

Part of our Enhanced COTS Initiative

Altera's ITAR program

Altera is committed to reducing risk and increasing system reliability for our military customers while providing a secure, ITAR-compliant design and manufacturing flow.

Altera's Enhanced Commercial Off-the-Shelf (COTS) Initiative focuses on reducing risk and increasing system reliability for military customers. One aspect of the Enhanced COTS Initiative is the International Traffic in Arms Regulation (ITAR) design and manufacturing flow for structured ASICs. By complying with ITAR regulations, Altera demonstrates our commitment to keeping our customers' designs secure.

Altera's high-performance HardCopy® II structured ASICs provide an ITAR-compliant option for our U.S. customers to implement designs in an ASIC. By choosing HardCopy II devices instead of standard ASICs, customers gain a turnkey migration path that is not available with other solutions, along with HardCopy II devices' high performance and advanced capabilities.

Altera ITAR compliance

Altera complies with all applicable U.S. export control laws and regulations, including the Arms Export Control Act and ITAR.

Administered by the U.S. Department of State, ITAR regulates the export and import of U.S. military defense-related equipment, services, and information. By adhering to ITAR regulations, Altera ensures that foreign entities are not privy to any of the designs generated by our customers.

In addition to ITAR compliance, we maintain an approved manufacturing license agreement (MLA) from the U.S. Department of State (which also covers our off-shore subcontractors, TSMC in Taiwan, and Amkor in Korea.) Our well-documented ITAR process includes:

- *Export Management Systems*
- *Technology Control Plan*
- HardCopy structured ASIC design flow which includes
 - A secure design facility
 - Secure server to protect design files
 - Encrypted communication
- Full participation in D-Trade, the electronic defense trade licensing system



With HardCopy II structured ASICs, customers get

- The only high-performance structured ASIC with ITAR compliance
- An ITAR-compliant design and manufacturing flow that is transparent to our customer
- The security of a tamper-proof ASIC design
- The low cost and low power consumption of an ASIC with the ease of FPGA design
- Flexible Nios® II soft processor for embedded applications

HardCopy II structured ASIC ITAR design flow

To use HardCopy II structured ASICs, an engineering team designs with Altera's high-performance Quartus® II design software, then prototypes and verifies their design in a high-end FPGA. When the team completes testing, they archive and encrypt their design. They then send their encrypted design to our secure ITAR Design Center server, where only authorized U.S. personnel review the design and map it into a HardCopy II structured ASIC.

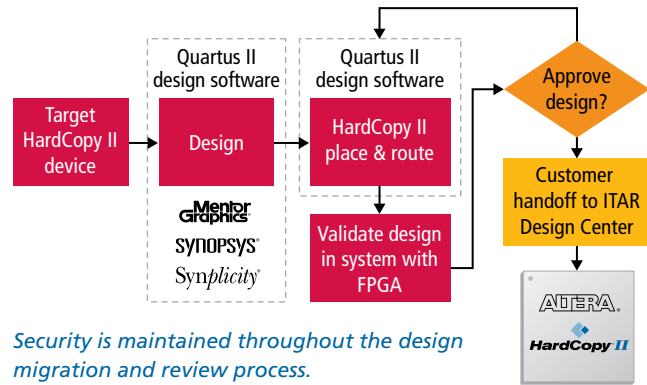
We maintain security throughout the design migration and review process.

- All work at Altera remains within the isolated ITAR Design Center
- Only approved U.S. personnel can access the design
- Altera retains the design only on our secure ITAR server

Once the ITAR Design Center completes the design migration to a structured ASIC, we send an encrypted report back to the engineering team for review before wafer fabrication and prototype. Upon customer approval of the prototypes, TSMC produces the HardCopy II devices using the same process as any other HardCopy II device—which maintains anonymity for all Altera customers.

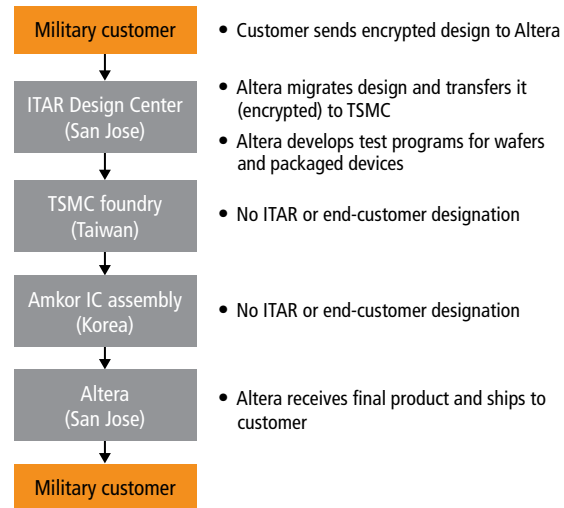
Our sub-contractors, TSMC and Amkor, do not know who the customer is, the application of the design, or that it is targeted for an ITAR application.

Secure design flow



Security is maintained throughout the design migration and review process.

ITAR-compliant HardCopy II manufacturing flow



Find out more

We are available to discuss our ITAR process and applicable documentation with current and prospective customers. Please contact your local sales representative for more information.

In addition, visit our Military and Aerospace website for more information on our Enhanced COTS Initiative: www.altera.com/military.

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