

ClockFrequencyGeneratorSine

A low-footprint frequency generator which uses NetTimeLogic's clock IP core as source for synchronous frequency generation. Allows high-precision generation of any integer frequency with range 0-10MHz and configurable polarity.

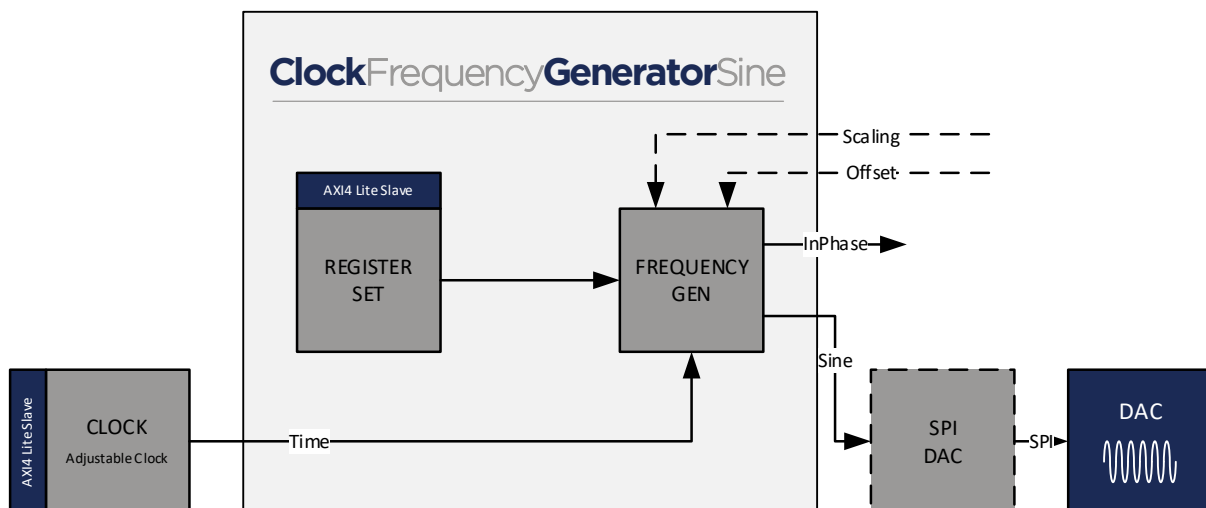
Key Features:

- Clock aligned frequency generation as Sine Wave
- Configurable DAC Sample rate
- Auto phase realignment on time jumps
- Continuous generation
- Configurable polarity
- Output delay compensation
- AXI4 lite slave interface

Typical Applications:

- Distributed data acquisition
- Test and measurement
- Robot control
- Substation automation
- Ethernet based automation networks
- Etc.

IP Core Architecture:



Specification:

| | |
|----------------------------|--|
| Generating | Frequency aligned with NetTimeLogic's Clock (frequency and phase at second crossing) Output delay compensation takes also external delays like DAC, SPI, RC into account Configurable DAC Data width Configurable DAC Sampling rate Optional Scaling and DC Offset Auto phase realignment on time jumps |
| Performance | Output signal max frequency is ~200kHz at 2MSPS DAC sampling |
| Portability | 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 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
- Linux Driver

Related Products:

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



NetTimeLogic GmbH
Synchronization Solutions

Strassburgstrasse 10
8004 Zürich
Switzerland

contact@nettimelogic.com
Tel. +41796716211
www.nettimelogic.com