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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz AMIQ04 I/Q Modulation Generator

Rohde & Schwarz AMIQ04 I/Q Modulation Generator 16 Msamples The R&S AMIQ04 is the 16 Msample I/Q modulation generator (order 1110.2003.04). Two synchronous 14-bit analog and Q outputs (16 bit at the digital output) and clock rates from 10 Hz to 100 MHz (setting to 105 MHz) generate complex baseband signals for vector RF generators and I/Q modules. Waveform length is 24 to 16 000 000 samples (steps of one in slow mode, four in fast mode). WinIQSIM software, four marker channels, up to 30 multisegment waveforms, and options for BER (B1), differential I/Q (B2), digital I/Q (B3), and rear I/Q (B19) support 2G/3G and WLAN baseband. The R&S AMIQ04 is the 16 Msample I/Q modulation generator (order 1110.2003.04). Two synchronous 14-bit analog and Q outputs (16 bit at the digital output) and clock rates from 10 Hz to 100 MHz (setting to 105 MHz) generate complex baseband signals for vector RF generators and I/Q modules. Waveform length is 24 to 16 000 000 samples (steps of one in slow mode, four in fast mode). WinIQSIM software, four marker channels, up to 30 multisegment waveforms, and options for BER (B1), differential I/Q (B2), digital I/Q (B3), and rear I/Q (B19) support 2G/3G and WLAN baseband.



MODEL

Rohde & Schwarz AMIQ04

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

AMIQ04

LISTING

<https://aumictechlabs.com/products/amiq04-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz AMIQ04 is a dual-channel I/Q modulation generator designed for precise baseband and intermediate frequency signal generation up to 25 MHz. It functions as a 2-channel arbitrary waveform generator with deep sample memory, supporting complex modulated signal creation across communications, aerospace, and defense applications. The instrument operates standalone via R&S WinIQSIM™ software or integrated with R&S SMIQ series signal generators, delivering the signal complexity and fidelity required for advanced modulation validation and RF testing.

Technical Specifications

- Sample rate: up to 100 MSamples/s
- Analog output amplitude resolution: 14-bit
- Digital I/Q output resolution: up to 16-bit (optional, with AMIQ-B3)
- Maximum IF signal generation: 25 MHz
- Memory depth per channel: 16,000,000 samples
- Dynamic range: 78 dB typical (3GPP FDD)
- Adjacent Channel Power (ACP) performance: excellent

Key Features

- Dual-channel I/Q baseband and IF signal generation
- Arbitrary waveform generation with large sample buffer capacity
- Modulation support: PSK (BPSK, QPSK, offset QPSK, $\pi/4$ DQPSK, 8PSK, 8PSK-EDGE), QAM (16/32/64/256), FSK (MSK, 2FSK, 4FSK, GTFM), and user-defined formats
- Signal types: single-carrier, multi-carrier, CDMA, WCDMA (3GPP), HiperLAN2, IEEE 802.11a
- Automatic amplitude and offset alignment with fine skew adjustment for optimal channel symmetry
- Integrated hard disk and floppy disk drives for waveform storage
- Impairment simulation: I/Q imbalance, phase noise, bandpass filtering, amplifier effects
- Full remote control via GPIB/IEEE 488 and RS-232-C interfaces

Typical Applications

- Digital modulation validation and characterization
- TDMA frame configuration testing
- Multicarrier signal generation and analysis
- RF receiver and transceiver testing

Compatibility & Integration

Operated via R&S WinIQSIM™ software or directly from R&S SMIQ series signal generators. Waveforms load from integrated storage or via IEC/IEEE bus and RS-232-C. Full programmability enables integration into automated test systems.

Features & description

From manufacturer datasheet

Features

- Clock slow mode 10 Hz to 4 MHz; fast mode 2 MHz to 100 MHz
- Auto-alignment of residual DC offset
- Floppy 1.44 MB plus hard disk (8 GB class)
- IEC/IEEE remote
- AMIQ-B3 digital I/Q only on models 03/04

Applications

- Baseband I/Q drive of SMIQ and other vector generators
- I/Q module and component test
- Impairment injection (offset, delay, imbalance) to stress modulators
- Digital-standard waveforms (IS-95, CDMA2000, W-CDMA, 802.11, HSDPA options)
- Dual arbitrary analog outputs

