

PpsClkToPps

A low-footprint, highly configurable, 100% hardware only Clock to Pulse Per Second (PPS) Generator solution, specifically designed for high-performance distributed systems. It is meant to work together with e.g. a NetTimeLogic PPS Slave core to allow standalone syntonization.

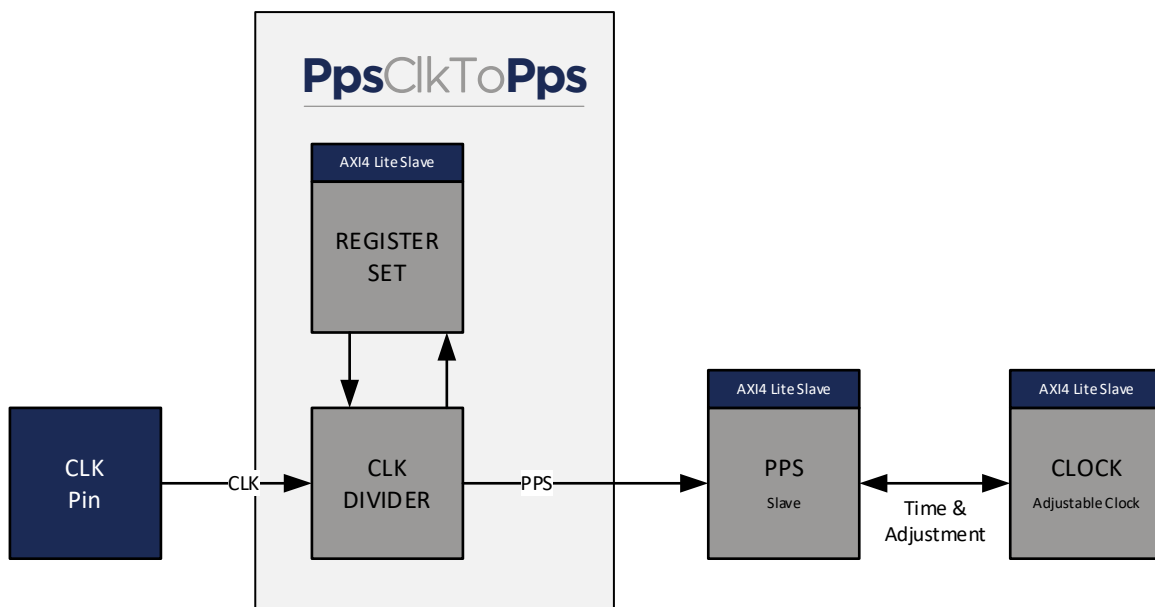
Key Features:

- Clock to PPS allowing frequencies from 100Hz to 100MHz
- For combination with PPS Slave Clock
- 100% hardware only solution
- Vendor independent
- Pulse width detection
- Frequency supervision

Typical Applications:

- Legacy Networks
- Time converters
- Robot control
- Substation automation
- Distributed data acquisition
- Test and measurement
- Etc.

IP Core Architecture:



Specification:

Clock & PPS	Clock frequency syntonization Runtime configurable input Clock frequency Frequency supervision and error signaling Configurable PPS width and polarity generation
Performance	PPS generation runs directly on input clock which creates minimal jitter. Used for numeric controlling of frequencies
Portability	100% hardware only solution, no dependency on external CPU or external driver circuitry features Vendor independent, written in plain VHDL Low footprint and low frequency requirements
Modularity	Slim and standardized interfaces are used
Configuration	No CPU required, standalone configuration with signals Axi4 lite slave support, for status and configuration

Deliverables:

- Ip core in plain VHDL
- Testbench in plain VHDL
- Reference Design with 1 PPS input and output
 - Top level VHDL file
 - Timing Constraint SDC files
 - Vivado/Quartus Project file

Related Products:

- PPS Slave
- PPS Master
- PTP Ordinary Clock
- PTP Grandmaster Clock
- PTP Hybrid Clock
- Adjustable Clock
- Signal Timestamper
- Signal Generator



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