MORE THAN 20 CONTINUOUS YEARS OF INNOVATION, SUPPORT, AND RELIABLITY IN AEROSPACE & DEFENSE

THREE GENERATIONS OF AGENCY-APPROVED SECURE SOLUTIONS

Security Challenges

- Increasingly complex agency specifications for security, including Information Assurance (IA) and Anti-Tamper (AT) support
- Long lead times and high cost for custom solutions
- Severe budget cuts, resulting in pressures to do more with less
- Disparity in tools and vendor support for ruggedized designs, compared to COTS solutions
- Finding experienced, pre-approved partners with the commitment to support long-life-cycle solutions

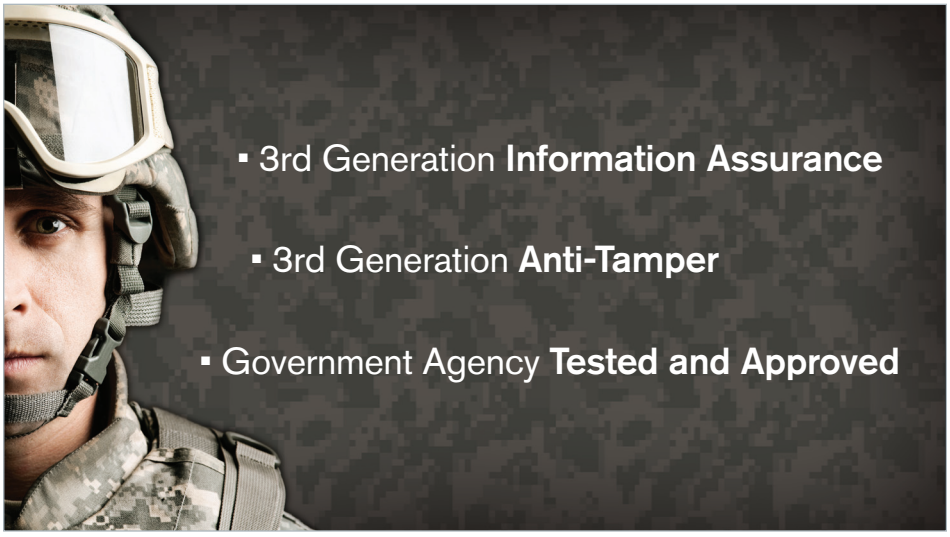
The Xilinx Solution

- Multi-generational secure, reprogrammable silicon, software, tools and IP
- The first government agency approval for a secure FPGA-based solution
- Dedicated support team, methodologies, and documentation for secure system implementation
- Proven reliability stemming from heritage, long term product support and deployment

Since 1989, when its first defense-grade FPGAs came to market, Xilinx has collaborated with Aerospace and Defense (A&D) solution providers and strategic government agencies to accelerate the delivery of high-assurance applications. Xilinx programmable devices give developers of mission-critical systems both flexibility and cost-efficiency—with SWaP-C (size, weight, power, and cost) optimization—making them the silicon of choice for dealing with the current economic conditions and for keeping ahead of increasingly sophisticated adversaries on the battlefield.

Today, Xilinx meets the rigorous demands of the A&D industry with unique, industry-leading security capabilities. As the basis for an extensive portfolio of commercial off-the-shelf (COTS), defense and space-grade silicon devices, Xilinx secure Information Assurance (IA) methodology and Anti-Tamper (AT) technology are meeting a broad range of stringent defense-related security requirements. Backed by support from dedicated secure application experts, these capabilities reduce mission risk as well as system cost.

THE XILINX ADVANTAGE



XILINX®

The Support of Dedicated Defense-Class Security Experts

Reliable, secure silicon devices provide a strong system foundation, but the dedicated team of security experts at Xilinx provides the vital support that allow system deployment to the field on schedule and within budget. Developers can take advantage of knowledge acquired over decades, which is shared in training, documentation, and participation in industry and government workshops and consortia. Today, many government guidelines for secure, programmable solutions incorporate specifications written by Xilinx.

