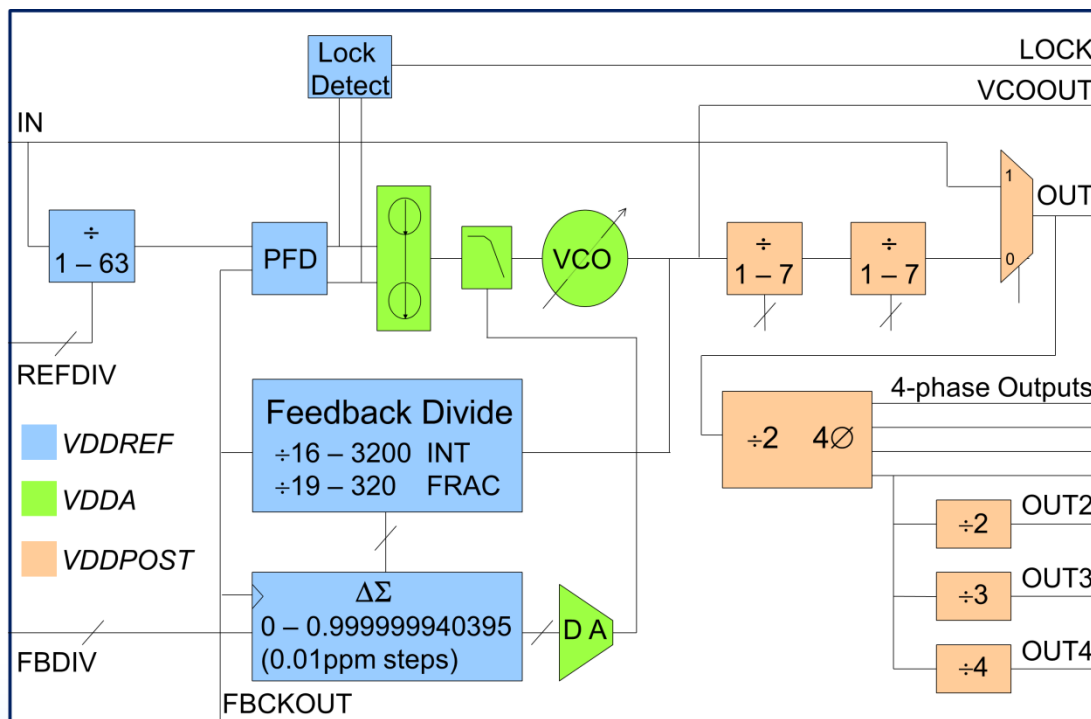


Overview

The Silicon Creations Fractional-N PLL series are multi-functional, general purpose frequency synthesizers. A rich set of features are combined with low power, low area, best-in-class jitter performance and widely flexible programming making these PLLs suitable for a wide range of applications from general purpose and spread spectrum clocking to clocking of ADC and AFE circuits.



Features

- Very wide input and output frequency ranges:
 - Input 1MHz to over 1GHz
 - Output <4MHz to over 1GHz (to 6.4GHz in 40n)
- >4:1 VCO frequency range allows PLL to be optimized for minimum jitter or minimum power
- Integrated Long Term Jitter as low as 2ps RMS in fractional mode
- Multiple outputs for related clocks
- Isolated analog supply allows for excellent supply rejection in noisy SoC applications and shared supplies in less demanding applications
- Minimal, or no additional on-chip supply decoupling required
- No external components required
- Loop automatically adjusts for any input frequency, so no complicated programming is required
- Fast locking time of <1000 reference cycles with glitch-free LOCK output
- Proven and highly programmable – test your new applications before tapeout to eliminate the risks from new/compiled PLLs

Availability

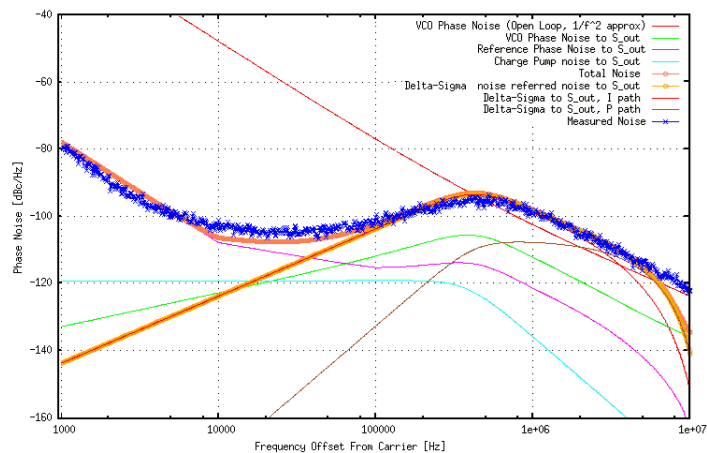
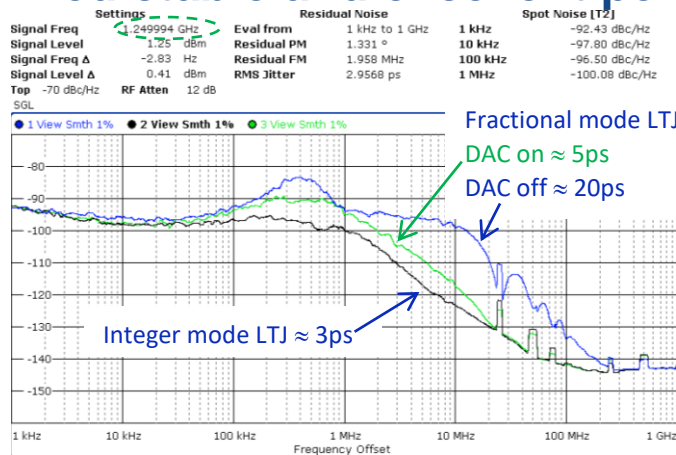
Mass production in 7n through 180n and at GLOBALFOUNDRIES, IBM, TSMC, SMIC, ST, and UMC. Available in Samsung 7n, 8n, 10n.

Integer-only, Core-voltage only, Multi-phase (DDR), Low-area, Deskew, IoT, Ultra-low power and very-low jitter variants of our PLLs are also available.

Deliverables

- GDSII
- CDL Netlist
- Rich Verilog Model with Jitter and loop dynamics
- Liberty timing models (.lib)
- LEF layout abstract
- Application Note
- Optional: SSMOD – RTL for a modulator to make a triangle/random SSCG and DPLL – RTL for a Jitter Cleaner PLL
- Industry leading support by IP designers
- Comprehensive test reports for many processes

Predictable and excellent performance



About Silicon Creations

Silicon Creations is focused on providing world class silicon IP for precision and general purpose timing (PLLs), Chip-chip SerDes and high-speed differential IOs.

Our IP is in production from 7n to 180n. Our complete commitment to our customer success and our support will delight you. Our IP has an excellent record of first silicon to mass production in customers' designs. Our key designs have been comprehensively verified in our labs as well as in mass production with multiple customers.

Silicon Creations was founded in 2006, is self-funded and growing. We have development centers in Atlanta, USA and Krakow, Poland and world-wide sales representation.

Contact us

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Related Information

- www.siliconcr.com
 → Products → Ring PLLs