
Model	ESW8
Manufacturer	Rohde & Schwarz
Instrument Type	EMI test receiver
Alias	ESW 8; R&S ESW8
Frequency Range Input 1 DC	1 Hz to 8 GHz
Frequency Range Input 1 AC	10 MHz to 8 GHz
Frequency Range Input 2 DC	1 Hz to 1 GHz
Frequency Resolution	0.01 Hz
Reference Aging Standard	plus/minus 1e-7 per year
OCXO ESW B4 Aging	plus/minus 3e-8 per year
Preselection Filters	21
LNA Frequency Range	150 kHz to 8 GHz
LNA Gain	30 dB nom.
Analyzer RBW	1 Hz to 10 MHz, 1/2/3/5
EMI Filters	1 Hz, 10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz, 10 MHz
Video Bandwidths	1 Hz to 10 MHz
SSB Phase Noise at 10 kHz	less than minus 134 dBc (1 Hz), typ. minus 138 dBc
SSB Phase Noise at 1 MHz	less than minus 145 dBc (1 Hz), typ. minus 149 dBc
TOI 10 MHz to 3 GHz	greater than 20 dBm, typ. 25 dBm (preselection off)
DANL 30 MHz to 2.5 GHz Preamp On	minus 165 dBm, typ. minus 168 dBm (1 Hz)
DANL 4.8 GHz to 8 GHz Preamp On	minus 160 dBm, typ. minus 163 dBm (1 Hz)
Analyzer Display Range	noise floor to +30 dBm
Receiver Detectors	max 4 of PK, RMS, AV, QP, CISPR AV, RMS AV
EMI Sweep Points	101 to 200001
Analyzer Sweep Points	101 to 100001

PARAMETER	VALUE
APD Min Probability	1e-7
APD Max Acquisition	120 s
APD Bandwidths	200 Hz, 9 kHz, 120 kHz, 1 MHz
Frequency Counter Resolution	0.001 Hz
Mixer Option B	not available on ESW8
Sibling ESW26 Range	1 Hz to 26.5 GHz
Sibling ESW44 Range	1 Hz to 44 GHz Notes Specs from the R&S ESW EMI Test Receiver specifications. Confirm B4 OCXO, B24 LNA, time-domain-scan hardware, and K55/K59 licenses. This file is the 8 GHz ESW8; external mixers are not offered on this model.

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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Model	ESW8
Manufacturer	Rohde & Schwarz
Instrument Type	EMI test receiver
Alias	ESW 8; R&S ESW8
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Frequency Range Input 1 AC	10 MHz to 8 GHz
Frequency Range Input 2 DC	1 Hz to 1 GHz
Frequency Resolution	0.01 Hz
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OCXO ESW B4 Aging	plus/minus 3e-8 per year
Preselection Filters	21
LNA Frequency Range	150 kHz to 8 GHz
LNA Gain	30 dB nom.
Analyzer RBW	1 Hz to 10 MHz, 1/2/3/5
EMI Filters	1 Hz, 10 Hz, 100 Hz, 200 Hz, 1 kHz, 9 kHz, 10 kHz, 100 kHz, 120 kHz, 1 MHz, 10 MHz
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Specifications	
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Analyzer Display Range	noise floor to +30 dBm
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PARAMETER	VALUE
EMI Sweep Points	101 to 200001
Analyzer Sweep Points	101 to 100001
APD Min Probability	1e-7
APD Max Acquisition	120 s
APD Bandwidths	200 Hz, 9 kHz, 120 kHz, 1 MHz
Frequency Counter Resolution	0.001 Hz
Mixer Option B21	not available on ESW8
Sibling ESW26 Range	1 Hz to 26.5 GHz
Sibling ESW44 Range	1 Hz to 44 GHz

Notes
Specs from the R&S ESW EMI Test Receiver specifications. Confirm B4 OCXO, B24 LNA, time-domain-scan hardware, and K55/K59 licenses. This file is the 8 GHz ESW8; external mixers are not offered on this model.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.