

Application Note 180

Using the DS1073Z-10A EconOscillator to Clock a Focus Enhancements FS460 PC-to-TV Coprocessor

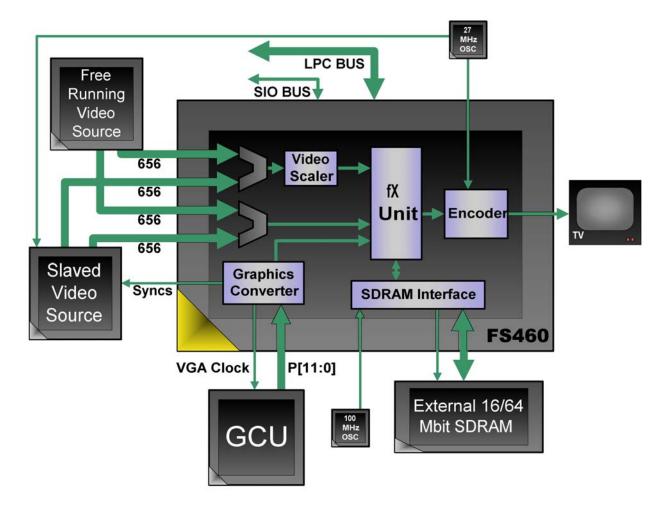
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INTRODUCTION

The FS460 from Focus Enhancements is a video processor with a three-channel mixer. Inputs include two CCIR-656 video streams and one (Intel DVO port) computer graphics stream (up to 1024 x 768). Video effects include scaling, 2D flicker filtering, two layer pixel resolution alpha blending, color keying with border and background, fades, wipes, moves, and graphics frame stores. The FS460 is a broadcast-quality video encoder that supports multiple output standards. The FS460 has applications in cable/DVD players, gaming consoles, graphic design and animation hardware, and many other applications.

Further technical and application information for the FS460 can be found at the Focus Enhancements website at http://www.focusinfo.com/products/b asics.htm.

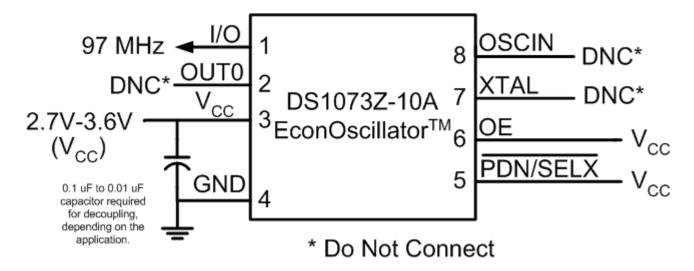
In a typical configuration, the FS460 requires two clock oscillator inputs for operation, a 27MHz clock and a 100Mhz clock. The 27MHz clock input has a frequency tolerance of ± 50 PPM, which can only be achieved using a crystal oscillator. The 100MHz clock input, however, has a frequency tolerance of 90MHz to 100MHz, which can easily be obtained using a non-crystal oscillator.



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The DS1073Z-10A EconOscillatorTM is a variant of the DS1073Z-100. The DS1073Z-10A has its master oscillator set to 97MHz and divider chain bypassed. This provides for an ouput of between 96MHz to 98MHz over the commercial temperature range and 94MHz to 100MHz over the industrial temperature range, meeting the clock requirements for the FS460. It is branded as a DS1073Z-100.

A typical configuration for the DS1073Z-10A is shown below.



For further information on the DS1073, a link to the datasheet can be found at: http://dbserv.maxim-ic.com/quick-view2.cfm?qv-pk=2617.

This quickview datasheet also includes a link to an online interactive frequency calculator that permits the calculation of other frequencies available from the DS1073.

EconOscillator is a trademark of Dallas Semiconductor.