

PpsMasterClock

A low-footprint, highly configurable, 100% hardware only Pulse Per Second (PPS) Master Clock solution, specifically designed for high-performance distributed systems. Allows compensating driver circuit delays and provides pulse width modulation for accuracy information distribution over the same signal.

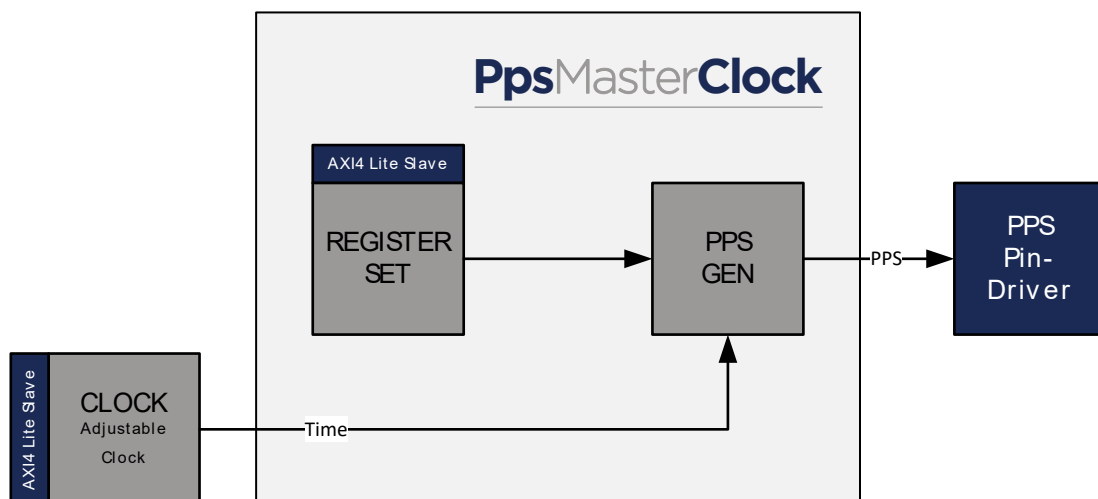
Key Features:

- PPS Master Clock
- 100% hardware only solution
- Vendor independent
- Pulse width modulation changeable at runtime
- High precision PPS generation
- Optional DTC for 1ns accuracy

Typical Applications:

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

IP Core Architecture:



Specification:

PPS	Pulse Per Second aligned with NetTimeLogic's Clock Adjustable pulse width to distribute information about clock quality to slave over the same single signal Pulse width can be changed at runtime without interruption, changes will apply on next PPS
Performance	Accuracy of rising edge PPS +/- half an input clock period without oversampling clock or one clock cycle of the oversampling clock or 1 ns with DTC, falling edge of PPS +/- 1 millisecond PPS pulse width adjustable in 1 millisecond steps from 1 to 999
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 and scalability	Simple time format can be also sourced by third-party clock core 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 output
 - Top level VHDL file
 - Timing Constraint SDC files
 - Vivado/Quartus Project file

Related Products:

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



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