With a wide range of dedicated expertise and support services, Xilinx can seamlessly take customers from early engagement to deployment. This translates to reduced risk for mission critical programs in a constantly changing battlefield.

Approval from Governement Agencies

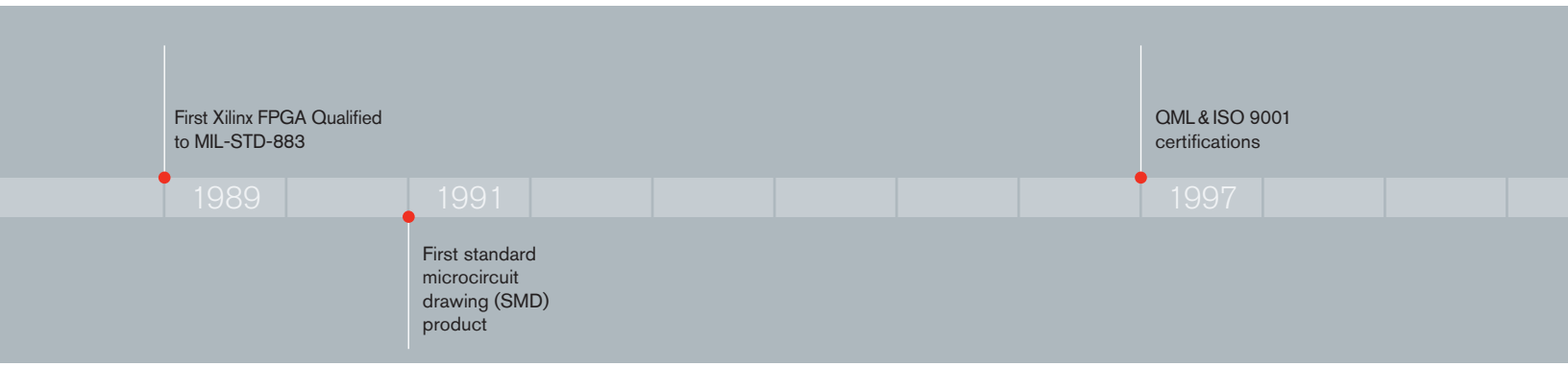
Xilinx is the only major FPGA vendor to offer a distinct defense-grade product line with government approval on secure capabilities. Xilinx is currently in production on its third generation of approved secure silicon, and has announced devices with fourth generation technology.

Ongoing relationships and collaborations with key government agencies have been vital to the confirmation of safe implementation of cryptographic systems utilizing Xilinx products for IA on multiple generations of architecture. Also, through these collaborations Xilinx has worked to have its FPGA AT solutions complement overall AT system solutions—to help ensure that a system's critical technology is protected as instructed by DoD 5200.39. In addition, the Xilinx secure solution yields higher levels of integration and reliability that benefit other applications such as commercial avionics and commercial cryptographic systems.

Evolving Security Over Multiple Generations

Since 1989, Xilinx has significantly expanded its defense- and space-grade product portfolio with multiple generations of secure defense-grade devices including the Xilinx Virtex™-4Q, Virtex-5Q and the Spartan™-6Q / Virtex-6Q FPGAs. The Spartan-6Q represents the industry's first defense-grade FPGA based on a successful low-cost, low-power process and architecture. Designers gain a highly flexible device that delivers industry-leading secure SWaP-C benefits to applications requiring high levels of security and reliability, such as secure mobility and similar applications within battery-powered form factors.

Xilinx offers the broadest range of secure FPGA solutions for the A&D industry, powering products in avionics, electronic warfare, missiles and munitions, MILCOM and, ISR. Xilinx defense-grade FPGAs are 100% pin compatible to their commercial equivalent and fully supported by Xilinx ISE® Design Suite, for seamless migration between prototyping and production.



Fully Tested at Full Speed for Maximum Reliability

Modern Xilinx defense-grade devices are full temperature range tested and qualified to operate in extreme environments.

