



Time Machine II™ MEMS Oscillator Programmer

QUICK START GUIDE

Kit Contents

- MEMS Oscillator Programmer
- Universal card
- Interposer boards
- USB cable
- Tweezers
- Field programmable device sample packs

Step 1: Install Time Machine Software

- Go to www.sitime.com/tm-sw, download SiTime installer package onto target computer that contains Time Machine II software installer, license, user guides and other documentation.
- Run the SiTime installer executable, and the following GUI will appear on screen:



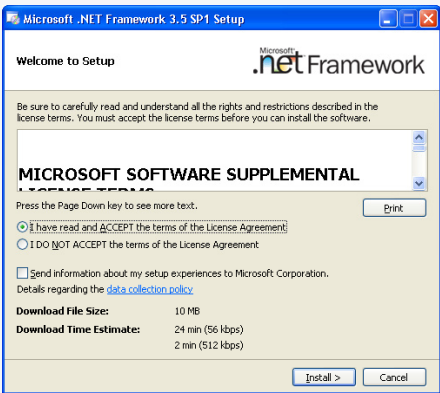
- Microsoft .NET Framework must be installed on target computer.

①

For Microsoft® Windows 7/8/10/11 operating systems

Refer to the GUI screen on page 1 for the following instructions.

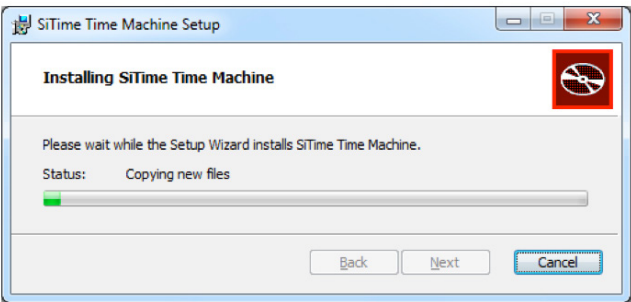
- If .NET Framework 3.5 SP1 is installed on your computer, a green check mark will appear next to the .NET Framework 3.5 Service Pack 1 line under Software Installation and the Install button will be grayed out.
- If .NET Framework 3.5 SP1 is NOT installed on your computer, click the Install button which will begin to extract the required .NET Framework setup files included with SiTime Installer download package. Read and accept .Net Framework License Agreement and follow onscreen instructions to complete the installation.



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For Microsoft® Windows XP operating system only

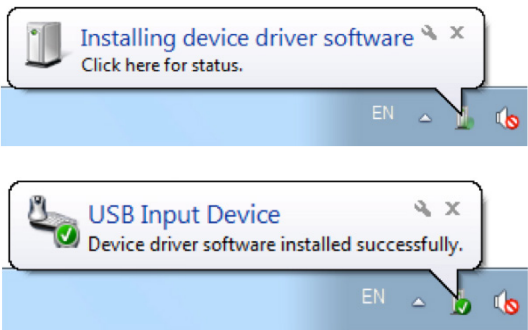
- .NET Framework 4.0 Service Pack 1 must be installed. During the driver installation process, you may be prompted to install .NET Framework 4.0.
- Download and install .NET Framework 4.0 from the Microsoft Download Center at <http://bit.ly/1OD2tMH>.
- After .NET Framework is installed, press the Install button next to *Time Machine Software* to start installation.
- Read and accept the License Agreement and follow the onscreen instructions to complete the installation.



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Step 2: Connect the MEMS Oscillator Programmer

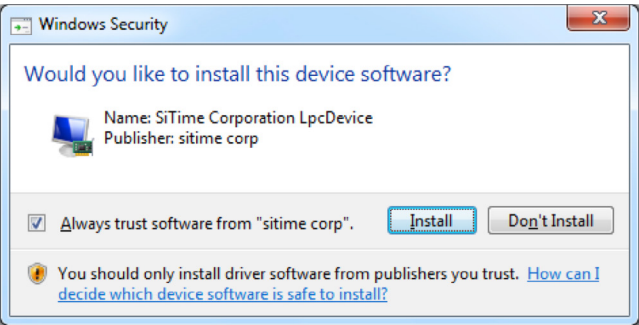
- Connect the SiTime programmer to your PC with the USB cable.
- Check that the power light on the SiTime programmer is illuminated. The red light is located under the *Time Machine II* label on the programmer. If the power light does not appear, make sure the USB port on the PC is active.
- The *Windows Found New Hardware* notification will automatically appear on screen. Wait until the USB device driver installation is complete before continuing.



