

Case Study: Guangdong Nufront CSC CO., LTD

Challenges

- Key project challenges drove the need for third-party USB IP:
 - Meeting an aggressive time-to-market window
 - Reducing development cost
 - Meeting performance, power and area targets
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Use Case

- Uses the following Synopsys USB IP:
 - USB 2.0 Controller
 - USB 2.0 PHY
 - Used the following process nodes to implement Synopsys' USB IP:
 - 28-nm
 - 40-nm
 - Integrated Synopsys USB IP into Mobile Multimedia (smartphone, tablet/netbook, digital camera, camcorder, etc.) SoC.
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Results

- Main reasons for selecting Synopsys' USB IP:
 - Extensive silicon success
 - Standards certification and interoperability
 - Quality of the IP
 - Ease of integration effort
 - Rated Synopsys DesignWare USB IP in the following categories as compared to the competition:
 - Area: Extremely differentiated
 - Power consumption: Extremely differentiated
 - Performance: Extremely differentiated
 - Standards certification: Extremely differentiated
 - Features/capabilities: Extremely differentiated
 - Ease of integration: Extremely differentiated
 - Completeness of solution (e.g., controller + PHY + verification IP): Extremely differentiated
 - Saved 9-12 staff-months in development and integration over their alternatives with Synopsys USB IP.
 - Saved 31 to 40% in power consumption using Synopsys USB IP over competitive USB IP alternatives.
 - Realized the following benefits with Synopsys USB IP:
 - Achieved USB-IF certification
 - Accelerated development schedule
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