Case Study: Guangdong Nufront CSC Co., Ltd

Challenges

- Project completion driven by need for third-party USB IP
- Meeting an aggressive time-to-market window
- Reducing development cost
- Meeting performance, power and area targets

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 IPs into Mobile Multimedia (smartphone, tablet/netbook, digital camera, camcorder, etc.) SoC.

Results

- Main reasons for selecting Synopsys' USB IP:
  - Extensive silicon success
  - Standards certification and interoperability
  - Quality of the IP
  - Ease of integration effort
  - Synopsys Advantage (great 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
  - Completeness of solution (e.g., controller + PHY + verification IP): Extremely differentiated

- Synopsys' USB IP reduces design cycle time by increasing design integration over their alternatives with Synopsys' USB IP.

- Saved 9-12 staff-months in development and integration over their alternatives with Synopsys' USB IP.

- Saved 31 to 40% in power consumption over competitive USB IP alternatives.

- Realized the following benefits with Synopsys USB IP:
  - Achieved USB-IF certification
  - Accelerated development schedule

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