

Quadrature Clock Converter Integrated Circuits

LSI/CSI announces the addition of five new devices to its family of Quadrature Clock Converter ICs. Designated **LS7082N1**, **LS7083N**, **LS7084N**, **LS7183N** and **LS7184N**, these devices are designed to interface between incremental encoders and counting devices by converting the encoder quadrature outputs into directional up/down clocks or clock and direction signals for driving the counting devices. When interfaced with microcontrollers, these devices can free up the resources of a microcontroller by relieving its computational burden used for decoding the quadrature signals. This is especially true at high speeds where the microcontroller becomes an unwieldy tool in performing the task effectively.

According to Peter J. Visconti, LSI's VP of Sales & Marketing, besides their primary application in motion control systems, these devices can be used in a variety of systems requiring control with directional clocks. One such application is replacing a mechanical potentiometer with a precision control comprised of a Rotary Encoder, Quadrature Clock Converter and Digital Potentiometer (think audio volume control, etc).

These new Quadrature Clock Converters are backward compatible with their respective older versions, **LS7082N**, **LS7083**, **LS7084**, **LS7183** and **LS7184**, while providing an enhanced feature set.

Features include:

- x1, x2 or x4 frequency multiplication of the quadrature clock
- Up-clock and down-clock outputs or clock and direction outputs
- Programmable output clock pulse width
- On-chip filtering of quadrature inputs for added reliability
- Up to 16MHz output clock frequency
- 3V to 12V operation
- TTL and CMOS compatibility

LS7082N1 is available in 14-Pin DIP and SOIC packages.

LS7083N, **LS7084N**, **LS7183N** and **LS7184N** are available in 8-Pin DIP and SOIC.