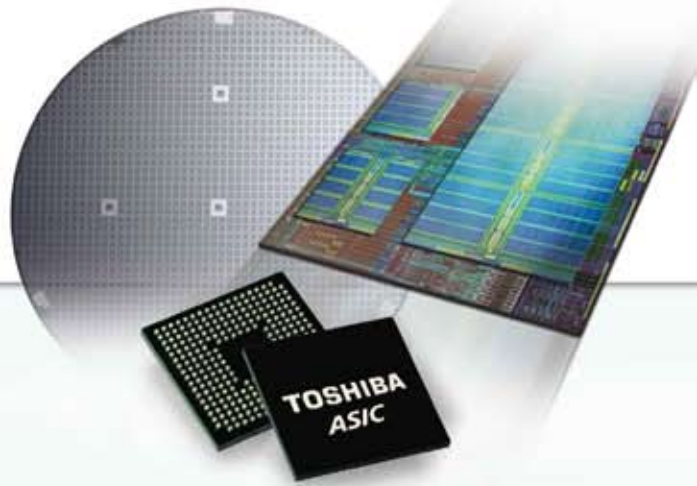


TOSHIBA

Leading Innovation >>>



ASIC & Foundry

Advanced CMOS technology for ASIC & Foundry business including full service supply chain management

Customer Benefits

Leading Edge CMOS Technology through in-house process development

- 65nm in mass production
- 40nm in mass production
- 28nm under introduction
- 20nm in research
- Balance of internal and outsourced wafer fabrication (for technical and demand/supply flexibility)

Customized System-on-Chip (SoC) development based on wide Intellectual Propriety (IP) line-up

- In-house analog cell development (mixed signal IP)
- In-house and 3rd party digital IP
- Processor skills (ARM and MIPS)
- Embedded memory (SRAM, eDRAM, eFLASH, OTP, plus stacked DRAM-Die with high bandwidth access)

Local competence and support - European LSI Design & Engineering Centre (ELDEC)

- Highly skilled engineers with many years of experience
- Support of flexible service interfaces from Customer-Owned-Tooling (COT) to full ASIC
- Development support - EDA / PDK / libraries, analog development, design, implementation, layout, testing, packaging
- Mass production ramp-up (qualification and yield improvement)

Short development Turn-Around-Time (TAT) to meet the market window

- Professional project management during development
- Optimized manufacturing process
- Early maturity of latest process technologies

Flexible business models for ASIC & Foundry

- From ASIC (one partner for design, implementation, production and full-service supply chain management)
- To selective Foundry services (wafer, chip-die, assembly, test)
- Any desired business model can be realized through Toshiba's open and advanced Integrated Device Manufacturer (IDM) Model

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