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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz EFA20 Digital (QAM) TV Test Receiver, DVB-C, Selective

Rohde & Schwarz EFA20 DVB-C TV Test Receiver / Demodulator The R&S EFA20 is the standard DVB-C test receiver / demodulator in the EFA family (order 2067.9002.20 class). Fully compatible with EN 300 429, it receives, demodulates, decodes, and analyzes 4/16/32/64/128/256-QAM cable signals. Symbol rate is variable from 1 to 6.999 Msymbol/s for modulator tests. Standard test-receiver RF class is 48 MHz to 862 MHz (selective 50 or 75 ohm). High-end demodulator siblings use a non-selective 50 ohm input from 45 MHz to 1000 MHz. Reed-Solomon BER (before and after decoder), constellation analysis, optional SAW filters, MPEG-2 decoder (EFA-B4), and noise-margin generator support cable-headend and modulator production. The R&S EFA20 is the standard DVB-C test receiver / demodulator in the EFA family (order 2067.9002.20 class). Fully compatible with EN 300 429, it receives, demodulates, decodes, and analyzes 4/16/32/64/128/256-QAM cable signals. Symbol rate is variable from 1 to 6.999 Msymbol/s for modulator tests. Standard test-receiver RF class is 48 MHz to 862 MHz (selective 50 or 75 ohm). High-end demodulator siblings use a non-selective 50 ohm input from 45 MHz to 1000 MHz. Reed-Solomon BER (before and after decoder), constellation analysis, optional SAW filters, MPEG-2 decoder (EFA-B4), and noise-margin generator support cable-headend and modulator production.



MODEL

Rohde & Schwarz EFA20

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

EFA20

LISTING

<https://aumictechlabs.com/products/efa20-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz EFA20 is a digital TV test receiver engineered for DVB-C (QAM) signal analysis and measurement. This selective measurement platform delivers constellation diagram analysis, bit error ratio (BER) assessment, echo measurement, and real-time signal demodulation across multiple digital and analog television standards. Built on modular architecture, the EFA20 supports DVB-C, DVB-T, ATSC/8VSB, and analog TV standards with configurable options for MPEG-2 analysis. The instrument operates across 5 MHz to 1 GHz, accommodating QAM constellations from 4 to 256 states. An integrated noise generator enables noise margin evaluation, while advanced digital signal processing delivers quasi-error-free (QEF) operation with system FEC improving BER from 10^{-4} to 10^{-10} – 10^{-11} . IEC/IEEE-bus and RS-232-C interfaces enable remote control and data integration in broadcast and cable network environments.

Technical Specifications
Signal Standards: DVB-C (QAM), DVB-T, ATSC/8VSB, ITU-T J.83/A/B/C, analog TV (B/G, I, D/K, M/N)
Frequency Range: 5 MHz to 1 GHz; variant configurations 47–862 MHz or 48–862 MHz
Intermediate Frequency: 36 MHz
QAM Constellations: 4, 16, 32, 64, 128, 256 state
System FEC: Improves BER from 10^{-4} to 10^{-10} – 10^{-11} for QEF operation
Standards Compliance: EN 300 429 (DVB-C framing, channel coding, modulation); ISO/IEC 13818-1 (MPEG-2 system layer)

Key Features
Selective measurement with constellation diagram analysis and automatic transmission parameter assessment
Real-time BER measurement and demodulation
Integrated noise generator for noise margin testing
Echo and amplitude/phase response measurement
Modular design with QAM demodulator and DVB-C digital TV options
Optional MPEG-2 analyzer/decoder for SDTV applications

Typical Applications
Cable television (DVB-C) network verification and commissioning
Broadcast signal quality monitoring and troubleshooting
Network operator acceptance testing and performance validation

Compatibility & Integration
IEC/IEEE-bus and RS-232-C interfaces for automated test systems
Compliant with DVB-C EN 300 429 standard
Supports multiple analog and digital TV transmission standards in single platform

Features & description

From manufacturer datasheet

Features

- Automatic or manual demodulation parameters
- Optional EFA-B3 RF preselection (5 MHz to 1000 MHz class on high-end receivers)
- SAW options 6/7/8/2 MHz (B11/B12/B13/B14)
- Firmware EFA-K21 DVB-C / J.83 A/C
- 3 HU 19 inch chassis, three option slots

Applications

- DVB-C modulator and transmitter production
- Cable-headend acceptance
- QAM constellation, MER/EVM, SNR
- Bit-error-ratio before/after Reed-Solomon
- Optional MPEG-2 decode of the transport stream

