



SiTime's Encore-based Ultra Performance Differential Oscillator family delivers integrated RMS phase jitter (12 kHz to 20 MHz) as low as 0.3 ps with ± 10 ppm frequency stability across the entire temperature range.

These devices are the first MEMS timing solutions to exceed the stringent 10GbE and SONET clocking requirements, and are ideal for applications in telecom, networking, storage and wireless.

All of SiTime's Oscillators are 100% drop-in replacements for quartz crystal, SAW and third-overtone oscillators and can be used in existing designs without any schematic or layout changes.

Differential Oscillators from SiTime can support

- 0.3 or 0.6 ps integrated RMS phase jitter (12 kHz to 20 MHz)
- Frequencies up to 800 MHz, with stability as good as ± 10 PPM
- Up to 6 decimal digits of frequency accuracy
- Configurable LVPECL, LVDS, HCSL and CML output signalling levels
- 2.5V to 3.3V operation - Contact SiTime for 1.8V LVDS option.
- Industry standard footprints – 3225, 5032 and 7050 packages.
- Available in industrial, extended commercial and commercial temperature ranges.

Model	Description	Characteristics	Operating Temperature Range	Frequency Stability (PPM)	Package Size (mm)
SiT9156	10 GbE Oscillator	156.250000 156.253906 156.257812 156.261718 161.132800 Positive frequency shift: $\pm 25, \pm 50, \pm 75$ PPM	-20°C to +70°C -40°C to +85°C	$\pm 10,$ $\pm 25,$ ± 50	3.2 x 2.5 x 0.75 5.0 x 3.2 x 0.75 7.0 x 5.0 x 0.9
SiT9121	LVPECL/LVDS O/P Programmable	1-220 MHz RMS phase jitter ≤ 0.6 ps 2.5, 3.3, & 2.25V to 3.63V continuous supply voltage	-20°C to +70°C -40°C to +85°C	$\pm 10,$ $\pm 25,$ ± 50	3.2 x 2.5 x 0.75 5.0 x 3.2 x 0.75 7.0 x 5.0 x 0.9
SiT9120	Low Jitter LVPECL/LVDS O/P	31 common std freqs RMS phase jitter ≤ 0.6 ps 2.5, 3.3, & 2.25V to 3.63V continuous supply voltage	-20°C to +70°C -40°C to +85°C	± 10 ± 20 ± 25 ± 50	3.2 x 2.5 x 0.75 5.0 x 3.2 x 0.75 7.0 x 5.0 x 0.9
SiT9102	Hi-Stab (± 10 PPM) V. Low Jitter LVPECL/LVDS/HCL/CML Programmable	1-220 MHz 1.8V, 2.5V & 3.3V RMS Phase Noise < 1 ps	0°C to +70°C -20°C to +70°C -40°C to +85°C	± 10 ± 15 ± 20 ± 25 ± 50	5.0 x 3.2 x 0.75 7.0 x 5.0 x 0.9
SiT9122	High Frequency LVPECL/LVDS Programmable	220MHz to 650MHz RMS phase jitter ≤ 0.6 ps 2.5, 3.3, & 2.25V to 3.63V continuous supply voltage	-20°C to +70°C -40°C to +85°C	± 10 ± 20 ± 25 ± 50	3.2 x 2.5 x 0.75 5.0 x 3.2 x 0.75 7.0 x 5.0 x 0.9
SiT9107	Hi-Stab (± 10 PPM) V. Low Jitter High Frequency LVPECL/LVDS/HCL/CML Programmable	220MHz to 850MHz Worlds First differential oscillator with ± 10 PPM Stability with ≤ 0.6 ps phase noise jitter	0°C to +70°C -20°C to +70°C -40°C to +85°C	± 10 ± 15 ± 20 ± 25 ± 50	3.2 x 2.5 x 0.75 5.0 x 3.2 x 0.75 7.0 x 5.0 x 0.9