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Data Sheet

August 13, 2026

AEROFLEX

AeroFlex IFR 3416 Signal Generator 250kHz – 6GHz Opt. 03, 05, 09, 21 *CALIBRATED*

AeroFlex IFR 3416 Signal Generator 250kHz – 6GHz Opt. 03, 05, 09, 21

CALIBRATED, Broadband signal generator offering up to 6 GHz with multiple installed options. Features include AM/FM/PM modulation, fast frequency switching, and excellent phase noise. Designed for RF and wireless communication testing, providing precise signal synthesis and reliable calibration.



MODEL	CALIBRATION
Aeroflex IFR 3416	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
IFR 3416	https://aumictechlabs.com/products/ifr-3416-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The AeroFlex IFR 3416 is a 250 kHz to 6 GHz signal generator engineered for RF and wireless communication testing across research, development, and manufacturing environments. It delivers fast frequency and level settling with exceptional spectral purity and dual modulation architectures - analog and vector - enabling precise characterization of amplifier linearity and receiver selectivity. The instrument excels in high-speed ATE integration through rapid GPIB response and optional dual-channel arbitrary waveform generation.

Technical Specifications
Frequency Range: 250 kHz to 6 GHz
Output Power: Peak output: +16 dBm (electronic attenuator)
Peak output: +19 dBm (mechanical attenuator with reduced switching speed)
Level resolution:

0.01 dB Frequency Stability & Purity: Frequency resolution: 1 Hz Residual FM: typically 1.5 Hz at 1 GHz Floor noise: typically better than -148 dBc/Hz Modulation Capabilities: AM bandwidth: up to 30 MHz FM bandwidth: up to 20 MHz Vector modulation bandwidth: up to approximately 50 MHz via I/Q inputs Built-in IQ modulator with excellent level linearity Optional differential I/Q outputs Optional high-speed pulse modulation RF Optimization Modes: Auto, Low Noise, Low ACP, Higher Power Power Consumption: <185 W Key Features 1 Hz frequency resolution across full 250 kHz to 6 GHz range Patented DC FM system minimizes carrier frequency errors Wide analog modulation bandwidths support video signal modulation with minimal distortion Vector modulation enables digital modulation with very low adjacent channel power Fast GPIB interface maximizes ATE throughput Typical Applications Amplifier linearity testing Receiver selectivity measurement Vector modulation component validation Digital modulation testing with low ACP requirements Compatibility & Integration Fast GPIB response integrates directly into high-speed automated test equipment systems. Optional dual-channel arbitrary waveform generation supports complex signal sourcing for advanced receiver testing.

Features & description

From manufacturer datasheet

Features

• Frequency coverage 250 kHz to 6 GHz • Built-in IQ modulator with IQCreator software • Peak output up to +16 dBm with electronic attenuator • Frequency resolution 1 Hz level resolution 0.01 dB • Residual FM 1.5 Hz at 1 GHz class • RF optimization modes Auto Low Noise Low ACP Higher Power

Applications

• Vector modulated signal simulation to 6 GHz • Receiver selectivity and amplifier linearity test • High-speed ATE frequency and level agility • Research development and manufacturing RF stimulus

IFR3416 Characteristics / Specifications

PARAMETER	VALUE
Model	3416
Manufacturer	Aeroflex / IFR / Marconi
Instrument Type	Digital RF Signal Generator
Alias	3416; IFR 3416; Aeroflex 3416
Frequency range	250 kHz to 6 GHz
Frequency resolution	1 Hz
Phase adjustment step	0.036 degree
Frequency setting time optimized below 10 kHz	about 2 to 2.5 ms class
Frequency setting time optimized above 10 kHz	about 4 to 5 ms class
Electronic attenuator range at 2 GHz	-140 to +16 dBm
Electronic attenuator range at 6 GHz	-140 to +8 dBm
Mechanical attenuator range at 2 GHz	-140 to +19 dBm
No attenuator maximum at 3 GHz	0 to +22 dBm
No attenuator maximum at 6 GHz	0 to +18 dBm
Level resolution	0.01 dB
Spectral purity residual FM at 1 GHz	1.5 Hz
Phase noise floor typical	better than -148 dBc/Hz
IQ modulation bandwidth RF	up to 160 MHz with internal baseband
AM depth reduction at high depth	up to 6 dB max output reduction
IQ modulation below 100 MHz	6 dB max output reduction
Remote control	GPIB fast response class
Display	touch panel color LCD
Form	compact lightweight portable
Bandwidth	RF: up to 160 MHz with internal baseband

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.

performance.

Applications

- Vector modulated signal simulation to 6 GHz
- Receiver selectivity and amplifier linearity test
- High-speed ATE frequency and level agility
- Research development and manufacturing RF stimulus

Key Features

- Frequency coverage 250 kHz to 6 GHz
- Built-in IQ modulator with IQCreator software
- Peak output up to +16 dBm with electronic attenuator
- Frequency resolution 1 Hz level resolution 0.01 dB
- Residual FM 1.5 Hz at 1 GHz class
- RF optimization modes Auto Low Noise Low ACP Higher Power

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No attenuator maximum at 3 GHz	0 to +22 dBm
No attenuator maximum at 6 GHz	0 to +18 dBm
Level resolution	0.01 dB

Level accuracy electronic at 2 GHz above -30 dBm: plus or minus 0.50 dB

Level accuracy electronic at 6 GHz above -30 dBm: plus or minus 1.00 dB

Specifications

PARAMETER	VALUE
Spectral purity residual FM at 1 GHz	1.5 Hz
Phase noise floor typical	better than -148 dBc/Hz
IQ modulation bandwidth RF	up to 160 MHz with internal baseband
AM depth reduction at high depth	up to 6 dB max output reduction
IQ modulation below 100 MHz	6 dB max output reduction
Remote control	GPIB fast response class
Display	touch panel color LCD
Form	compact lightweight portable

Optional dual channel ARB: available
Optional differential I/Q outputs: available
Optional high speed pulse modulation: available

Notes
Specs from Aeroflex/IFR 3410 series signal generator datasheet for 3416 (250 kHz–6 GHz). Confirm attenuator configuration, IQ/ARB options, and calibration date on the unit.

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.