

# TimeFlash Field Programming Kit

Configure Your MEMS Oscillators Instantly

Wouldn't it be nice to be able to quickly customize your MEMS oscillators to any frequency, anywhere? With Microchip's TimeFlash Field Programming Kit, it's all possible.

The TimeFlash programmer allows you to rapidly program Microchip's field-programmable MEMS oscillator to a custom frequency in seconds, minimizing design time by enabling fast prototyping and testing. Our MEMS oscillators are available in industry-standard packages that are drop-in replacements to standard crystal oscillators.



## Features and Benefits

- Custom frequencies in seconds with immediate design verification
- Supports all Microchip MEMS oscillator package sizes
- Supports CMOS, LVPECL, LVDS, and HCSL output types
- Easy-to-use interface with auto software update

The TimeFlash Programmer is used with device-dependent socket cards and the appropriate DSC8XXX or DSC6XXX devices.

## Kit Contents

- Portable programming dongle
- USB cable
- Antistatic tweezers
- USB Flash drive for installing the software

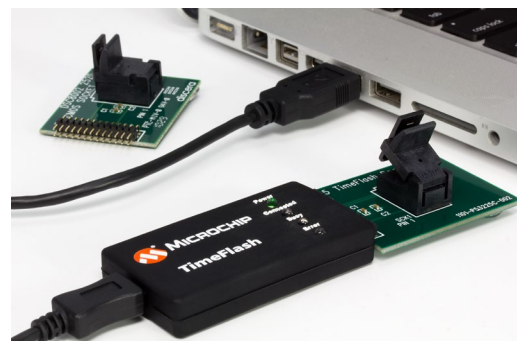
*Portable USB-Powered Programmer Allows Easy Configuration*



## Kit Specifications

Feature	Specification
<b>Programmer Power Supply</b>	Supplied through USB cable (micro USB to USB A)
<b>Oscillator Operating Supply Voltage</b>	1.8V–3.6V
<b>Programming Time</b>	2 seconds
<b>Operating System Supported</b>	Windows® 7, 8.1 and 10
<b>Programmer Size</b>	2.5 × 1.25 × 0.5 in (63.5 × 31.75 × 12.7 mm)
<b>Programmer Weight</b>	0.2 lb (90 g)

*Complete Solution Enables Fast Prototyping*



## Ordering Information

For programming of devices, a TimeFlash programmer and an appropriate socket card kit are required. You can order an appropriate socket card with the socket size that matches your selected device, or you can purchase extended kits that offer either two socket cards, or all six cards.

Part Number	Description
DSC-TimeFlash-Kit	TimeFlash Field Programming Kit with all 6 cards (7.0 × 5.0 mm, 5.0 × 3.2 mm, 3.2 × 2.5 mm, 2.5 × 2.0 mm, 2.0 × 1.6 mm), programmer, USB cable, tweezers and installation USB Flash drive.
DSC-TimeFlash-Kit2	TimeFlash Field Programming Kit with 2 cards (3.2 × 2.5 mm, 2.5 × 2.0 mm), programmer, USB cable, tweezers and installation USB Flash drive.
DSC-TimeFlash	TimeFlash Field Programming Kit with programmer, USB cable, tweezers and installation USB Flash drive. (No socket card included. Socket cards need to be ordered separately.)
DSC-PROG-7050	Single socket card (7.0 × 5.0 mm) with blank DSC8001 parts for TimeFlash Field Programming Kit.
DSC-PROG-5032	Single socket card (5.0 × 3.2 mm) with blank DSC8001 parts for TimeFlash Field Programming Kit.
DSC-PROG-3225	Single socket card (3.2 × 2.5 mm) with blank DSC8001 parts for TimeFlash Field Programming Kit.
DSC-PROG-2520	Single socket card (2.5 × 2.0 mm) with blank DSC8001 parts for TimeFlash Field Programming Kit.
DSC-PROG-2016	Single socket card (2.0 × 1.6 mm) with blank DSC6101 parts for TimeFlash Field Programming Kit.
DSC-PROG-1612	Single socket card (1.6 × 1.2 mm) with blank DSC6101 parts for TimeFlash Field Programming Kit.