AMIQ04 Characteristics / Specifications

PARAMETER	VALUE
Model	AMIQ04
Manufacturer	Rohde & Schwarz
Instrument Type	I/Q modulation generator
Alias	AMIQ 04; R&S AMIQ04; AMIQ model 04
Order Number	1110.2003.04
Memory Depth	16 000 000 I/Q samples
Waveform Length Slow Mode	24 to 16000000 in steps of one
Waveform Length Fast Mode	24 to 16000000 in steps of four
Clock Range Specified	10 Hz to 100 MHz
Clock Setting Range	to 105 MHz (restrictions above 100 MHz)
Amplitude Resolution Analog	8 bit to 14 bit selectable
Amplitude Resolution Digital	up to 16 bit (AMIQ-B3)
Marker Channels	4 (marker or trigger, word length up to 14 bit)
Multisegment Waveforms	max 30
Segment Changeover Same Clock	typically 4 ms
Segment Changeover Clock Change	typically 12 ms
IF Generation	up to 25 MHz class
DAC	two-channel
Outputs	analog and Q, matched
Differential I/Q Option	AMIQ-B2 1110.3700.03
Digital I/Q Option	AMIQ-B3 1122.2103.02
Rear I/Q Option	AMIQ-B19 1110.3400.02
BER Option	AMIQ-B1 1110.3500.02
Software	WinIQSIM for Windows 95/98/NT/2000
Remote	IEC 625 / IEEE 488 (SH1 AH1 T6 L4 SR1 RL1 PP1 DC1)

PARAMETER	VALUE
Sibling AMIQ03 Memory	4 000 000 samples (1110.2003.03)
Sibling AMIQ	1110.2003.02 (earlier/smaller memory class)
Mass Memory	3.5 inch 1.44 MB floppy; 8 GB class HDD
Fine Tuning	delay, level, and offset of I/Q outputs
Form Factor	AMIQ family baseband generator Notes Specs from the R&S AMIQ I/Q Modulation Generator data sheet/brochure. AMIQ04 is the 16 Msample model. Confirm B1/B2/B3/B19 and K-options. Do not confuse with AMIQ03 (4 Msamples) or AFQ100B.

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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PARAMETER	VALUE
Model	AMIQ04
Manufacturer	Rohde & Schwarz
Instrument Type	I/Q modulation generator
Alias	AMIQ 04; R&S AMIQ04; AMIQ model 04
Order Number	1110.2003.04
Memory Depth	16 000 000 I/Q samples
Waveform Length Slow Mode	24 to 16000000 in steps of one
Waveform Length Fast Mode	24 to 16000000 in steps of four
Clock Range Specified	10 Hz to 100 MHz
Clock Setting Range	to 105 MHz (restrictions above 100 MHz)
Amplitude Resolution Analog	8 bit to 14 bit selectable
Amplitude Resolution Digital	up to 16 bit (AMIQ-B3)
Marker Channels	4 (marker or trigger, word length up to 14 bit)
Multisegment Waveforms	max 30
Segment Changeover Same Clock	typically 4 ms
Segment Changeover Clock Change	typically 12 ms
IF Generation	up to 25 MHz class
DAC	two-channel
Outputs	analogIand Q, matched
Differential I/Q Option	AMIQ-B2 1110.3700.03
Digital I/Q Option	AMIQ-B3 1122.2103.02
Rear I/Q Option	AMIQ-B19 1110.3400.02
BER Option	AMIQ-B1 1110.3500.02
Software	WinIQSIM for Windows 95/98/NT/2000
Remote	IEC 625 / IEEE 488 (SH1 AH1 T6 L4 SR1 RL1 PP1 DC1)
Sibling AMIQ03 Memory	4 000 000 samples (1110.2003.03)

PARAMETER	VALUE
Sibling AMIQ02	1110.2003.02 (earlier/smaller memory class)
Mass Memory	3.5 inch 1.44 MB floppy; 8 GB class HDD
Fine Tuning	delay, level, and offset of I/Q outputs
Form Factor	AMIQ family baseband generator

Notes

Specs from the R&S AMIQ I/Q Modulation Generator data sheet/brochure. AMIQ04 is the 16 Msample model. Confirm B1/B2/B3/B19 and K-options. Do not confuse with AMIQ03 (4 Msamples) or AFQ100B.

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>

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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.