Unlike competitors that 'characterize' full range temperature range operation, Xilinx defense-grade devices are actually tested at verified junction temperatures that include I-temperature (-40 to +100 °C), Q-temperature (-40 to +125 °C) and M-temperature (-55 to +125 °C) ranges.

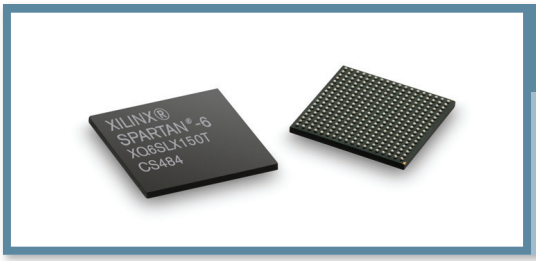
Ruggedized Packaging without Pure Tin

All defense grade products are manufactured with standard tin/lead materials to ensure against tin-whiskering for absolute long-term reliability. In addition, unique ruggedized packaging is featured where caustic manufacturing processes are utilized by the customer.

Smooth Migration Path to Future Devices

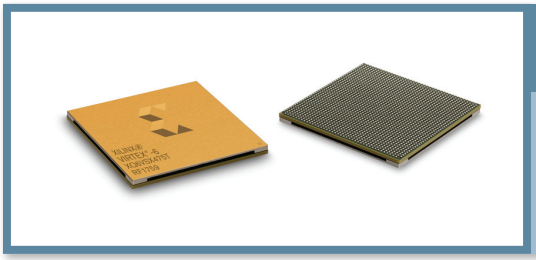
A continuous roadmap of secure devices is planned for Xilinx secure solutions. Security is a core part of the Xilinx plan for all future silicon product architectures.

LATEST GENERATION OF SECURE PROGRAMMABILITY



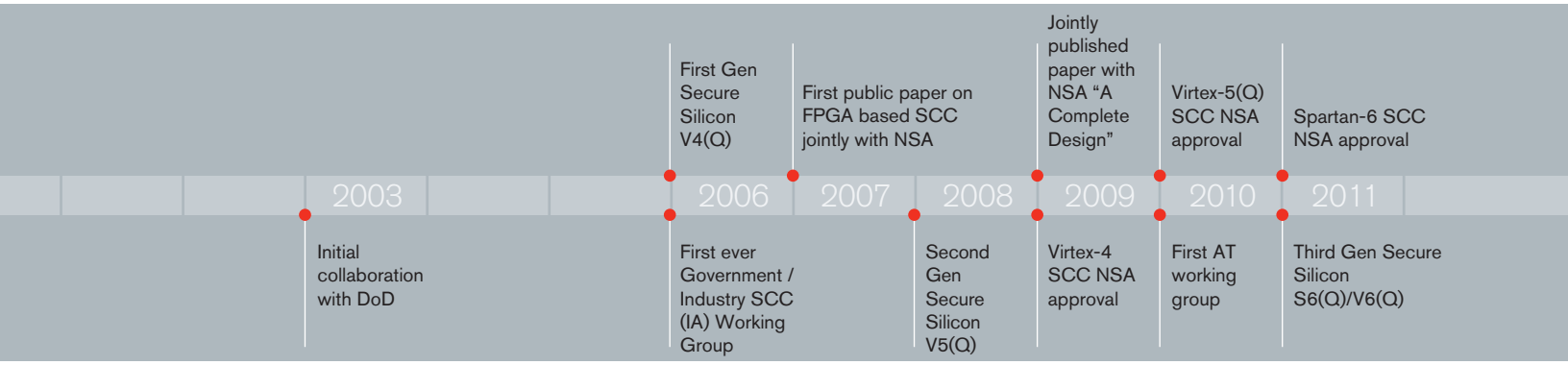
Spartan-6Q FPGA Family

Ideal for MILCOM and other applications where security, low power and low costs are critical

