

Programmable FTG for Differential PCI-Express

Recommended Application:

Frequency Timing Generator for Differential PCI-Express clocks

Features:

- Generates common PCI-Express frequencies from reference input clock (33.33MHz)
- 7 - 0.7V current-mode differential output pairs
- Three spread spectrum modes: spread tracking mode, 0 to -0.5 downspread and +/-0.25% centerspread
- Support for M/N programming
- Programmable spread percentage
- Programmable output divider
- SMBus address is DC/DD

Key Specifications:

- Output cycle-to-cycle jitter < 85 ps
- Output to output skew < 85 ps
- +/-300 ppm frequency accuracy on output clocks

Pin Configuration

REFIN	1	ICS9FG110	28	VDDA
SDATA	2		27	GND A
SCLK	3		26	IREF
*PD#	4		25	MODE_SEL**
PCIEXT0	5		24	PCIEXT6
PCIEXC0	6		23	PCIEXC6
VDDPCIEX	7		22	VDDPCIEX
GND	8		21	GND
PCIEXT1	9		20	PCIEXT5
PCIEXC1	10		19	PCIEXC5
PCIEXT2	11		18	PCIEXT4
PCIEXC2	12		17	PCIEXC4
PCIEXT3	13		16	VDDPCIEX
PCIEXC3	14		15	GND

28-SSOP/TSSOP

* This pin have 120K pull-up to VDD

** This pin have 120K pull-down to GND

Functionality Table

MODE_SEL	PCIEX Freq	Spread Spectrum %
0	100	Spread Tracking Input
1	100	+/- 0.25 Center Spread

Power Groups

Pin Number		Description
VDD	GND	
28	27	Analog power & GND for CPU Core
7, 22	8, 15, 21	Power & GND for PCI Express Clock Outputs

Block Diagram

