

# Synopsys Foundation IP Meets Stringent Automotive AEC-Q100 Grade 1 Temperature Requirements for TSMC 16FFC and 28HPC+ Processes

DesignWare Logic Libraries and Embedded Memories Accelerate Development and Qualification of Automotive SoCs

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## Highlights:

- DesignWare Foundation IP meets automotive Grade 1 temperature (-40C to +150C junction) requirements, delivering high reliability for automotive SoCs
- ASIL D Ready Embedded Memories, STAR Memory System and STAR Hierarchical System accelerate ISO 26262 functional safety assessments to help reach target ASIL levels
- High-speed, high-density and ultra-high-density logic libraries, memory compilers and HPC Design Kits deliver superior performance, power and area on TSMC 16FFC and 28HPC+

Synopsys, Inc. (Nasdaq: SNPS) today announced that its DesignWare® Foundation IP, including [Logic Libraries and Embedded Memories](#), meets stringent automotive AEC-Q100 Grade 1 temperature requirements on the TSMC 16-nanometer FinFET Compact (16FFC) and 28-nm High-Performance Compact+ (28HPC+) processes. By providing IP that is ready for high temperature operation on TSMC 16FFC and 28HPC+, Synopsys enables designers to reduce design effort and accelerate AEC-Q100 qualification of system-on-chips (SoCs) for automotive applications such as advanced driver assistance system (ADAS) and infotainment.

This latest achievement complements Synopsys' [broad portfolio of automotive-grade IP](#) that offers ASIL B Ready and ASIL D Ready certification, AEC-Q100 testing and TS 16949 quality management.

"By offering DesignWare Foundation IP for TSMC's 16FFC and 28HPC+ processes that meets Grade 1 temperature requirements, Synopsys demonstrates its commitment to providing high-quality IP solutions that help designers speed development and certification of SoCs on TSMC's advanced processes," said Suk Lee, TSMC senior director, design infrastructure marketing division. "Synopsys continues to be a leading provider of proven IP solutions that enable designers to reduce design effort and achieve their automotive SoC design goals on TSMC's latest process technologies."

"Automotive SoCs require IP that adheres to stringent ISO 26262 functional safety, AEC-Q100 reliability and TS 16949 quality standards," said John Koeter, vice president of marketing for IP and prototyping at Synopsys. "Synopsys' significant investments in all these areas provides designers with a broad portfolio of DesignWare IP that helps accelerate qualification for their automotive SoCs."

## Availability & Resources

DesignWare Logic Libraries and ASIL D Ready Embedded Memories meeting AEC-Q100 temperature requirements for the TSMC 16FFC and 28HPC+ processes are available now. ASIL D Ready DesignWare STAR Memory System® and STAR Hierarchical System are also available now.

Synopsys' broad portfolio of automotive-grade IP includes Logic Libraries, Embedded Memories, STAR Memory System, STAR Hierarchical System, Ethernet Audio Video Bridging (AVB), LPDDR4, MIPI CSI-2 and DSI, HDMI, PCI Express®, USB, Mobile Storage, NVM, Data Converters, Security IP, ARC® EM Processors with Safety Enhancement Package (SEP), ARC MetaWare Compiler, EV Vision Processors and the Data Fusion IP Subsystem. Synopsys also provides [virtual prototyping solutions for automotive](#).

## About DesignWare IP

Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad DesignWare IP portfolio includes logic libraries, embedded memories, embedded test, analog IP, wired and wireless interface IP, security IP, embedded processors and subsystems. To accelerate prototyping, software development and integration of IP into SoCs, Synopsys' IP Accelerated initiative offers IP prototyping kits, IP software development kits and IP subsystems. Synopsys' extensive investment in IP quality, comprehensive technical support and robust IP development methodology enable designers to reduce integration risk and accelerate time-to-market. For more information on DesignWare IP, visit <http://www.synopsys.com/designware>.

**Synopsys Automotive: Enabling Safe, Secure, Smarter Cars - from Silicon to Software**

Customers across the automotive supply chain use Synopsys' Silicon to Software™ solutions to develop ICs and software for infotainment, ADAS, V2X and autonomous driving applications. Synopsys' portfolio of automotive-specific IC design and verification tools, automotive-grade IP and automotive software cybersecurity and quality solutions accelerate time to market and enable the next generation of safe, secure and smarter connected cars. Learn more at <http://www.synopsys.com/automotive/>.

### **About Synopsys**

Synopsys, Inc. (Nasdaq: SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 15th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software quality and security solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at <http://www.synopsys.com/>.

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