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Data Sheet
August 2, 2026

ASTRONICS / EADS / RACAL

Astronics / EADS / Racal 3152B Precision PLL Waveform Generator

Astronics / EADS / Racal 3152B Precision PLL Waveform Generator The Astronics / EADS / Racal 3152B isasingle-slot C-size message-based VXIbus precision PLL waveform synthesizer. It combines function, pulse, sequenced, modulated, and arbitrary waveform generation with external phase-lock andabuilt-in counter/timer. Sample clock rates reach 250 MS/s class (modern mode). It replaces/extends the 3152A used on many military and commercial VXI platforms, withacompatibility mode that accepts 3152A-style programming and an extended-performance mode unlocked by ArbConnection software. Ordering class includes 1 M-point memory and 1 ppm TCXO (P/N 408151-001 and variants). The Astronics / EADS / Racal 3152B isasingle-slot C-size message-based VXIbus precision PLL waveform synthesizer. It combines function, pulse, sequenced, modulated, and arbitrary waveform generation with external phase-lock andabuilt-in counter/timer. Sample clock rates reach 250 MS/s class (modern mode). It replaces/extends the 3152A used on many military and commercial VXI platforms, withacompatibility mode that accepts 3152A-style programming and an extended-performance mode unlocked by ArbConnection software. Ordering class includes 1 M-point memory and 1 ppm TCXO (P/N 408151-001 and variants). VXI ATE stimulus generation; PLL-locked waveform sources; telecom and high-SNR sine/square test; replacement for legacy pul

MODEL **Astronics / EADS / Racal 3152B**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **3152B**	LISTING **https://aumictechlabs.com/products/3152b-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Astronics/EADS/Racal 3152B is a precision PLL waveform generator housed in a single-slot C-sized VXIbus module. It combines function generator and arbitrary waveform generation capabilities, delivering standard waveforms (sine, square, triangle, ramp, pulse, DC, exponential, Gaussian pulse, sinc) and user-defined arbitrary waveforms with exceptional frequency stability through phase-locked loop architecture. Technical Specifications Waveform Generation Standard waveforms: 100 µHz to 50 MHz Arbitrary waveforms: 100 mHz to 100 MHz clock rate Sampling rate: 250 MS/s continuous mode Vertical resolution: 12 bits Frequency sweep: Linear or logarithmic, sine/square to 100 MHz, triangle to 16 MHz Phase-Locked Loop External lock range (standard): 500 Hz to 10 MHz External lock range (arbitrary): 500 Hz to 100 MHz Input voltage: 100 mV to 30 Vrms Phase offset: ±180° coarse, ±36° fine (0.01° resolution) Phase accuracy: 2% ± sample clock period Frequency readback: 4-digit counter (0-10 MHz, ≤30 Vrms input) Frequency Synthesis Standard reference: CLK10 at 100 ppm accuracy Optional TCXO: 1 ppm accuracy and stability Frequency resolution: 7-digit standard, 11-digit synthesis Synthesis accuracy: Up to 1 ppm Modulation Amplitude modulation: 10 Hz to 500 Hz rate, 1% to 200% depth Phase modulation: PLL mode operation Advanced Sequencing Waveform linking: Up to 4096 segments and/or bursts Key Features Dual-mode operation merges arbitrary and function generation in one module PLL synchronization enables phase-coherent multi-waveform synthesis Programmable phase offset with 0.01° fine resolution Integrated frequency counter functionality Temperature-stabilized clock option for long-term accuracy Typical Applications Stimulus generation for analog and mixed-signal test benches Frequency sweep testing and characterization Phase-coherent multi-channel stimulus generation Arbitrary waveform synthesis for complex signal simulation Compatibility & Integration VXIbus single-slot C-size form factor enables direct integration into VXI chassis systems.

Features & description

From manufacturer datasheet

Features

• Single-slot C-size message-based VXI waveform synthesizer • Standard, arbitrary, sequenced, pulse, modulated, and half-cycle waveforms • Sample clock to 250 MS/s (continuous mode class) • Sine/square to 100 MHz; triangle/pulse/ramp to 16 MHz class • External PLL lock (STD 500 Hz–10 MHz; ARB per segment length) • Phase modulation; AM/ASK/FM/FSK/PSK class modulation (enhanced mode) • Built-in counter/timer (frequency, period, pulse width, totalize) • Legacy mode 512k/12-bit; modern mode 1M/16-bit vertical resolution • 10 mV–16 Vpk-pk into 50 ohm (20 mV–32 V open circuit) • ArbConnection and WaveCAD 3.4 compatible; VXIplug&play / LabVIEW / CVI

3152B Characteristics / Specifications

PARAMETER	VALUE
Model	3152B
Manufacturer	Astronics Test Systems / EADS / Racal Instruments
Instrument Type	VXI precision PLL arbitrary / function waveform generator
Form Factor	C-size, single-slot, message-based VXI
Sample Clock	up to 250 MS/s continuous (modern mode); 11-digit resolution class
Frequency (sine/square)	100 uHz to 100 MHz
Amplitude	10 mV to 16 Vpk-pk into 50 ohm; 20 mV to 32 Vpk-pk open
Memory	legacy 512 k points / 12-bit; modern 1 M points / 16-bit
Reference	CLK10 typical 100 ppm; optional internal TCXO 1 ppm
PLL Input	external lock to ~30 Vrms class; phase offset programmable
Counter	20 Hz to 100 MHz class on TRIG/PLL IN when counter mode enabled
Power	typically under 25 W total (family datasheet)
Weight	about 2 lb 9 oz (1.16 kg)
Ordering	408151-001 (1 M RAM, 1 ppm TCXO); TEK and ID-response variants exist Standard Operating Conditions Operate 0 to 55 C inaproperly cooled VXI chassis. Counter/timer mode disables waveform generation when enabled. Use compatibility vs extended mode intentionally for legacy vs ArbConnection workflows.

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 mode unlocked by ArbConnection software. Ordering class includes 1 M-point memory and 1 ppm TCXO (P/N 408151-001 and variants).

Applications
VXI ATE stimulus generation; PLL-locked waveform sources; telecom and high-SNR sine/square test; replacement for legacy pulse/function generators in VXI; multi-module synchronized stimulus.

Key Features
- Single-slot C-size message-based VXI waveform synthesizer
- Standard, arbitrary, sequenced, pulse, modulated, and half-cycle waveforms
- Sample clock to 250 MS/s (continuous mode class)
- Sine/square to 100 MHz; triangle/pulse/ramp to 16 MHz class
- External PLL lock (STD 500 Hz–10 MHz; ARB per segment length)
- Phase modulation; AM/ASK/FM/FSK/PSK class modulation (enhanced mode)
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Operational Notes
Confirm faceplate 3152B vs 3152/3152A and option memory/TCXO. Catalog title “Precision PLL Waveform

Generator” matches this synthesizer family.

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

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