**Nano VLSI Era Circuit**

**Background**

Nano-CMOS VLSI

Voltage Resolution

Time Resolution

TDC converts input time difference into a digital value.

TDC is a key component of time domain analog circuits in nano-CMOS VLSI.

(e.g. Sensor Interface Circuit, All-Digital PLL)

High Quality TDC is required.

**Conventional TDC**

**Proposed TDC**

**Measurement Result**

**Conclusion**

**Programmable System-on-Chip**

PSoC (Programmable System-on-Chip) is a family of integrated circuits made by Cypress Semiconductor.

PSoC include a CPU and mixed-signal arrays of configurable integrated analog and digital peripherals.

**Photo of PSoC implemented TDC**