Case Study: Hisense   *Hisense*

Challenges

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

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:
    - 55-nm
- Integrated Synopsys USB IP into Digital Home (set-top box, DVD player, DTV, residential gateway, etc.) SoC.

Results

- Main reasons for selecting Synopsys' USB IP:
    - Quality of the IP
    - Completeness of solution (controller, PHY, verification IP)
    - Availability on required process node(s)
    - Previous experience with Synopsys IP
- Rated Synopsys DesignWare USB IP in the following categories as compared to the competition:
    - Area: Differentiated
    - Power consumption: Differentiated
    - Performance: Differentiated
    - Features/capabilities: Differentiated
    - Ease of integration: Differentiated
    - Completeness of solution (e.g., controller + PHY + verification IP): Highly differentiated
- Realized the following benefits with Synopsys USB IP:
    - Achieved first pass silicon success
    - Accelerated development schedule
    - Reduced development cost
    - Received knowledgeable and responsive technical support

Testimonials

"It's so easy to integrate Synopsys IP into our SoC that it saved us time to market."

Source: Shoulei Zhao, Design Engineer, Hisense Company Limited