Synopsys DesignWare IP Enables First-Pass Silicon Success for SK Hynix Universal Flash Storage Device

High-Quality IP Enables Integration in Two Weeks and Speeds Time to Volume

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Highlights:

- SK Hynix delivered a more energy-efficient product using ultra-low standby power and fast exit/entry latency features in the IP
- Increased performance by utilizing the MIPI M-PHY high-speed, Gear 3 mode with dual data lanes
- Accelerated design schedule by six months with Synopsys' silicon-proven UFS, UniPro and M-PHY IP
- Achieved interoperability by using Synopsys IP that is compliant with the latest JEDEC UFS, MIPI UniPro and MIPI M-PHY standard-specifications

Synopsys, Inc. (Nasdaq:SNPS), today announced that SK Hynix has achieved first-pass silicon success for its 64 GB Universal Flash Storage (UFS) 2.0 device using Synopsys' DesignWare® UFS Host Controller, UniPro Host Controller and M-PHY IP. By integrating Synopsys' high-quality, silicon-proven DesignWare IP, SK Hynix was able to accelerate their time-to-volume production by six months. SK Hynix selected Synopsys' DesignWare IP because it is compliant with the latest UFS 2.0, UniPro℠ 1.60 and M-PHY℠ 3.0 standard specifications and incorporates differentiated features including high-speed, Gear 3 mode with dual data lanes to deliver exceptional performance. With Synopsys' IP, SK Hynix was able to deliver read/write speeds of 780 Megabytes per second (MB/s) and 160 MB/s respectively. Compared to alternative offerings, the ultra-low standby power and fast exit/entry latency features in the DesignWare IP enabled SK Hynix to achieve a more energy efficient solution.

"We needed a proven IP provider with a successful track record to help us quickly deliver a high-performance and power-efficient UFS 2.0 solution for mobile devices such as high-end smartphones," said J. W. Park, senior engineer at SK Hynix. "By using Synopsys' DesignWare UFS, UniPro and M-PHY IP solutions optimized for performance and power, we were able to integrate the IP in two weeks and speed volume production by six months. In addition, the technical support team was there to help us every step of the way with timely responses and technical expertise."

"SK Hynix's silicon success with our DesignWare UFS, UniPro and M-PHY IP demonstrates how Synopsys provides high-quality IP with the right features to help customers like SK Hynix incorporate the required functionality into their products with less risk," said John Koeter, vice president of marketing for IP and prototyping at Synopsys. "By providing SK Hynix with a broad portfolio of proven and compliant DesignWare UFS, UniPro and M-PHY IP solutions, Synopsys enables designers to confidently deliver differentiated products in the competitive mobile market."

Availability

Synopsys' DesignWare UFS Host Controller, UniPro Host Controller and M-PHY IP are available now.

Read the SK Hynix success story: https://www.synopsys.com/implementation-and-signoff/rtl-synthesis-test.html

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 enables designers to reduce integration risk and accelerate time-to-market. For more information on DesignWare IP, visit http://www.synopsys.com/designware.

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 16th 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 www.synopsys.com.

Editorial Contacts:
Monica Marmie
Synopsys, Inc.
650-584-2890
monical@synopsys.com

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