

Synopsys and Hisilicon Technologies

Silicon-Proven DesignWare USB 2.0 PHY IP Lowers Integration Risk and Enables First Pass Silicon Success



“Time-to-market was a top priority for us. With the DesignWare USB 2.0 PHY IP, we were able to achieve first pass silicon success and meet our project schedule.”

- Jason Chao, Senior Director, HiSilicon Technologies

Business

Hisilicon is one of the largest IC design companies in China and former ASIC Design Center of Huawei. The company provides solutions for communication network, wireless terminal and digital multimedia markets.

Hisilicon Technologies' Challenges

- Achieve time-to-market goals
- Lower integration risk
- Meet performance requirements

Solution

- DesignWare® USB 2.0 PHY IP

Benefits

- Achieved first pass silicon success
- Lowered integration risk by acquiring high quality IP
- Received excellent support from applications engineers

Overview

Established in 2004, Hisilicon provides comprehensive ASIC solutions for fixed network, optical network, wireless network, data communication and network security. These ASICs are widely used in over 100 countries and regions around the world.

Hisilicon has mastered leading IC design and test technologies, constructed the advanced EDA design platform, as well as R&D flows. Moreover, Hisilicon possesses the IPRs of more than 100 types of self-developed chips, and owns over 400 patents.

Based on the principles of seeking mutual interests and common growth, Hisilicon has kept excellent strategic cooperation with partners from USA, Japan, Europe and China, thus maintaining a complete and stable network covering wafer production, encapsulation and test.

“After evaluating several IP vendors, we found that Synopsys’ DesignWare USB 2.0 PHY IP was the low risk choice based on its track record of delivering certified, high quality IP. In addition, the post-sales support during IP integration was excellent.”

- Jason Chao, Senior Director, HiSilicon Technologies

Leading IP Features

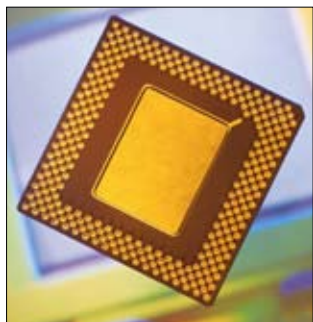
HiSilicon's Hi3560 is a highly-integrated and programmable network media processor that supports various audio/video protocols. The processor is used in many of today's multimedia terminals including network and digital TV, set top boxes and mobile TV receivers.

For the specific Hi3560 design, performance and time-to-market were priorities for HiSilicon. They turned to Synopsys to help meet their design goals. The Synopsys DesignWare USB 2.0 PHY IP provided HiSilicon with a core that met their small area, low power and high yield requirements. In addition, the DesignWare USB 2.0 PHY was USB-IF logo certified in China's popular SMIC 130-nm low cost process technology, which was exactly what HiSilicon needed.

High Quality and Excellent Support

After a careful technical evaluation of other IP vendors, HiSilicon selected Synopsys DesignWare IP because of its reputation for delivering high quality IP and established presence in the industry. In addition, Synopsys provided HiSilicon with excellent post-sales support during IP integration, which saved HiSilicon weeks of development time.

Using Synopsys' DesignWare USB PHY IP, which has been silicon-proven and in volume production, helped HiSilicon achieve first pass silicon success and meet their project schedule. With this successful design behind them, HiSilicon is focused on future developments, which will undoubtedly consist of DesignWare IP.



“Performance was a key factor for this design. The DesignWare USB 2.0 PHY IP had a robust architecture that provided us with a strong combination of small area, low power and high yield.”

- Jason Chao, Senior Director, HiSilicon Technologies

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Predictable Success

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