ZL30153
Synchronous Ethernet Network Synchronization DPLL
Short Form Data Sheet

April 2014

Features

- Supports requirements of ITU-T G.8262 for Synchronous Ethernet Equipment Slave Clocks (EEC option 1 and 2)
- Supports requirements of Telcordia GR-1244 Stratum 3 and GR-253, ITU-T G.813, and G.781 SETS
- Supports ITU-T G.823, G.824 and G.8261 for 2048 kbit/s and 1544 kbit/s interfaces
- Programmable synthesizers generate any clock-rate from 1 Hz to 750 MHz
- Two precision synthesizers generate clocks with low jitter of 0.7 ps RMS for 10 G PHYs
- Programmable digital PLL synchronize to any clock rate from 1 Hz to 750 MHz
- Flexible two-stage architecture translates between arbitrary data rates, line coding rates and FEC rates
- Digital PLL filter jitter from 0.1 mHz, 1 mHz, 10 mHz, 0.1 Hz, 1.7 Hz, 3.6 Hz, 7 Hz, 14 Hz, 28 Hz, 56 Hz, 112 Hz, 224 Hz, 448 Hz or 896 Hz
- Automatic hitless reference switching and digital holdover on reference fail
- Four reference inputs configurable as single ended or differential
- Eight LVPECL outputs and four LVCMOS outputs
- Operates from a single crystal resonator or clock oscillator
- Configurable via SPI/I2C interface

