



## **TSMC Delivers World-first 7nm Automotive Design Enablement Platform**

*Proven Volume Production Track Record with ISO 26262-Certified Foundation IP Accelerates Time-to-Design for AI Inferencing Engines, ADAS and Autonomous Driving*

**Hsinchu, Taiwan, R.O.C., May 28, 2020** – TSMC (TWSE: 2330, NYSE: TSM) today announced the availability of the world's first 7nm Automotive Design Enablement Platform (ADEP), accelerating time-to-design for customers' AI Inferencing Engines, Advanced Driver-assistance Systems (ADAS) and Autonomous Driving applications. With its 7nm family of technologies in volume production since 2018, TSMC possesses industry-leading yield learning and quality assurance experience to both deliver on the increasing demand for leading-edge processes to fulfill high computation needs for automotive applications, and also meet rigorous durability and reliability requirements.

TSMC's ADEP is certified with the ISO 26262 standard for functional safety, and consists of Standard Cell, GPIO, and SRAM foundation IP based on the Company's years of experience in 7nm production for design robustness and first-time success. In addition, TSMC's foundation IP have also passed rigorous qualification according to AEC-Q100 Grade-1, providing customers with another layer of quality assurance. Process design kits and support from third party vendor IPs are also available, enabling customers to further focus their efforts on the unique capabilities that distinguish their product in the market. Furthermore, TSMC not only provides robust 7nm capacity with automotive-grade defect PPM, it is also committed to supporting the long life cycles of automotive products.

"Automotive applications have always demanded the highest level of quality. With the advent of ADAS and autonomous driving, powerful and efficient computing is now also required to enable AI inferencing engines to perceive the road and understand traffic to help drivers make split-second decisions," said Dr. Cliff Hou, Senior Vice President of Research & Development and Technology Development at TSMC. "TSMC is uniquely positioned with our 7nm experience and comprehensive design ecosystem to unleash our customers' innovations and achieve first-time silicon success while meeting the rigorous demands of bringing safer and smarter vehicles to market."

In addition to a robust automotive IP ecosystem, TSMC Fabs are certified with IATF 16949 for automotive product manufacturing. TSMC also provides an Automotive Service Package for wafer manufacturing, with a built-in "Zero Defect Mindset" for tightened control and enhanced gating to achieve automotive DPPM goals, as well as a Safe Launch Program during production ramp to ensure the success of new product introduction.



## About TSMC

TSMC pioneered the pure-play foundry business model when it was founded in 1987, and has been the world's largest dedicated semiconductor foundry ever since. The Company supports a thriving ecosystem of global customers and partners with the industry's leading process technologies and portfolio of design enablement solutions to unleash innovation for the global semiconductor industry. With global operations spanning Asia, Europe, and North America, TSMC serves as a committed corporate citizen around the world.

TSMC deployed 272 distinct process technologies, and manufactured 10,761 products for 499 customers in 2019 by providing broadest range of advanced, specialty and advanced packaging technology services. TSMC is the first foundry to provide 5-nanometer production capabilities, the most advanced semiconductor process technology available in the world. The Company is headquartered in Hsinchu, Taiwan.

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