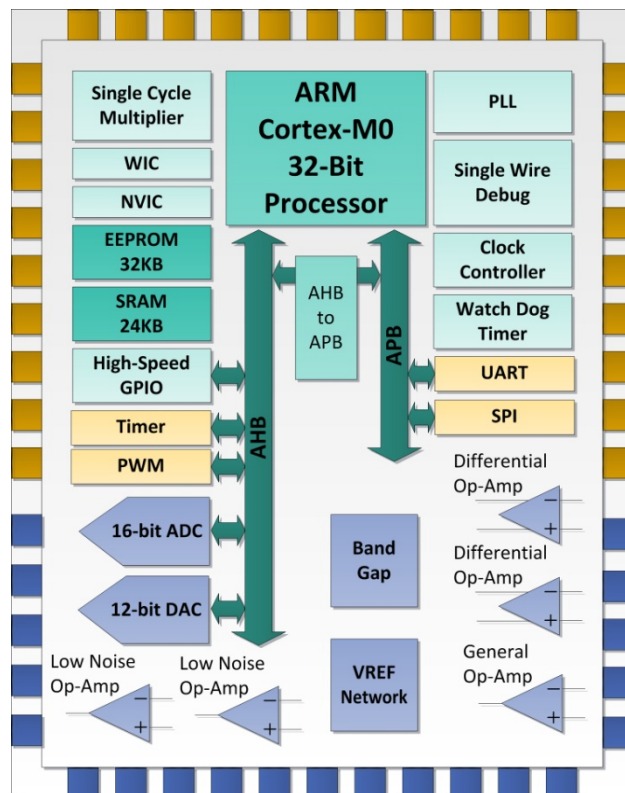


ARM® Cortex™-M0 Mixed Signal SoC

The TSX1001 combines a low-power, high-performance ARM Cortex-M0 32-bit processor with precision analog resources including a 16-bit ADC, 12-bit DAC and uncommitted op-amps for demanding sensor and data acquisition applications.

Processor

- **ARM Cortex-M0 32-bit processor**
- 25MHz operation
- 32 Kbytes of on-chip EEPROM program memory
- 24 Kbytes of SRAM
- Nested Vectored Interrupt Controller (NVIC)
- Watchdog Timer
- System and Clock Control
- Multiple Power Saving Modes
- Wake-Up Interrupt Controller (WIC)
- Serial Wire Debug
- PLL with Flexible System Clocking Options



Digital Peripherals

- 16 High-Speed GPIO
- High-Speed UART
- SPI (master/slave)
- PWM (processor and external enables)
- Timer (32-bit general purpose)

Analog Peripherals

- 16-bit Sigma-Delta ADC
- 12-bit DAC
- 2x Low-Noise, Single-Ended Op-Amps
- General-Purpose, Single-Ended Op-Amp
- 2x Wideband, Fully Differential Op-Amps
- Precision Onboard Band-Gap Reference
- Vdd/2 Buffered Voltage References with off-chip drivers
- 3.3V Analog Operation
- Isolated Analog & Digital Supplies



Applications

- Bluetooth Low Energy Sensors
- Portable Medical Devices
- Automatic Meter Reading
- Motor Control
- Intelligent Lighting
- Smart Grid Controllers
- Low Power Fitness Devices
- Smart Inverters for Solar Panels