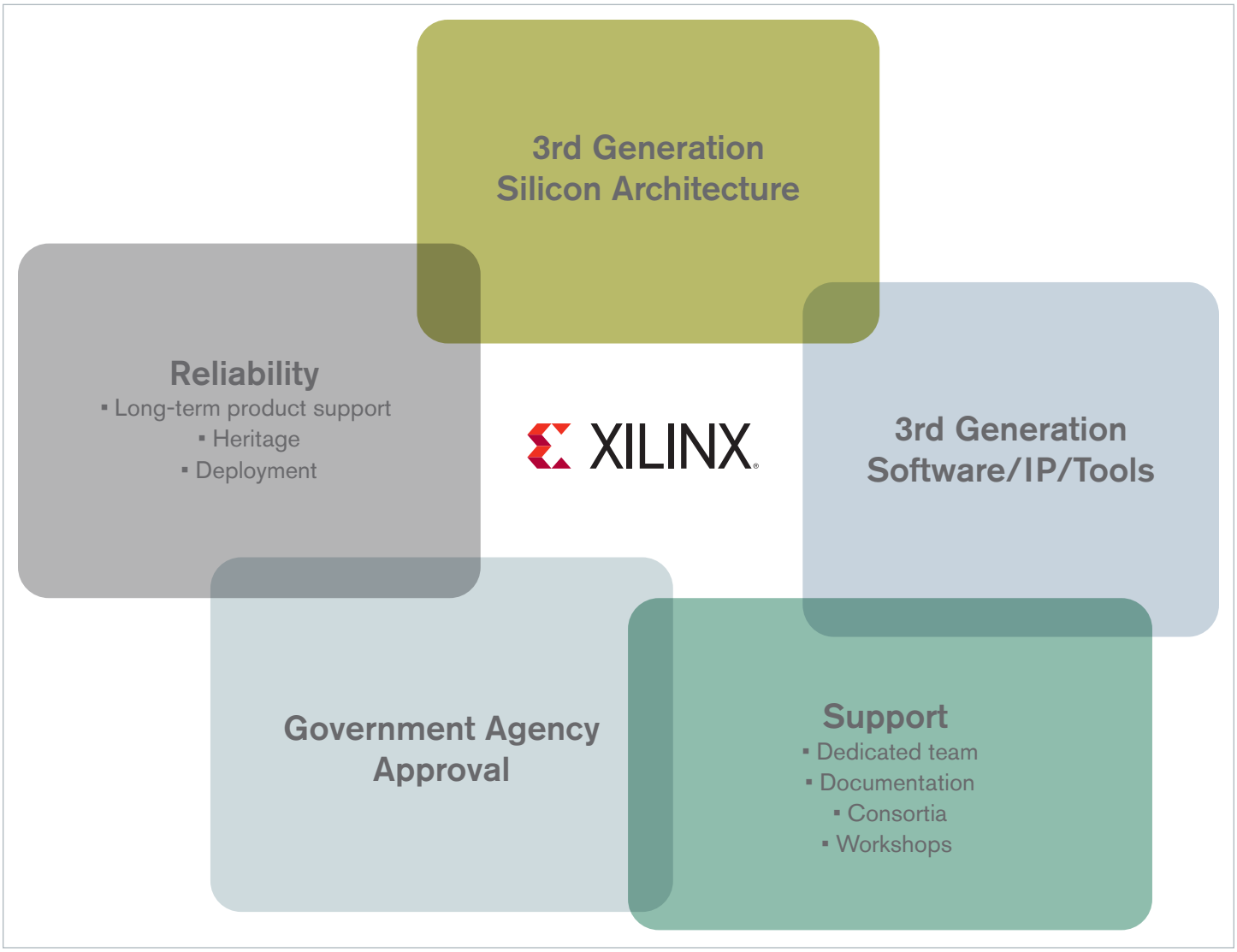


Virtex-6Q FPGA Family

Ideal for applications where security, high-reliability, high-performance and bandwidth



SECURE LEADERSHIP



Take the NEXT STEP

For more information about Xilinx secure solutions, please visit: **www.xilinx.com//applications/aerospace-and-defense/index.htm**

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