

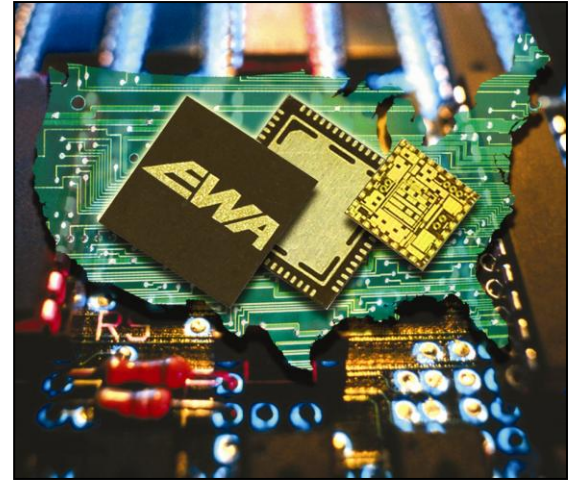
# Miniaturization & Microelectronics Design Center

## 100% Domestic Miniaturization and Microelectronics Solution

EWA GSI Miniaturization & Microelectronics Design Center leverages the latest technologies to reduce power consumption, improve performance, and minimize the weight and size of electronic devices.

EWA GSI provides a full range of solutions to include:

- Printed Circuit Board (PCB)
- Digital Signal Processor (DSP)
- Field Programmable Gate Array (FPGA)
- Microwave Monolithic Integrated Circuit (MMIC)
- Application Specific Integrated Circuit (ASIC)
- Multi-Chip Module (MCM)



*Our cadre of microelectronics experts with active DoD clearances work with each customer to choose and implement technology that best meets their performance, cost, and schedule requirements.*

EWA GSI provides turn-key solutions, imparting experience in the successful specification, design, development, testing, and integration of complete solutions, to include microchips, circuit boards, hardware, software, and documentation.

All stages of development are 100% domestic and ITAR compliant.

## Secure Design Environment (CAGE 47CA6)

The EWA GSI Design Center is an established secure, state-of-the-art, specialized environment to design miniaturized products and develop microelectronics. This is achieved through:

- Cadence™-based Engineering Design Automation (EDA) for ASIC Design
- AWR Microwave Office™-based EDA for MMIC Design
- Agilent™-based Radio Frequency (RF) and mixed-signal analysis and simulation environment
- Supplementation by MATLAB, Simulink, AutoCAD, and RF Toolbox engineering tools.
- Configured to integrate the foundry's PDKs (Process Design Kits) for seamless introduction to manufacturing.

In addition, the entire Design Center computer network is contained within our secure facility and is isolated from all external access (no connection to the web). Features include:

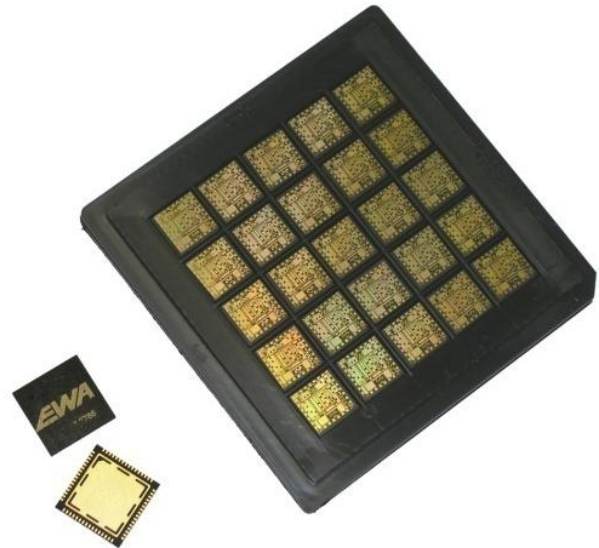
- Triple-redundant client server LAN configurable for classified processing / development
- Ensures protection of customer's sensitive designs and Intellectual Property (IP)
- Separate stand-alone client server LAN in a Restricted Area for SECRET / Protection Level 1 (PL1) software design, development, test, and documentation.

Our Design Center also includes Electro-Static Discharge (ESD)-safe laboratory facilities and test equipment that support functional testing and characterization.

## Miniaturization Solutions for All Stages of Product Lifecycle

EWA GSI's Miniaturization Design Center supports customers whose products are at different levels of product maturity. We are practiced in assisting customers at any stage in a product's lifecycle. We are experienced solutions providers for:

- **New Concepts & Designs** - Design and prototype to verify product functionality, then miniaturize using microelectronics technology to create a smaller and more energy-efficient form factor.
- **Existing Devices Requiring Miniaturization** - Reduction of circuit board(s) as well as development of microelectronics that are integrated into smaller, lower power, reduced weight form factors.
- **Older Technology Designs** - Convert existing / legacy design(s) into newer optimal microelectronics technology, often permitting the introduction of additional capability and performance.
- **Microelectronic Designs Requiring Fabrication** - Serve as a "second source" for fabrication of existing chipset design (in a current technology).



## Complete In-House Development Capability

EWA GSI provides comprehensive design and development to include: logical design, synthesis, simulation, physical design, layout, verification, submission to foundry, package design and implementation, test & evaluation, and characterization.

## 100% Domestic Microelectronics Offerings

EWA GSI's current microelectronic offerings allow us to select and implement the technology that best meets the customer's performance and cost requirements:

- **Application Specific Integrated Circuit (ASIC)**
  - Digital Devices
  - Mixed Signal (Analog / Digital) Devices
- **Microwave Monolithic Integrated Circuit (MMICs)**
  - Radio Frequency (RF) Devices

EWA GSI's has established teaming agreements/contracts with leading domestic foundries and packaging vendors to support custom / low volume runs as well as high volume production runs.

- ASIC "chip" foundry, located in Vermont, has been certified as a "Trusted Foundry" by NSA
- Trusted MMIC "chip" foundry facilities in Oregon and Texas

Available in a range of transistor sizes (0.5  $\mu\text{m}$  – 45 nm) and process technologies to include:

- CMOS / RF CMOS
- Silicon-On-Insulator
- Silicon Germanium (SiGe)
- Gallium Arsenide (GaAs) / Gallium Nitride (GaN)