Ordering Information

ZL30153GGG	100 Pin LBGA	Trays
ZL30153GGG2	100 Pin LBGA*	Trays

*Pb Free Tin/Silver/Copper

-40°C to +85°C

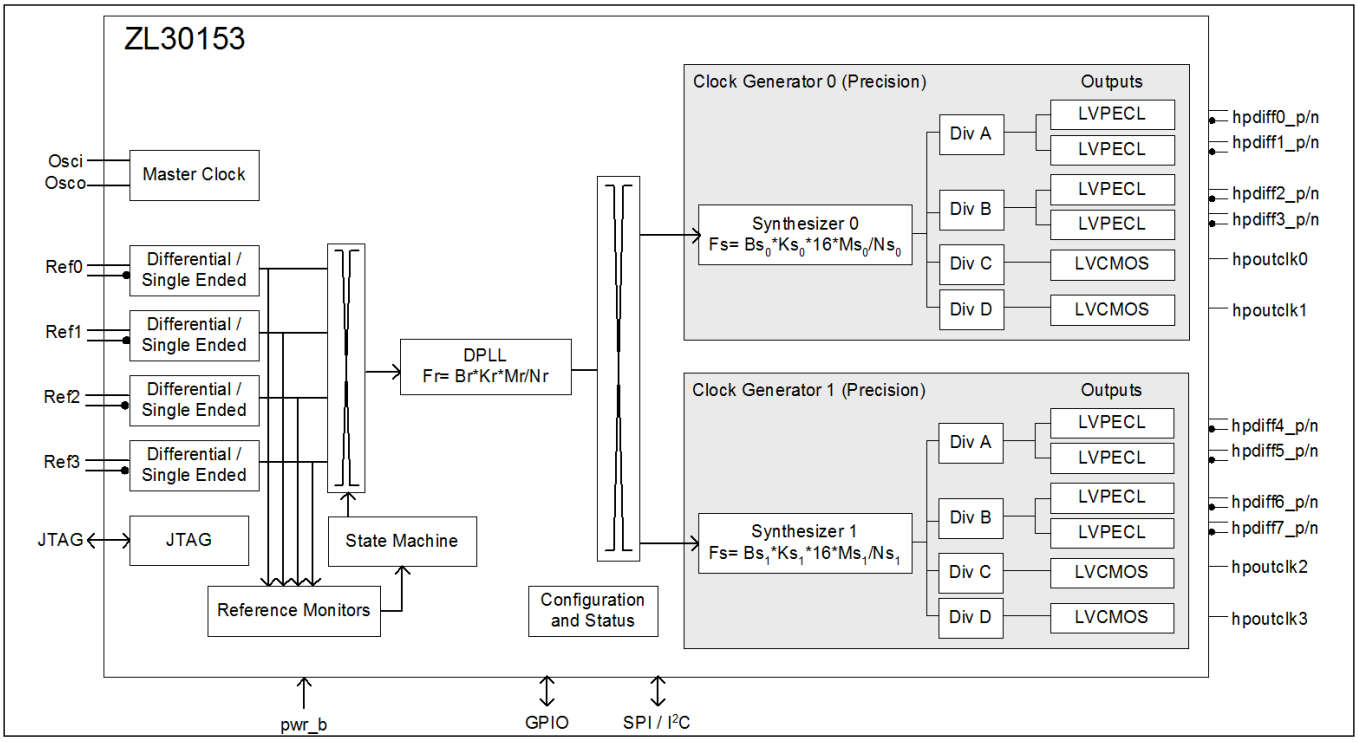

Figure 1 - Functional Block Diagram

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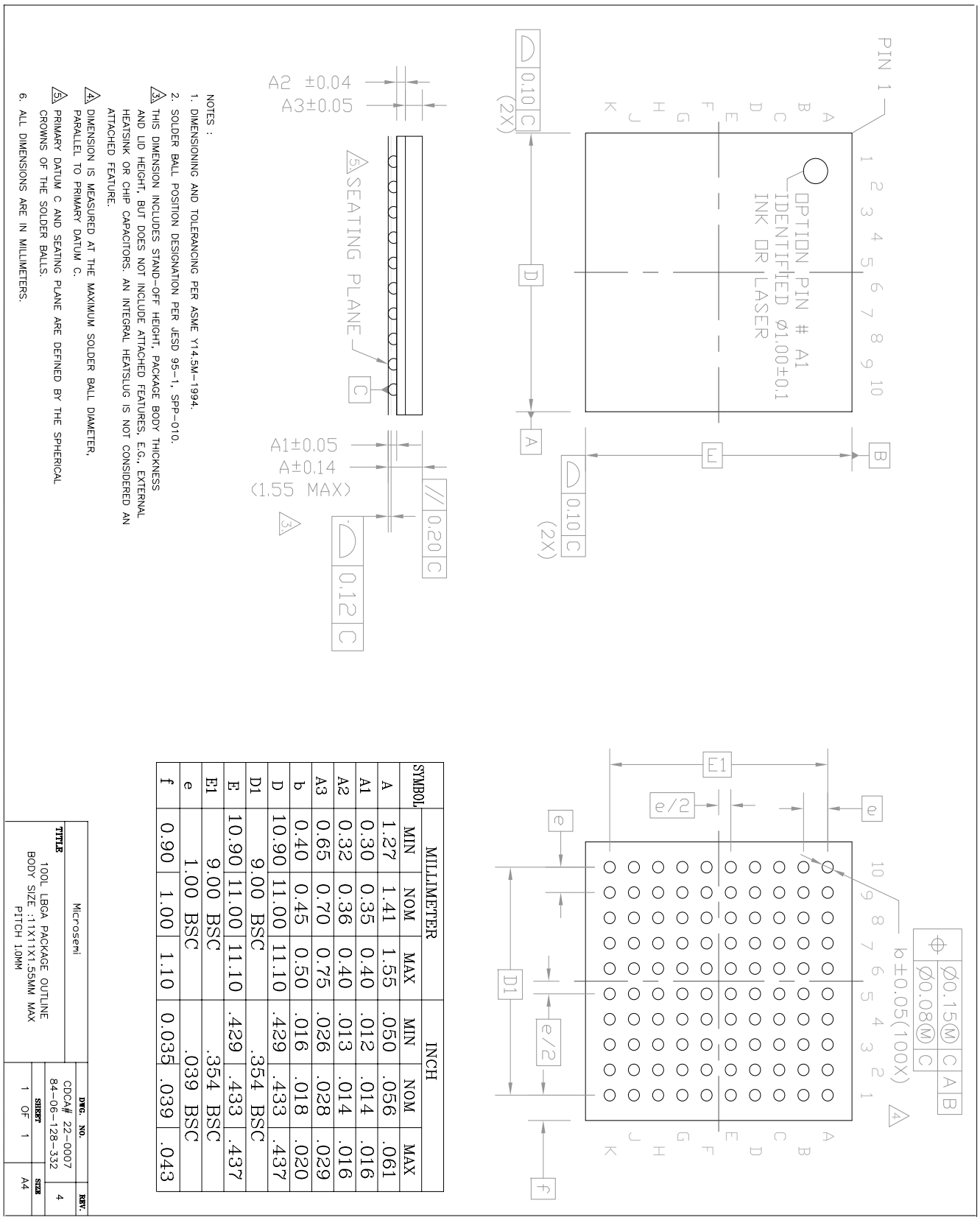
Applications

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

Mechanical Drawing



SYMBOL	MILLIMETER			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.27	1.41	1.55	.050	.056	.061
A1	0.30	0.35	0.40	.012	.014	.016
A2	0.32	0.36	0.40	.013	.014	.016
A3	0.65	0.70	0.75	.026	.028	.029
b	0.40	0.45	0.50	.016	.018	.020
D	10.90	11.00	11.10	.429	.433	.437
D1		9.00 BSC			.354 BSC	
E	10.90	11.00	11.10	.429	.433	.437
E1		9.00 BSC			.354 BSC	
e		1.00 BSC			.039 BSC	
f	0.90	1.00	1.10	0.035	.039	.043

NOTES :
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
2. SOLDER BALL POSITION DESIGNATION PER JESD 95-1, SPP-010.
3. THIS DIMENSION INCLUDES STAND-OFF HEIGHT, PACKAGE BODY THICKNESS AND LID HEIGHT, BUT DOES NOT INCLUDE ATTACHED FEATURES, E.G., EXTERNAL HEATSINK OR CHIP CAPACITORS. AN INTEGRAL HEATSLUG IS NOT CONSIDERED AN ATTACHED FEATURE.
4. DIMENSION IS MEASURED AT THE MAXIMUM SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM C.
5. PRIMARY DATUM C AND SEATING PLANE ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.
6. ALL DIMENSIONS ARE IN MILLIMETERS.

Microsemi		DWG. NO.	REV.
TITLE		CDCA# 22-0007	4
100L LBGA PACKAGE OUTLINE BODY SIZE :11X11X1.55MM MAX PITCH 1.0MM		84-06-128-332	
		SIZE	
		A4	
		SHEET	
		1 OF 1	

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