EFA20 Characteristics / Specifications

PARAMETER	VALUE
Model	EFA20
Manufacturer	Rohde & Schwarz
Instrument Type	DVB-C TV test receiver / demodulator
Alias	EFA 20; EFA model 20; R&S EFA20
Order Number Class	2067.9002.20
TV Standard	DVB-C EN 300 429
QAM Orders	4, 16, 32, 64, 128, 256
Symbol Rate	1 Msymbol/s to 6.999 Msymbol/s
RF Range Standard Receiver	48 MHz to 862 MHz
RF Range High End Demodulator Class	45 MHz to 1000 MHz
RF Range with EFA B3 Class	4.5 MHz to 1000 MHz (also 5 MHz start)
Level Range Low Distortion Standard	minus 55 dBm to +20 dBm (preamp off)
Return Loss Selective 50 ohm att 10 dB	greater than or equal to 14 dB in channel
LO Resolution	1 Hz
LO Frequency Error	less than or equal to 2e-6
SSB Phase Noise at 860 MHz 1 kHz Standard	less than or equal to minus 82 dBc/Hz, typ. minus 86
SSB Phase Noise at 860 MHz 20 kHz Standard	less than or equal to minus 93 dBc/Hz, typ. minus 98
MER Class Standard	greater than or equal to 40 dB
EVM Class Standard	less than or equal to 0.66 percent
SNR Class Standard	greater than or equal to 42 dB
Error Correction	Reed-Solomon
BER	before and after Reed-Solomon decoder
Noise Generator	integrated for noise-margin measurement
Form Factor	19 inch, 3 HU

PARAMETER	VALUE
QAM Demodulator	EFA-B1 included in model 20
MPEG2 Decoder Option	EFA-B4
RF Preselection Option	EFA-B3 2067.3627.02
SAW 6 MHz	EFA-B11
Firmware DVB C	EFA-K21
Input Class	50 ohm or 75 ohm, BNC or N, front or rear (configuration)
Constellation	automatic analysis of transmission parameters Notes Specs from R&S EFA TV Test Receiver family data sheets (DVB-C models 20/23 and RF tables). Model 20 is the standard DVB-C test receiver; model 23 is high-end demodulator/receiver. Confirm EFA-B3 versus demodulator-only RF path and SAW/MPEG options.
Return loss	Selective 50 ohm att 10 dB: greater than or equal to 14 dB in channel

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	
Specifications	
PARAMETER	VALUE
Model	EFA20
Manufacturer	Rohde & Schwarz
Instrument Type	DVB-C TV test receiver / demodulator
Alias	EFA 20; EFA model 20; R&S EFA20
Order Number Class	2067.9002.20
TV Standard	DVB-C EN 300 429
QAM Orders	4, 16, 32, 64, 128, 256
Symbol Rate	1 Msymbol/s to 6.999 Msymbol/s
RF Range Standard Receiver	48 MHz to 862 MHz
RF Range High End Demodulator Class	45 MHz to 1000 MHz
RF Range with EFA B3 Class	4.5 MHz to 1000 MHz (also 5 MHz start)
Level Range Low Distortion Standard	minus 55 dBm to +20 dBm (preamp off)
Return Loss Selective 50 ohm att 10 dB: greater than or equal to 14 dB in channel	
L0 Resolution: 1 Hz	
L0 Frequency Error: less than or equal to 2e-6	
SSB Phase Noise at 860 MHz 1 kHz Standard: less than or equal to minus 82 dBc/Hz, typ. minus 86	
SSB Phase Noise at 860 MHz 20 kHz Standard: less than or equal to minus 93 dBc/Hz, typ. minus 98	
Specifications	
PARAMETER	VALUE
MER Class Standard	greater than or equal to 40 dB
EVM Class Standard	less than or equal to 0.66 percent
SNR Class Standard	greater than or equal to 42 dB
Error Correction	Reed-Solomon
BER	before and after Reed-Solomon decoder
Noise Generator	integrated for noise-margin measurement
Form Factor	19 inch, 3 HU
Option Slots: 3	

Specifications

PARAMETER	VALUE
QAM Demodulator	EFA-B1 included in model 20
MPEG2 Decoder Option	EFA-B4
RF Preselection Option	EFA-B3 2067.3627.02
SAW 6 MHz	EFA-B11
Firmware DVB C	EFA-K21
Input Class	50 ohm or 75 ohm, BNC or N, front or rear (configuration)
Constellation	automatic analysis of transmission parameters

Notes

Specs from R&S EFA TV Test Receiver family data sheets (DVB-C models 20/23 and RF tables). Model 20 is the standard DVB-C test receiver; model 23 is high-end demodulator/receiver. Confirm EFA-B3 versus demodulator-only RF path and SAW/MPEG options.

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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Generated August 13, 2026

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