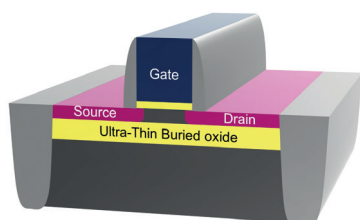


28nm FD-SOI Technology Platform from STMicroelectronics



FD-SOI

Power and energy efficiency

Ultra low leakage, wide Body-Bias & operating voltage range

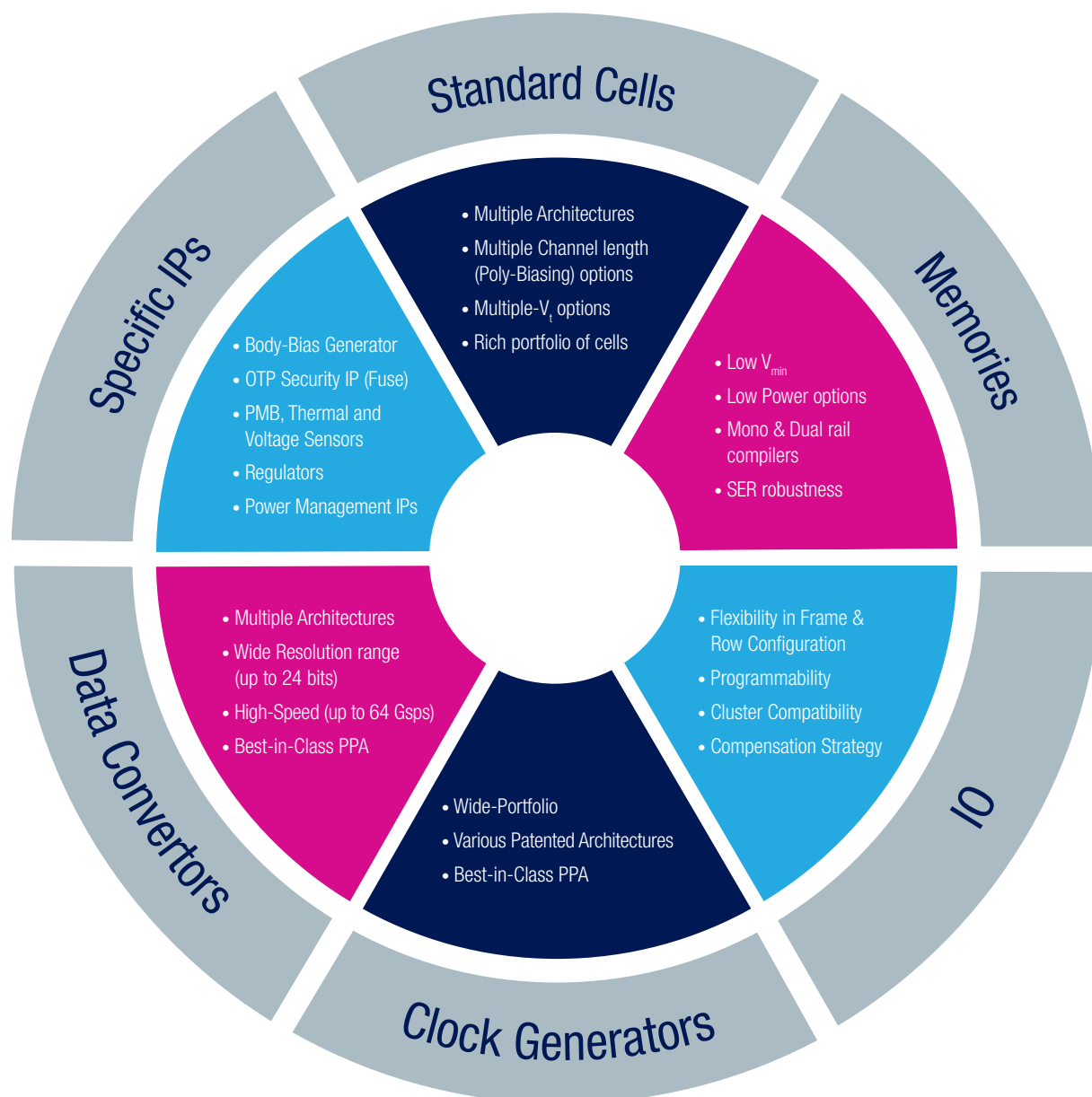
Analog performance

for mixed signal & RF design

Robustness

for mission critical applications

Cost effective platform



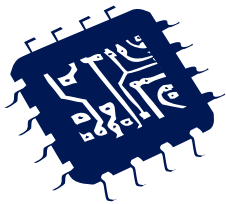


Standard Cells

- Application oriented offer: General Purpose, Low-Power & High-Performance
- High-Performance 12T, High-Density 8T offer with best-in-class Performance, Power & Area figures of merit*
- 8T offer is area competitive vs. the densest offers available in the market*
- Strong Power optimization possible using Body-Bias feature
- Rich Flip-Flop offer with reduced delay

- High performance, low leakage, low voltage SRAMs, ROMs & Special Memories
- V_{min} of 0.7V, being extended to near threshold voltage
- Best-in-class Performance, Power & Area figures of merit* Patented Well Structures, for Ultra-Low Voltage operation
- Soft Error Rate (SER) less than 10FIT/Mb

Memories

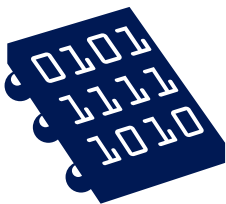


IO Library

- 1.2V / 1.5V / 1.8V / 2.5V / 3.3V IO Voltage Support
- 0.7V to 1.15V Core Voltage Support
- Up to 20% less supply pad using Compensation techniques
- Lesser area in 3V3 IO, compared to competition
- No Intermediate supply required for 3.3V IOs
- ESD: 2KV – HBM and 500V – CDM JEDEC (10A), 100mA LU (@ 125°C)
- Multiple-Cuts in IO-ring enabled

- Multiple Architectures: Standard, Spread-Spectrum, Fractional & High-Performance
- Industry Benchmark: Very small area PLLs
- On the fly Switching and no dependence on supply sequence
- Multi-mode Operations and Automatic Bandwidth Tracking
- On-Chip and Crystal Oscillator offers

Clock Generators

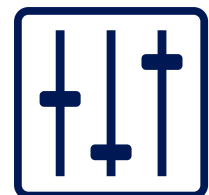


Data Convertors

- Best-in-Class Analog to Digital Convertor (ADC) & Digital to Analog Convertors (DAC): confirmed as industry benchmark
- High Speed offer (ADC: up to 64 Gbps and DAC: up to 10 Gbps)
- High Resolution offer (ADC & DAC: up to 24 bits)
- Available for various Application and customizable on request

- Programmable Body-Bias Voltage generation
- One-Time Programmable Security IP offer with reduced Area
- Voltage & Thermal Sensor: enabling Dynamic Voltage and Frequency Scaling (DVFS)
- Process Monitoring Sensors & Controllers for Silicon Learning and Yield enhancement
- Customized Regulator solution with Low drop-out

Specific IPs



* Benchmark performed on real designs