

PtpClient

A low-footprint, configurable, 100% hardware only CSPTP Client solution based on the first draft of the upcoming CSPTP standard (Client-Server-PTP, IEEE 1588.1), specifically designed for high-performance distributed systems. Allows running PTP synchronization completely independent and standalone from the user application with the highest performance on the market

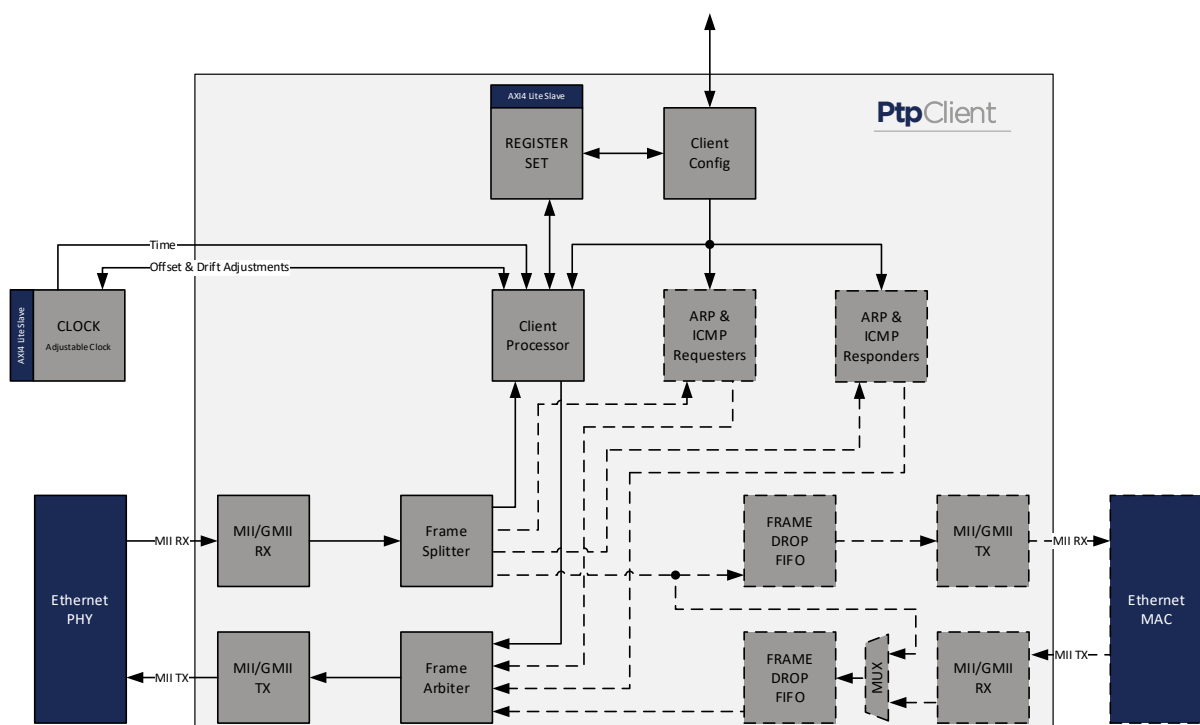
Key Features:

- PTP Client according to PTPv2.1 (IEEE1588) and the first Draft of CSPTP (IEEE1588.1)
- One-Step operation (can handle Two-Step responses)
- P2P Support
- 100% hardware only solution
- Vendor independent
- Sub-microsecond accuracy

Typical Applications:

- High Performance PTP Client
- Ethernet based automation networks
- Power and Utilities
- Distributed data acquisition
- Datacenters
- Test and measurement
- Etc.

IP Core Architecture:



Specification:

CSPTP	According to the first draft of CSPTP (IEEE1588.1) specification
IEEE1588	Support for One-Step operation as Client and supports One- and
IEEE1588.1	Two-Step operating Servers, support for Layer2, Ipv4, IPv6 Support for P2P. Flexible configuration and supervision
Performance	Offloading synchronization, lucky-packet filtering, filtering outliers, delivering the highest performance with minimal resources Hardware timestamping with 4ns resolution
Portability	10/100/1000 Mbit/s support, intercepts (R)(G)MII interfaces between MAC and PHY (no MAC required) 100% hardware only solution, no dependency on external CPU Vendor independent, written in plain VHDL Low footprint and low frequency requirements
Accuracy	Sub-microsecond accuracy on networks with full and partial PTP support 4ns Timestamps accuracy
Modularity	Modular system; adjustable clock is a separate 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
 - Top level VHDL file
 - Timing Constraint SDC files
 - Vivado/Quartus Project file

Related Products:

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|----------------------|----------------------|
| • Adjustable Clock | • IRIG Master/Slave |
| • NTP Client | • PPS Master/Slave |
| • PTP Ordinary Clock | • Signal Timestamper |
| • NMEA Master/Slave | • Signal Generator |



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