DALLAS SEMICONDUCTOR

Application Note 172
DS1075X-M Crystal Replacement Module

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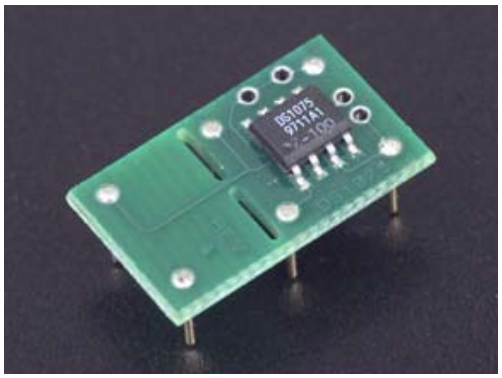
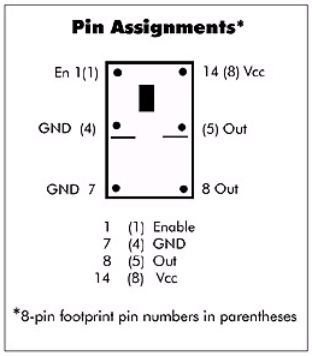
Use the Module for Quick and Easy Evaluation of the DS1075 EconOscillator in Existing Crystal-Based Oscillator Designs

- Matches common 8-pin and 14-pin crystal oscillator footprints
- Evaluate the DS1075 in existing crystal oscillator applications
- Output-enable function
- Programmable output frequencies from 27kHz to 100kHz

Dallas Semiconductor's DS1075 EconOscillator™ offers designers a programmable replacement for bulky resonators and oscillators. A single-chip, fixed-frequency oscillator, the DS1075 can be programmed to produce a set frequency between 27kHz and 100MHz.

A programmable EEPROM divider and prescaler is used to produce the desired output frequencies. These values can either be pre-programmed at the factory or user-configured. The chip maintains a 1% accuracy over the specified temperature and voltage ranges. No external components are required, so the DS1075 saves board space for other functions.





The DS1075X-M Crystal Replacement Module is an evaluation tool allowing the installation of the DS1075 EconOscillator in an existing 8-pin and 14-pin oscillator sockets. The DS1075X-M consists of a printed circuit board containing a DS1075Z but with the footprint and pinout matching most standard oscillator footprints. The DS1075X-M is available in 30MHz, 33.333MHz, 40MHz, and 50MHz. Special frequencies are available on request. Contact Maxim Direct for free samples or further information. Supplies are limited to the quantities at hand.

The DS1075K, an evaluation and programming kit for the DS1075, is also available for $99.

EconOscillator is a trademark of Dallas Semiconductor.

Description

1) The DS1075X-M makes prototyping and product evaluation easy
Use the module for quick and easy evaluation of the DS1075 EconOscillator in existing crystal-based sockets.

2) Replacing an oscillator with an 8-pin DIP footprint
Saw off the lower part of the PC board, insert, and power-up your board.

3) Replacing a crystal oscillator with a 14-pin footprint
Remove the two center pins on the module (see diagram). Pins can be removed by desoldering or cutting them off.

4) Output-enable function
The enable pin operates like most crystal oscillator enable functions. If your design does not require this function, the enable pin on the DS1075X-M can be tied high on your system board, or you can hardwire it to pin 8 on the DS1075X board.

Ordering Information

PART NO.	MAX FREQ	DEFAULT FREQ
DS1075X-M10	100.000MHz	50.000MHz
DS1075X-M80	80.000MHz	40.000MHz
DS1075X-M66	66.666MHz	33.333MHz
DS1075X-M60	60.000MHz	30.000MHz