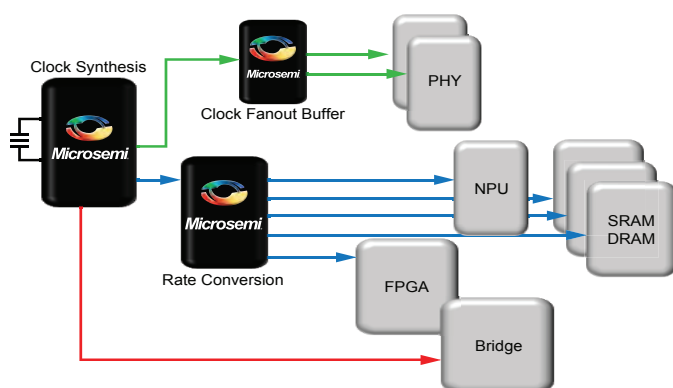


Clock Synthesis Products

Today's modern systems often require the generation and distribution of several clock frequencies to multiple loads. Clock synthesis devices from Microsemi® help lower bill of material costs, reduce board space, simplify design and improve performance and reliability by replacing multiple external components traditionally used to time processors, memory chips, PHY chips and more with a fully integrated, single chip solution.



Applications

- Timing for NPUs, FPGAs, Ethernet switches and PCIe switches
- Timing for 10 Gigabit CDRs, Rapid-IO, PCIe, Serial MII, Star Fabric, Fibre Channel, XAUI
- Processor, processor bus, SDRAM and DDR clocks
- Timing generation for enterprise routers and switches, wireless base stations, servers, optical, storage, networking, and broadcast video applications

Availability and Support

Microsemi Clock Management products are in volume production. To learn more about Microsemi's clock products, visit www.microsemi.com/timing-and-synchronization/clock-synthesis. Full information, including complete data sheets and design manuals, is available to registered MyMicrosemi customers. To register for a MyMicrosemi account, visit www.microsemi.com/create-an-account.

Clock Synthesis Solutions Address Key Customer Pains

- Dependence on crystal oscillators to design and test timing clock trees reduce board reliability and increase cost
- Discrete components increase BOM cost and lengthen time to market
- Expensive oscillators are required to achieve low jitter

High Integration

- Up to 4 independent programmable synthesizers replace competing multi-chip single channel solutions
- Integrated fanout buffers with up to 20 output clock signals in two frequency families

Industry Leading Ultra-low Jitter

- Ultra - low 160 fs jitter on all outputs provide spec-compliant timing for high-performance system components and multi-gigabit interfaces

Wide Frequency Range

- Output clock frequencies from <1 Hz to 1035 MHz
- Fractional synthesizers support any-to-any clock synthesis

Highly Programmable Outputs

- Control of each output clock's signal format, voltage, drive strength, frequency divider and phase
- Replace external support components such as fanout buffers and format converters

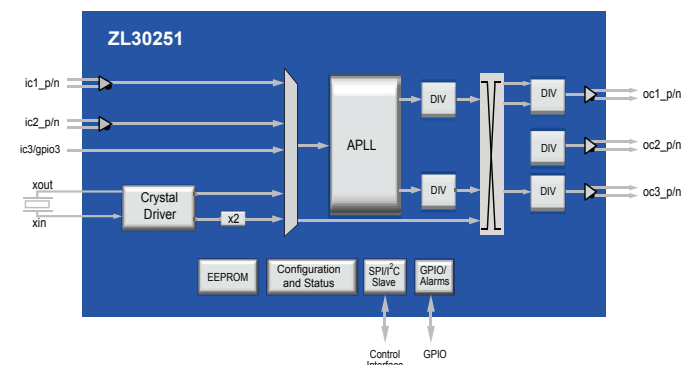
Custom Configuration

- Clock signals available at power-up with OTP or integrated EEPROM; easily configurable with hardware pins

Microsemi makes no warranty, representation, or guarantee regarding the information contained herein or the suitability of its products and services for any particular purpose, nor does Microsemi assume any liability whatsoever arising out of the application or use of any product or circuit. The products sold hereunder and any other products sold by Microsemi have been subject to limited testing and should not be used in conjunction with mission-critical equipment or applications. Any performance specifications are believed to be reliable but are not verified, and Buyer must conduct and complete all performance and other testing of the products, alone and together with, or installed in, any end-products. Buyer shall not rely on any data and performance specifications or parameters provided by Microsemi. It is the Buyer's responsibility to independently determine suitability of any products and to test and verify the same. The information provided by Microsemi hereunder is provided "as is, where is" and with all faults, and the entire risk associated with such information is entirely with the Buyer. Microsemi does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other IP rights, whether with regard to such information itself or anything described by such information. Information provided in this document is proprietary to Microsemi, and Microsemi reserves the right to make any changes to the information in this document or to any products and services at any time without notice.

