ZL30168

Enhanced Quad Clock Translator

Short Form Data Sheet

January 2014

Features

- Four independent clock channels
- Programmable synthesizers generate any clock-rate from 1 Hz to 750 MHz
- Four precision synthesizers generate clocks with maximum jitter below 0.63 ps RMS
- Four programmable digital PLLs/Numerically Controlled Oscillators (NCOs)/OTN clock generators based on buffer-fill levels
  - Programmable digital PLLs synchronize to any clock rate from 1 kHz to 750 MHz
  - Flexible two-stage architecture translates between arbitrary data rates, line coding rates and FEC rates
  - Digital PLLs filter jitter with bandwidths from 5 to 896 Hz
  - Automatic hitless reference switching and digital holdover on reference fail
- Eight reference inputs configurable as single ended or differential

Ordering Information

ZL30168GDG2 144 Pin LBGA Trays
Pb Free Tin/Silver/Copper
-40°C to +85°C
Package size: 13 x 13 mm

- Eight LVPECL outputs and eight LVCMOS outputs
- Operates from a single crystal resonator or clock oscillator
- Configurable via four selectable default configurations or field programmable via SPI/I2C interface

Applications

- OTN muxponders and transponders
- 10 Gigabit line cards
- Synchronous Ethernet, 10 GBASE-R and 10 GBASE-W
- SONET/SDH, Fibre Channel, XAUI

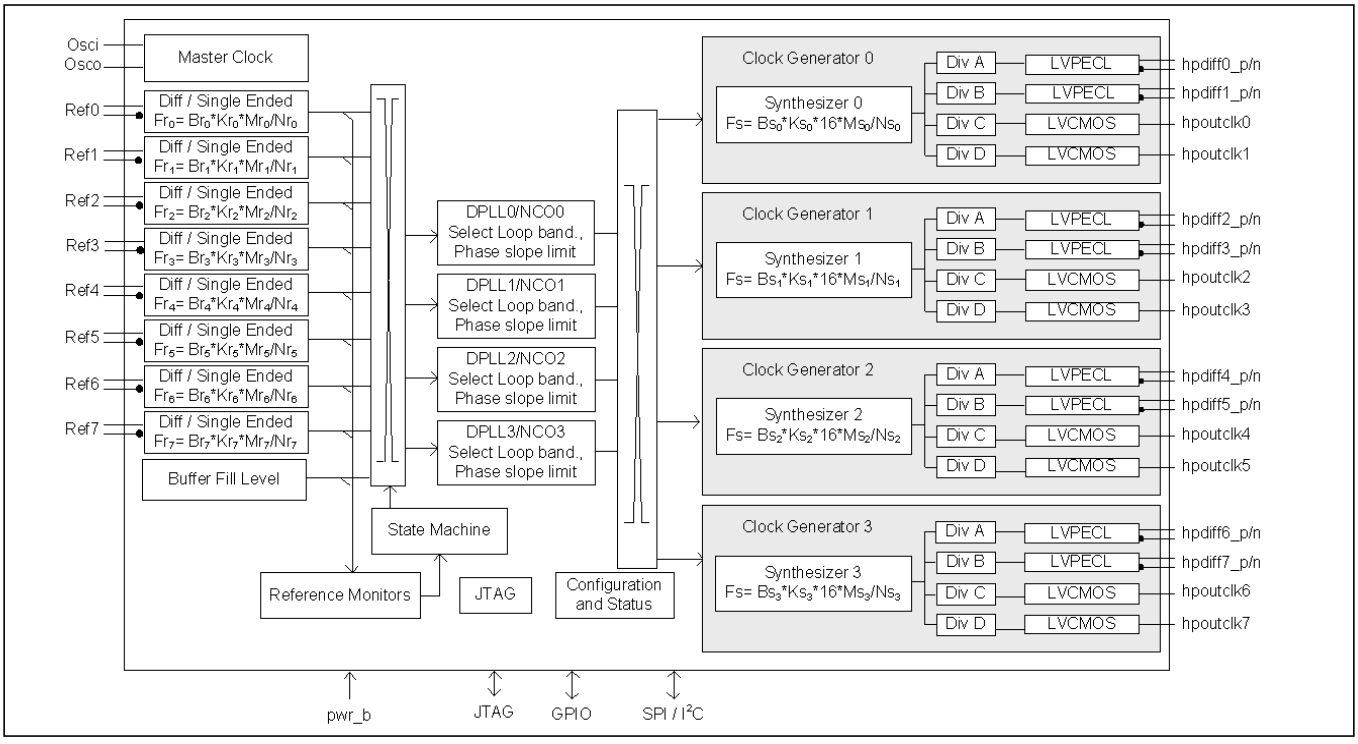

Figure 1 - Functional Block Diagram

Microsemi Corporation
Copyright 2014, Microsemi Corporation. All Rights Reserved.

For more information about all Microsemi products visit our Web Site at

www.microsemi.com

Information relating to products and services furnished herein by Microsemi Corporation or its subsidiaries (collectively "Microsemi") is believed to be reliable. However, Microsemi assumes no liability for errors that may appear in this publication, or for liability otherwise arising from the application or use of any such information, product or service or for any infringement of patents or other intellectual property rights owned by third parties which may result from such application or use. Neither the supply of such information or purchase of product or service conveys any license, either express or implied, under patents or other intellectual property rights owned by Microsemi or licensed from third parties by Microsemi, whatsoever. Purchasers of products are also hereby notified that the use of product in certain ways or in combination with Microsemi, or non-Microsemi furnished goods or services may infringe patents or other intellectual property rights owned by Microsemi.

This publication is issued to provide information only and (unless agreed by Microsemi in writing) may not be used, applied or reproduced for any purpose nor form part of any order or contract nor to be regarded as a representation relating to the products or services concerned. The products, their specifications, services and other information appearing in this publication are subject to change by Microsemi without notice. No warranty or guarantee express or implied is made regarding the capability, performance or suitability of any product or service. Information concerning possible methods of use is provided as a guide only and does not constitute any guarantee that such methods of use will be satisfactory in a specific piece of equipment. It is the user's responsibility to fully determine the performance and suitability of any equipment using such information and to ensure that any publication or data used is up to date and has not been superseded. Manufacturing does not necessarily include testing of all functions or parameters. These products are not suitable for use in any medical **and other** products whose failure to perform may result in significant injury or death to the user. All products and materials are sold and services provided subject to Microsemi's conditions of sale which are available on request.

Purchase of Microsemi's I²C components conveys a license under the Philips I²C Patent rights to use these components in an I²C System, provided that the system conforms to the I²C Standard Specification as defined by Philips.

Microsemi, ZL, and combinations thereof, VoiceEdge, VoicePort, SLAC, ISLIC, ISLAC and VoicePath are trademarks of Microsemi Corporation.

TECHNICAL DOCUMENTATION - NOT FOR RESALE