# Xilinx Extends Functional Safety into AI-class Devices

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**IEC 61508 specification certificate issued by Exida for high-performance Zynq UltraScale+ family**

SAN JOSE, Calif., Nov. 20, 2018 /PRNewswire/ -- Xilinx, Inc. (NASDAQ: XLNX) today announced that its Zynq® UltraScale+™ MPSoC family has been assessed as SIL 3, HFT1 capable, according the IEC 61508 functional-safety specification, by Exida, the leading functional safety certification agency. This assessment means product developers can build new high-performing systems including artificial intelligence (AI) for safety-critical applications using Xilinx's feature-rich, highly integrated single-chip MPSoC family, with the assurance of IEC 61508 functional-safety certification up to Safety Integrity Level 3 (SIL 3).



"AI-based systems need to be safe systems," said Yousef Khalilollahi, vice president, core vertical markets, Xilinx. "Today's announcement underscores our leadership in this new category of devices, further raising performance and extending design flexibility. Zynq UltraScale+ MPSoC was designed with safety and security in mind and is the ideal architecture to support industrial IoT or Industrie 4.0 platforms and future generations of automotive, aviation, and AI-based systems."

The independent assessment of the Zynq UltraScale+ MPSoC family is a significant milestone in Xilinx's functional safety offerings. The achievement built upon the industry's first commercial ARM-based SoC, the Zynq-7000, able to demonstrate compliance to functional safety requirements for on-chip redundancy (HFT=1).  Both device families leverage Xilinx's competencies in implementing isolated function domains on a single die with hardware protection mechanisms, creating the required hardware fault tolerance consistent with on-chip redundancy (HFT=1). In addition, developers can take advantage of the embedded FPGA fabric to accelerate performance beyond conventional software-based systems and thus achieve the fast response times and low latency typically required of safety-critical systems. Xilinx has also introduced safety-enhanced automotive-qualified XA Zynq UltraScale+ MPSoCs, certified to ISO 26262 ASIL C.

Combined with the recent IEC 61508 safety certification of the supporting Vivado® Design Suite by TÜV Süd and the MicroBlaze™ compiler for additional soft processors by SGS-TÜV Saar, Xilinx now provides a complete ecosystem based on robust design flows that includes supporting documentation, assessment reports, and IP to minimize risks for customers. Moreover, each of the four leading functional-safety assessment bodies has now indicated acceptance of Xilinx's methodologies for establishing functional safety of monolithic silicon devices and design flows.

Developers can find tools and resources to support highly integrated safety-critical systems design by purchasing access to Xilinx's online Functional Safety Lounge. Privileges include access to the Safety Manual for Zynq UltraScale+ MPSoC, device and architecture updates, tool-flows and documentation including future reports and assessments. To learn more, visit: https://www.xilinx.com/applications/industrial/functional-safety.html

For more information on Xilinx and its breakthrough technologies, visit www.xilinx.com. Follow Xilinx on Twitter, LinkedIn, and Facebook.

**About Xilinx**
Xilinx develops highly flexible and adaptive processing platforms that enable rapid innovation across a variety of technologies—from the endpoint to the edge to the cloud. Xilinx is the inventor of the FPGA, hardware programmable SoCs, and the ACAP, designed to deliver the most dynamic processor technology in the industry and enable the adaptable, intelligent, and connected world of the future. For more information, visit www.xilinx.com.

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