ZL30158

SyncE and Telecom Rate Clock Translator

Short Form Data Sheet

January 2012

Features

- Synchronizes to any Telecom (N * 8 kHz) or any Synchronized Ethernet (SyncE) frequency.
- Generates any Telecom or SyncE frequency independent of the input frequency rate
- Uses proprietary DPLL technology to guarantee a stable synchronization path over any combination of input and output ratios and frequencies
- Provides input reference jitter filtering with programmable loop bandwidth in the range of 14 Hz to 896 Hz
- Supports two input references, each configurable as single ended LVCMOS (up to 177.5 MHz) or differential LVPECL (up to 750 MHz)
- Automatic hitless reference switching and stand-by mode on reference fail
- Digital PLL (DPLL) and high speed clock synthesis engine for generating high speed PHY clocks
- Provides four high performance differential LVPECL outputs with maximum speed up to 750 MHz with jitter below 0.7 psec RMS
- Provides 2 high performance single ended LVCMOS outputs with maximum speed of 177.5 MHz with jitter below 1.3 psec RMS

Ordering Information

ZL30158GGG	64 Pin LBGA	Trays
ZL30158GGG2	64 Pin LBGA*	Trays

*Pb Free Tin/Silver/Copper

-40°C to +85°C

- Operates from a single crystal resonator or crystal oscillator
- Configurable using a simple SPI/I^2C interface

Applications

- Clock Generation for Physical Line Interface:
  - Synchronous Ethernet, 10 GBASE-R and 10 GBASE-W
  - SONET/SDH, OC-192/OC-48
  - 100 BaseX, GE, Fibre channel
- Clock Generation and Distribution for back plane Interface:
  - TDM, Telecom Bus, Utopia, SBI
  - XAUI

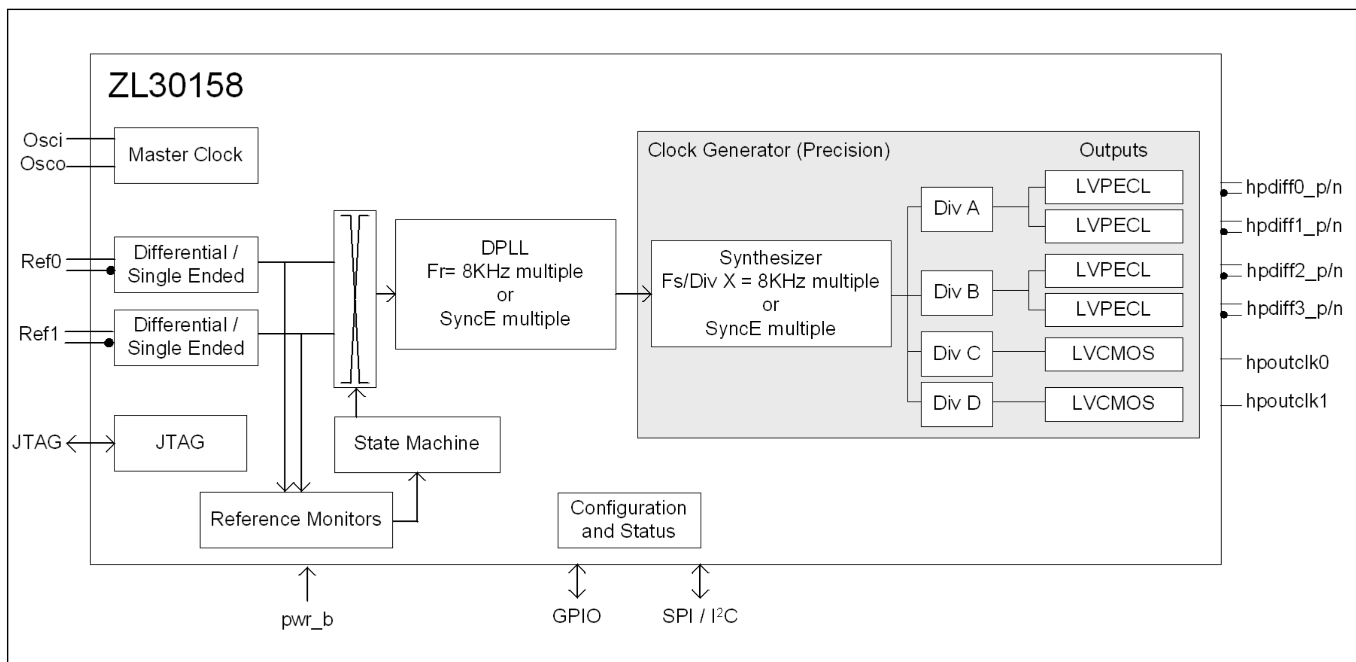
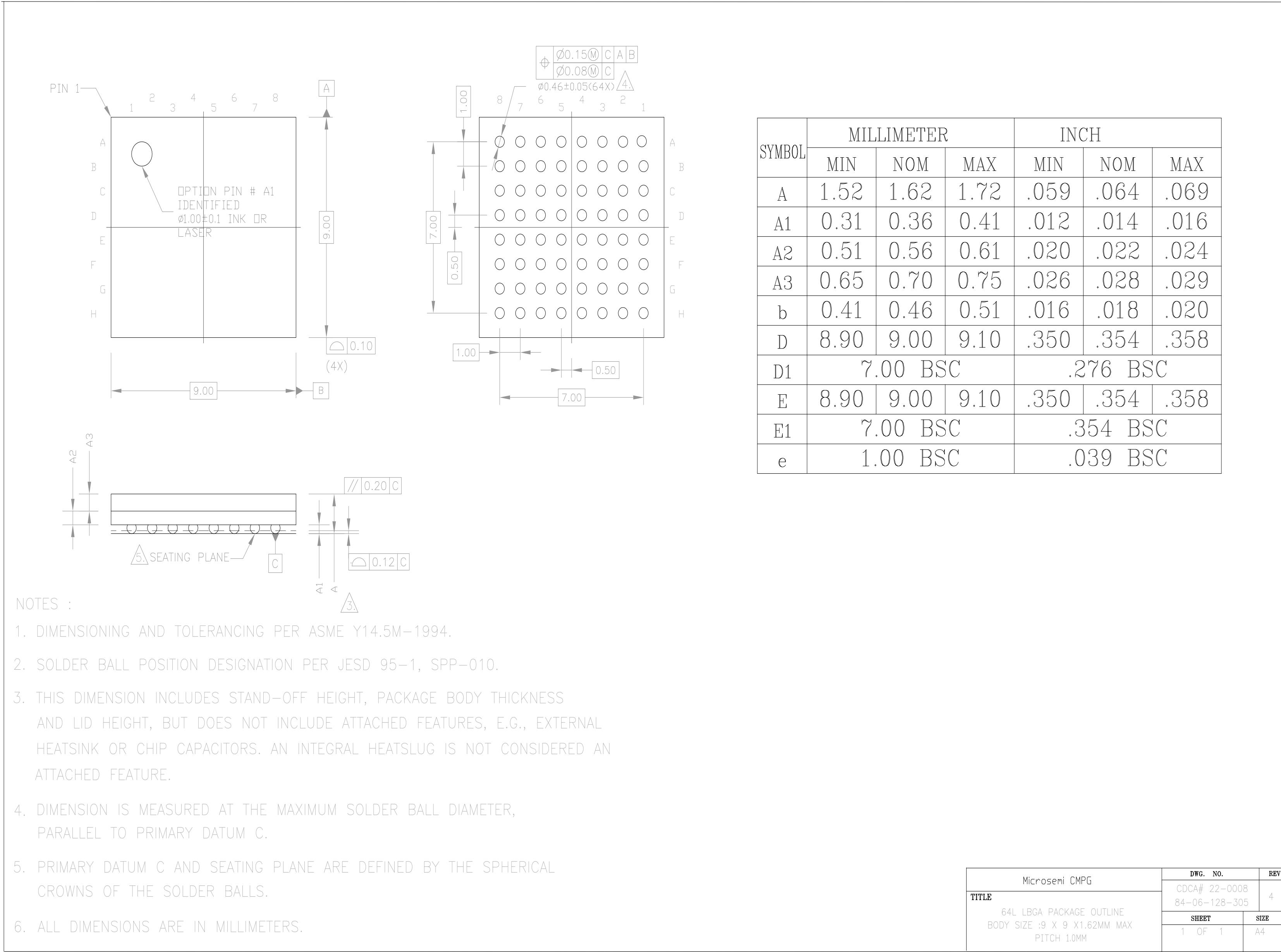


