

## Time Machine II

MEMS Oscillator Programmer

## Instant Oscillators

Complete easy-to-use programming kit for SiTime's field programmable devices

Any frequency

Any voltage

Any stability





Don't waste time searching and waiting for oscillators. The Time Machine II<sup>™</sup> allows you to easily configure SiTime always-in-stock field programmable devices to your exact specification and create drop in replacements for legacy quartz oscillators within seconds.

#### **Benefits**

- Optimize system performance with custom frequencies
- Reduce EMI with programmable drive strength
- Quickly develop prototypes and reduce design time with instant oscillators

#### Applications

- Ultra-Performance Oscillators: SiT8208, SiT8209
- Differential Oscillators: SiT9120, SiT9121, SiT9122
- Low Power Oscillators: SiT8008, SiT8009, SiT2001, SiT2002, SiT1602
- High Temp Oscillators: SiT8918, SiT8919, SiT8920, SiT8921, SiT2018, SiT2019, SiT2020, SiT2021, SiT1618
- AEC-Q100 Automotive Oscillators/Clocks: SiT8924, SiT8925,
- SiT2024, SiT2025
- VCXOs: SiT3807, SiT3808, SiT3809
- Spread Spectrum Oscillators: SiT9003, SiT9005

#### Features

#### Easy to Use

- USB powered programmer
- Add-on cards with directional connectors and indicators
- Anti-slip bumps hold programmer in place
- One-click programming software
- Built-in part number generator
- Programming history
- Auto software update
- Compatible with all PCs and Microsoft Windows

#### **Complete Solution**

- Small carrying case holds programmer and all accessories
- Add-on cards (socket cards) support 6 oscillator packages
- Sample field programmable device packs
- Complete documentation

#### **Future Proof**

- Software and hardware upgradable for future products
- Durable socket card connectors rated at 5000 insertions

# **Si**Time

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### Program Oscillators in 3 Simple Steps

- 1. Mount the field programmable device
- 2. Specify desired configuration
- 3. Program

See how easy it is to program SiTime devices using the Time Machine at: sitime.com/time-machine-video

	SiTime Machine SiTime Time — X		
One-Click Programming Instant Part Number	Time Machine View Help SIT9122AC-1C2-33E622.080000 FP Part Number Generator Datasheet 5.0x3.2mm		
Link to Documentation	SIT9120AI-2C2-255156.250000 FP Program Part Number Generator Datasheet 7.0x5.0mm		
Tracking & Device Count Please enter a Tracking ID (optional)   Additional Information Detected on 5.0x3.2mm[Ch1] Partnumber: FP Part			
	Detected on 7.0x5.0mm[Ch2] Partnumber: FP Part		
Connectivity Status	Connected READY		

#### **Configure Devices to Your Exact Specification**

Customizable Frequency	Differential: 1 to 625 MHz Single-ended: 1 to 220 MHz	6 decimals of accuracy	
Frequency Stability	±0.1 to ±50 PPM		
Supply Voltage	1.8V, 2.5 to 3.3V		
Pull Range	Programmable from ±50 to ±1600 ppm in VCXO		
Drive Strength Control	0.25 to 40 ns rise/fall time for low to high output drive and load		
Spread Spectrum	$\pm 0.25$ to $\pm 2.0\%$ center spread and -0.5 to -4.0% down spread		
Additional Options			
Package Options	QFN: 2016, 2520, 3225, 5032, 7050; SOT23-5: 2928; SMD: 5032;		
Temperature Range	-20 to +70°C, -40 to +85°C, -40 to +105°C, -40 to +125°C, -55 to +125°C		
Output Signaling	Differential: LVPECL or LVDS, Single-ended: LVCMOS		

#### Kit Contents (SiT6100DK) SiTime Time Machine II Programmer Adapter board(s) **USB** Cable Instant Oscillators GREEN INSTANT LIFETIME Tweezers SOLUTIONS SAMPLES WARRANTY Field Programmable Oscillators > Download Time Machine II Software: sitime.com/tm-sw Field programmable oscillators: sitime.com/fp-devices Programmer and adapter cards: sitime.com/time-machine User Manual: sitime.com/tm-um +1-408-328-4400 5451 Patrick Henry Drive, Santa Clara, CA 95054, USA salessupport@sitime.com sitime.com

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