

LS7290 PRESS RELEASE

A New Low Cost Precision Stepper Motor Controller for Bipolar and Unipolar Motors

LSI/CSI announces the availability of its new high performance stepper motor controller integrated circuit. "A huge advantage for our customers is that **this new IC can replace the expensive L297** in most applications", according to Pete Visconti, VP Sales and Marketing. Designated **LS7290**, this IC is capable of step sizes ranging between full and 1/2 step.

The **LS7290** is designed to control **two-phase Bipolar motors** or **four-phase Unipolar motors** with minimum burden on the resources of a host micro-controller. For bipolar motors, the **LS7290** interfaces with an external Dual Full Bridge Driver such as the L298, which contains a pair of H-bridges driven by the **LS7290** PWM and Phase Control outputs. The H-bridges allow for the selection of wide range of motor sizes. For unipolar motors, the **LS7290** PWM and Phase Control outputs interface with four AND gates driving four NMOS driver transistors.

Inputs to the **LS7290** are available to control the step size, step command, motor direction, over-current sense, over-current threshold and inter-step phase drive blanking delays. The programmable inter-step blanking delays allow for delay selection to suit a specific motor resulting in reduced audible motor noise, increased step accuracy, and reduced power dissipation. The basic timing clock can be supplied either from the built-in oscillator or from the system clock.

LS7290 features include:

- Programmable step sizes: full, and 1/2.
- Nominal clock frequency: 8MHz
- Maximum stepping rate: greater than 30k per second
- Programmable inter-step blanking delays: 1.25us, 2.5us, 3.75us, and 5us at 8MHz
- H-bridge PWM resolution: 0.39%
- Supply voltage: 3V to 5.5V

LS7290 is available in 24-pin DIP, SOIC and TSSOP packages.