Figure 1 - Functional Block Diagram

Copyright 2011, Microsemi Corporation. All Rights Reserved.

Downloaded from Arrow.com.

Mechanical Drawing



SYMBOL	MILLIMETER			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.52	1.62	1.72	.059	.064	.069
A1	0.31	0.36	0.41	.012	.014	.016
A2	0.51	0.56	0.61	.020	.022	.024
A3	0.65	0.70	0.75	.026	.028	.029
b	0.41	0.46	0.51	.016	.018	.020
D	8.90	9.00	9.10	.350	.354	.358
D1	7.00 BSC			.276 BSC		
E	8.90	9.00	9.10	.350	.354	.358
E1	7.00 BSC			.354 BSC		
e	1.00 BSC			.039 BSC		

Downloaded from Arrow.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.

For more information about all Microsemi products
visit our website at
www.microsemi.com

TECHNICAL DOCUMENTATION – NOT FOR RESALE

Microsemi Corporate Headquarters
One Enterprise, Aliso Viejo CA 92656 USA
Within the USA: + 1 (949) 380-6100
Sales: +1 (949) 380-6136
Fax: +1 (949) 215-4996

Microsemi Corporation (NASDAQ: MSCC) offers a comprehensive portfolio of semiconductor solutions for: aerospace, defense and security; enterprise and communications; and industrial and alternative energy markets. Products include high-performance, high-reliability analog and RF devices, mixed signal and RF integrated circuits, customizable SoCs, FPGAs, and complete subsystems. Microsemi is headquartered in Aliso Viejo, Calif. Learn more at **www.microsemi.com**.

© 2011 Microsemi Corporation. All rights reserved. Microsemi and the Microsemi logo are trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.

ZL30158

Downloaded from Arrow.com.