ZL40255 SmartBuffer™

3-Output Programmable Fanout Buffer with Multi-Format I/O and Dividers

Product Brief

December 2016

Features

- **4 Input Clocks**
  - One crystal/CMOS input
  - Two differential/single-ended inputs
  - One single-ended/CMOS input
  - Any input frequency up to 1035MHz (up to 300MHz for CMOS)
  - Clock selection by pin or register control
- **Up to 3 Differential Outputs (Up to 6 CMOS)**
  - Output frequencies are any integer divisor up to 2^{32} of the input frequency (CMOS 250MHz max)
  - Each output has independent dividers
  - Low additive jitter <200fs RMS (12kHz-20MHz, for input frequencies ≥100MHz)
  - Outputs are CML or 2xCMOS, can interface to LVDS, LVPECL, HSTL, SSTL and HCSL
  - In 2xCMOS mode, the P and N pins can be different frequencies (e.g. 125MHz and 25MHz)*
  - Per-output supply pin with CMOS output voltages from 1.5V to 3.3V
  - Precise output alignment circuitry and per-output skew adjustment*
  - Per-output enable/disable and glitchless start/stop (stop high or low)*

Ordering Information

ZL40255LDG1	32 Pin QFN	Trays
ZL40255LDF1	32 Pin QFN	Tape and Reel

Matte Tin

Package size: 5 x 5 mm

-40°C to +85°C

- **General Features**
  - Automatic self-configuration at power-up from internal EEPROM; up to four configurations, pin-selectable
  - Crystal interface for frequency synthesis up to 60MHz
  - Four general-purpose I/O pins, each with many status and control options
  - SPI or I^2C processor Interface
  - Tiny 5x5mm QFN package

Applications

- Frequency synthesis up to 60MHz
- Fanout up to 1035MHz
- Format conversion, frequency division, and skew adjustment in a wide variety of equipment types

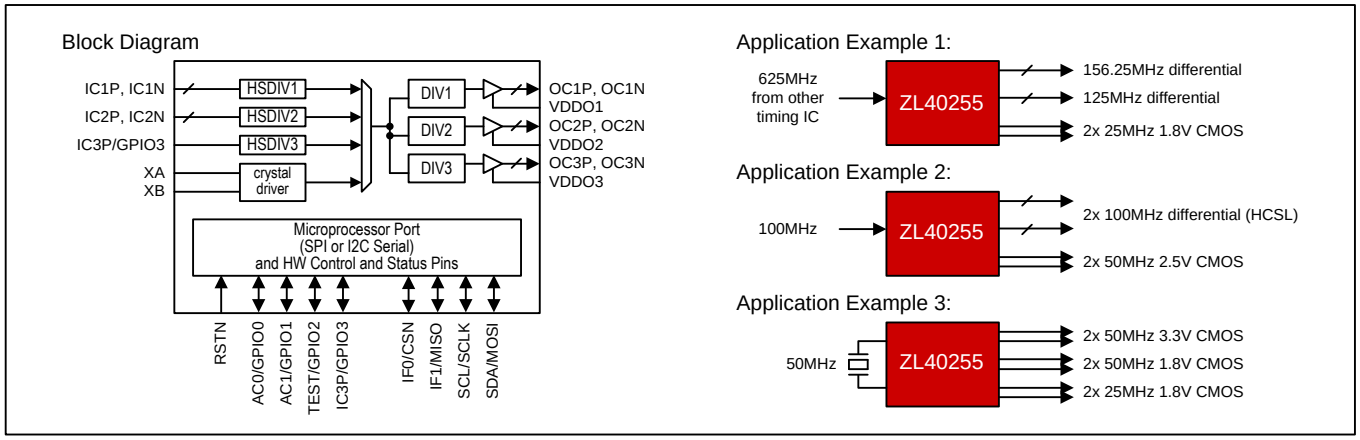

Figure 1 - Functional Block Diagram

* Some features require a higher-frequency input clock and enabling the output dividers.

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

E-mail: sales.support@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**.