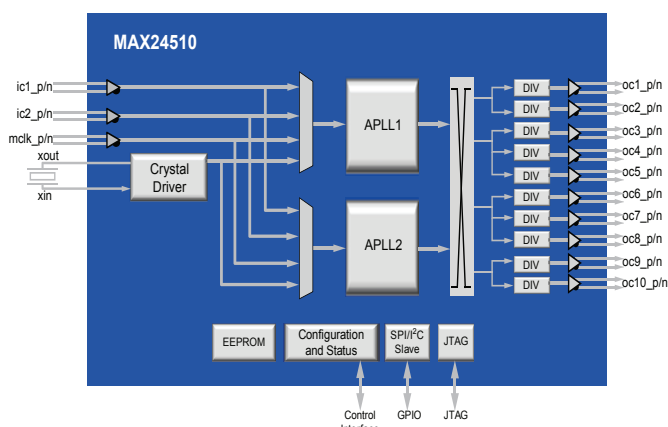
Clock Synthesis Products

Featured Products



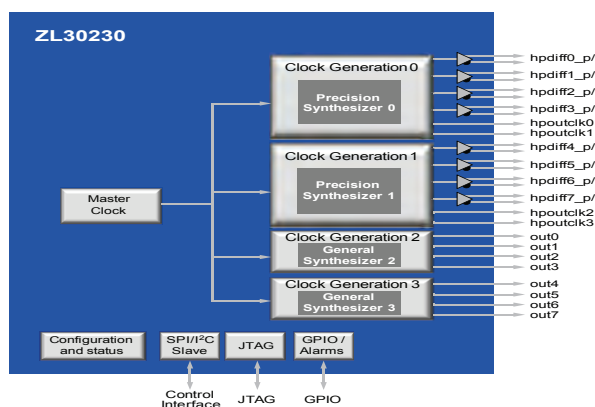
ZL30250 and ZL30251

- Industry leading low jitter provides spec-compliant timing for multi-gigabit interfaces
 - Any-to-any frequency synthesis / conversion generates any clock rate from <1Hz to 1035 MHz with jitter as low as 160 fs
- Spread-spectrum
 - +/- 0.5% meets low EMI specifications
- Accurate numerically controlled oscillator
 - Replaces expensive high end analog VCXOs
- Pin-selectable custom configuration
 - Easy implementation; up to 4 configurations
- Small 5mm x 5mm QFN



MAX24405/10 and MAX24505/10

- Ultra-low jitter output clocks provide spec-compliant timing for multi-gigabit interfaces
 - Any-to-any frequency synthesis / conversion from 10 MHz to 750 MHz with ultra – low 180 fs RMS jitter
- On-chip fanout buffers with flexible output configuration
 - Up to 20 output clock signals in two frequency families
 - Control over each output clock's signal format, voltage and drive strength
 - Frequency divider and phase adjustment per output
- 10mm x 10mm CSBGA



ZL30230, ZL30236 and ZL30237

- High channel integration with low output jitter replace competing multi-chip solutions
 - Up to 4 independent synthesizers generate any clock rate from 1 kHz to 720 MHz with jitter below 0.7 ps RMS
- On-chip fanout buffers reduce component count and board cost
 - 8 LVPECL outputs
 - 8 outputs configurable as LVCMOS or LVDS/LVPECL/HCSL
- 11x11mm BGA



Microsemi Corporate Headquarters
 One Enterprise, Aliso Viejo, CA 92656 USA
 Within the USA: +1 (800) 713-4113
 Outside the USA: +1 (949) 380-6100
 Sales: +1 (949) 380-6136
 Fax: +1 (949) 215-4996
 email: sales.support@microsemi.com
 www.microsemi.com

Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for communications, defense & security, aerospace and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; security technologies and scalable anti-tamper products; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, Calif., and has approximately 3,400 employees globally. Learn more at www.microsemi.com.