FEMTOSIX™

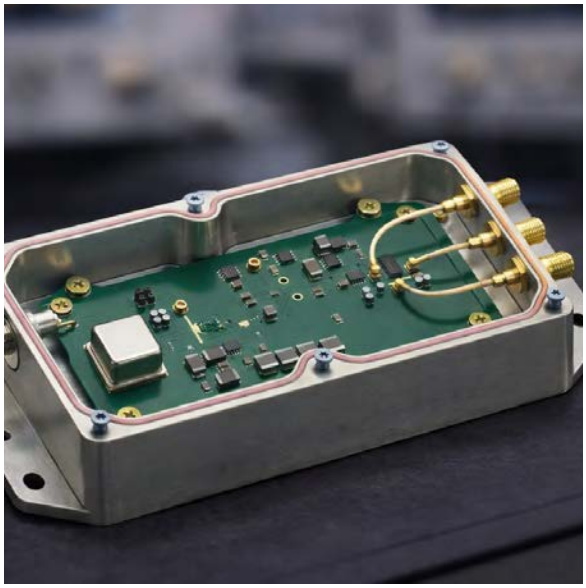
Deployable Microwave Clock Source for Systems That Rely on Lab-Grade Timing

Replace laboratory-grade clock sources with a compact, deployable solution.

In many systems, achieving peak performance today requires bulky lab equipment that cannot be deployed, creating a gap FEMTOSIX™ is designed to close.

Modern RF systems often rely on laboratory-grade clock sources to achieve peak performance, particularly in high-speed DAC/ADC evaluation and advanced RF architectures.

FEMTOSIX™ delivers comparable timing performance in a compact, deployable form factor, enabling integration where lab instruments are impractical.



Key Advantages:

- Lab-level timing performance in deployed systems
- Enables high-speed DAC/ADC evaluation platforms
- Improves spectral purity and dynamic range
- Compact, integrable SWaP-C optimized design
- Replaces non-deployable lab clock sources

FEMTOSIX™ Use Cases

High-Speed DAC / ADC Platforms

Replace lab sources in evaluation and test setups.

Phased Array & EW Subsystems

Support coherent signal generation and timing alignment.

RF Test & Validation Systems

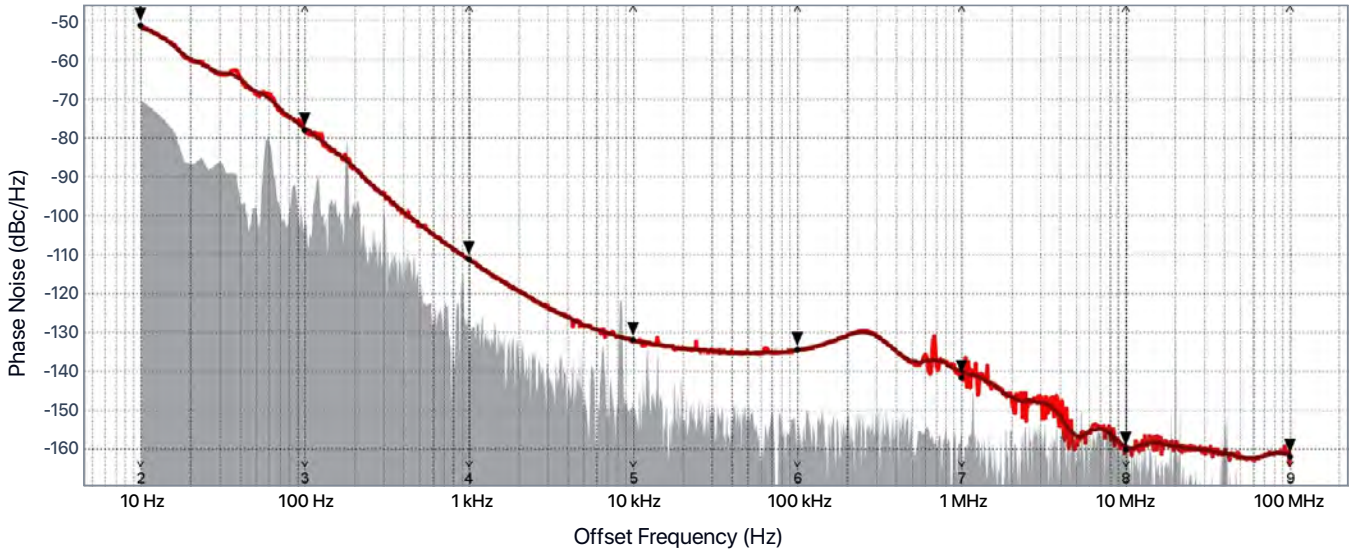
Deploy lab-level timing in field-ready configurations.

FEMTOSIX™ Performance at a Glance

~5 fs RMS Jitter	-130 dBc/Hz @ 10 kHz	~-165 dBc/Hz Noise Floor	10.24 GHz Output
Enables high-fidelity timing in microwave systems	Low close-in phase noise for cleaner signals	Maintains spectral integrity at higher offsets	Aligned with modern high-speed converter architectures

PARAMETER	REPRESENTATIVE VALUE
CORE OUTPUT	
Nominal frequency	10.24 GHz
RF output differential power	2 to 6 dBm into 100 Ω @ +25°C
MEASURED TIMING AND SPECTRAL PERFORMANCE	
RMS jitter	5 fs typical, 6 fs max (12 kHz–20 MHz)
Phase noise @ 1 kHz offset	-110 dBc/Hz
Phase noise @ 10 kHz offset	-130 dBc/Hz
Phase noise @ 100 kHz offset	-134 dBc/Hz
Phase noise @ 1 MHz offset	-140 dBc/Hz
Phase noise @ 10 MHz offset	-158 dBc/Hz
Non-harmonic spurious	-70 dBc
Reference spurious	-60 dBc
ENVIRONMENTAL AND OPERATING CONDITIONS	
Operating temperature (specified)	-25°C to +70°C
Operating temperature (functional)	-40°C to +85°C

Typical Phase Noise at 10.24 GHz



Measured single-sideband (SSB) phase noise of the FEMTOSIX™ microwave clock source at a 10.24 GHz carrier frequency. The curve shows low close-in phase noise and a noise floor approaching -165 dBc/Hz at higher offset frequencies, consistent with ~5 fs RMS jitter (12 kHz–20 MHz integration bandwidth).

MICROSOURCE
Excellence by Design

If your system depends on a lab-grade clock source today, FEMTOSIX™ is designed to replace it.