The kits, socket cards and black supported devices are available from microchipDIRECT ([www.microchipdirect.com](http://www.microchipdirect.com)) or from Microchip's worldwide distribution network.

## Supported Devices

TimeFlash Part Number	Equivalent Programmed Part Number	Description	Packages	
DSC8001	DSC1001	Low-power CMOS MEMS oscillator	A = 7.0 × 5.0 mm B = 5.0 × 3.2 mm C = 3.2 × 2.5 mm D = 2.5 × 2.0 mm	
DSC8002	DSC1033	Low-power CMOS MEMS oscillator		
DSC8003	DSC1003	Low-power CMOS MEMS oscillator with 25 pf output drive strength		
DSC8004	DSC1004	Low-power CMOS MEMS oscillator with 40 pf output drive strength		
DSC8101	DSC1101	Low-jitter, precision, CMOS MEMS oscillator with standby		
DSC8102	DSC1102	Low-jitter, precision, LVPECL MEMS oscillator with standby		
DSC8103	DSC1103	Low-jitter, precision, LVDS MEMS oscillator with standby		
DSC8104	DSC1104	Low-jitter, precision, HCSL MEMS oscillator with standby		
DSC8121	DSC1121	Low-jitter, precision, CMOS MEMS oscillator with OE		
DSC8122	DSC1122	Low-jitter, precision, LVPECL MEMS oscillator with OE		
DSC8123	DSC1123	Low-jitter, precision, LVDS MEMS oscillator with OE		
DSC8124	DSC1124	Low-jitter, precision, HCSL MEMS oscillator with OE		
DSC6003-000.0000	DSC6003XXXX-XXX.XXXX	Ultra-low power MEMS oscillators with OE and low drive		C = 3.2 × 2.5 mm J = 2.5 × 2.0 mm M = 2.0 × 1.6 mm H = 1.6 × 1.2 mm
DSC6013-000.0000	DSC6013XXXX-XXX.XXXX	Ultra-low power MEMS oscillators with standby and low drive		
DSC6101-000.0000	DSC6101XXXX-XXX.XXXX	Low-power, precision MEMS oscillators with OE		
DSC6111-000.0000	DSC6111XXXX-XXX.XXXX	Low-power, precision MEMS oscillators with standby		
DSC6001-000.0000	DSC6001XXXX-XXX.XXXX	Ultra-low power MEMS oscillators with OE		
DSC6011-000.0000	DSC6011XXXX-XXX.XXXX	Ultra-low power MEMS oscillators with standby		
DSC6103-000.0000	DSC6103XXXX-XXX.XXXX	Low-power, precision MEMS oscillator with OE and low drive		
DSC6113-000.0000	DSC6113XXXX-XXX.XXXX	Low-power, precision MEMS oscillator with standby and low drive		
DSC6102-000.0000	DSC6102XXXX-XXX.XXXX	Low-power, precision MEMS oscillator with OE and high drive		
DSC6112-000.0000	DSC6113XXXX-XXX.XXXX	Low-power, precision MEMS oscillator with standby and high drive		

## Resources

- Already have the TimeFlash Field Programming Kit? Download the latest version of the software. [www.microchip.com/TimeFlashSoftware](http://www.microchip.com/TimeFlashSoftware)
- View the *TimeFlash Programmer User's Guide* (DS50002563)
- Watch the demo video at for step-by-step instructions on how to program a MEMS oscillator. [www.microchip.com/TimeFlashVideo](http://www.microchip.com/TimeFlashVideo)
- For additional support, please email us at [TimeFlashSupport@microchip.com](mailto:TimeFlashSupport@microchip.com)

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