④

Step 3: Launch Time Machine Software

- Click on the *SiTime Time Machine* icon to start the Time Machine software.
- Time Machine driver installation is required during first use. Select *Always trust software from "sitime corp"* and press the *Install* button.

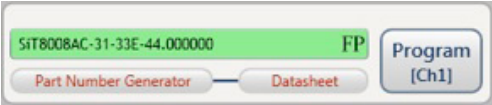


- *Connected* and *READY* will be displayed in the bottom left corner of the Time Machine window to confirm that the programmer status is ready to run (See screen on next page).

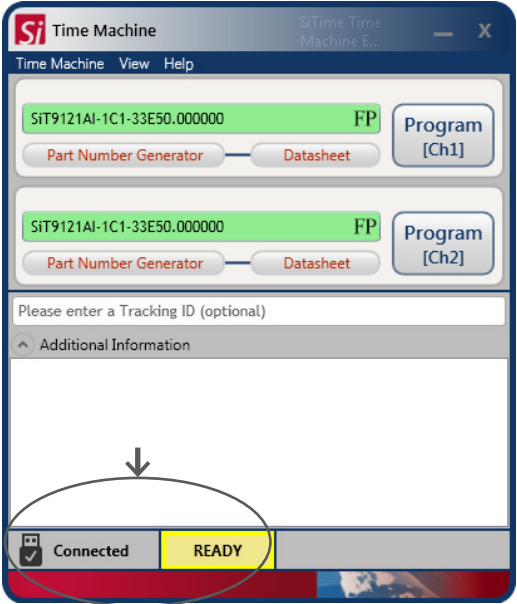
⑤

Step 4: Program MEMS Oscillators

- Select and insert the universal card SiT6170DK in TM base. For all MHz devices, use channels explicitly labeled with “MHz,” and for kHz devices, use channels labeled with “kHz.” It is important to ensure that P3 is connected. Each interposer board includes a socket for connecting devices in different packages to the main unit for programming via the universal socket card. It is possible to remove and insert devices in the socket while the board is connected to the SiTime Programmer.
- Each socket card has two sockets for different package sizes. Use the tweezers to insert a field programmable device into the proper socket on the socket card. Align pin 1 (which is indicated with a small circle on top of package) with the small white triangle on the socket card.
- Enter the SiTime part number into the *part number* field in the programming software window. Or use the *Part Number Generator* to build the SiTime part number.



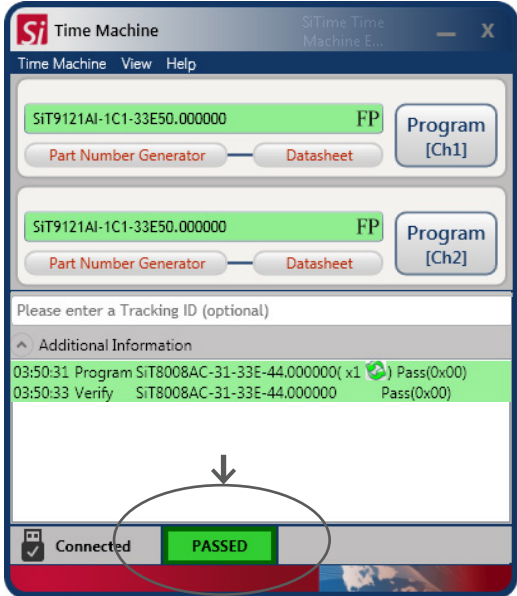
- Press the *Program* button to program the device.



⑥

⑦

- When the green *PASSED* indicator is displayed at the bottom of the Time Machine II window, you have successfully programmed the SiTime MEMS oscillator. Congratulations!



⑧

Notice to Users

1. The Time Machine II Programmer and associated hardware (henceforth Platform) are intended for use only with SiTime's MEMS oscillators. This Platform will not program any other manufacturer's programmable oscillators and no attempt to do so should be made.
2. The Platform is intended for use for engineering development and evaluation of SiTime's MEMS Oscillators. SiTime does not guarantee or warranty the devices that are programmed on this Platform for qualification or production purposes.
3. The Platform should be used in a static free environment with good engineering practices.
4. This Platform does not fall under the scope of the European Union directives regarding electromagnetic compatibility, FCC, CE or UL and therefore may not meet the technical requirements of these directives.
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6. The user assumes all responsibility and liability for [the] proper and safe handling of the Platform and the associated programmed MEMS Oscillators.
7. The user indemnifies SiTime from all claims arising from the handling or use of this Platform and the associated field programmable devices.
8. Please contact a SiTime representative if you have any issues or problems with using this Platform.

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