SYNOPSYS

Research by TechValidate

Case Study: InfoTM Microelectronics

Challenges

- Key project challenges drove the need for a third-party USB IP:
  - Meeting an aggressive time-to-market window
  - Reducing development cost
  - Availability of IP in target foundry process
  - Reducing project risk
  - Enabling the design team to focus on differentiated portions of their design

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:
  - 40-nm
  - 65-nm
- Integrated Synopsys USB IP into Mobile Multimedia (smartphone, tablet/netbook, digital camera, camcorder, etc.) SoC.

Results

- Main reasons for selecting Synopsys' USB IP:
  - Extensive silicon success
  - Quality of the IP
  - Ease of integration effort
  - Completeness of solution (controller, PHY, verification IP)
- Rated Synopsys DesignWare USB IP in the following categories as compared to the competition:
  - Power consumption: Differentiated
  - Performance: Highly differentiated
  - Standards certification: Highly differentiated
  - Features/capabilities: Highly differentiated
  - Ease of integration: Highly differentiated
  - Completeness of solution (e.g., controller + PHY + verification IP): Extremely differentiated
- Saved 6-8 staff-months in development and integration over their alternatives with Synopsys USB IP.
- Realized the following benefits with Synopsys USB IP:
  - Achieved first pass silicon success
  - Met design's performance, power and area goals
  - Achieved first-to-market

Testimonials

"Synopsys' reliability made us believe that integrating USB in our SoC would be problem-free, and it was."

Source: Chuck Liu, Engineering Manager, InfoTM Microelectronics Co.,Ltd