Trusted Semiconductor Solutions

Trusted Semiconductor Solutions is a technology leader in the development of microelectronics from concept to production product delivery. Since 2006, we have been designing, manufacturing, and testing microelectronics for high-reliability applications. Our expertise enables solutions for next-generation systems as well as sustainment of mission-critical systems. We leverage state-of-the-art and state-of-the-practice commercial technology, and design methodologies, to achieve best-in-class performance in extreme environments.

military/defense





medical

industrial



Capability Overview

IC, Semiconductor IP, and Chiplet Development

- Integrated circuit (IC) design of digital, analog, and mixed signal circuits on planar, FinFET, and Gate all Around technologies
- Custom semiconductor IP on GF 12nm, 22nm, & 45nm, Intel 16nm, SkyWater 90nm, Honeywell 90nm & 150nm, Tower 130nm & 180nm, XFab, and ONSemi
- Chiplet design with chip-to-chip interconnects
- Radiation hardening by design expertise and rad hard IP

Semiconductor Assemblies, Circuit Cards, and Electronic Modules

- Design of advanced 3D SiP assemblies with high density interconnects
- Single die, multi-die, and hybrid packages for extreme environments
- Signal integrity, power, thermal, and mechanical analysis of IC/pkg/ board build-up
- Custom circuit cards, PCBs, and electronic module development

Microelectronics Fabrication, Assembly, and Test

- Wafer fab and processing (probe, bumping, thinning, dicing, sort)
- Package substrate, interposer, and PCB fabrication and assembly
- Product testing for high reliability applications (MIL-STD 883, ESCC9000, JESD)

Semiconductor Foundry Partners



Technology options from $1\mu m$ to 1.8nm

Product Portfolio

- ASICs, SoCs, memories, data convertors, radiation circumvention, processors
- Semiconductor IP: SerDes, eFPGA, I/Os, memories, PLL, rad hard library, data converters, processors, cybersecurity
- Non-volatile memory storage cards
- Single board computers

Certifications

- Non-traditional Defense Contractor
- Small business concern
- ITAR and EAR complaint
- DoD Category 1A Trusted Accreditation
- AS9100 certified
- NAICS: 541330, 334413, 541380, 541713

Explore the Possibilities with Trusted Semiconductor Solutions

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