

# Synopsys and Sino Wealth

Sino Wealth Cuts Development Time and Meets Aggressive Design Requirements With DesignWare Bluetooth Low Energy IP



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## Business

- ▶ Sino Wealth Electronics Ltd. is a high-tech enterprise specializing in design and sale of integrated circuits (ICs) for microprocessors used in a variety of small electronics.

## Challenges

- ▶ Acquire a compact, low power wireless IP solution that met key design goals
- ▶ Integrate Bluetooth wireless connectivity while meeting an aggressive design schedule

## Synopsys Solutions

- ▶ DesignWare® Bluetooth Low Energy PHY IP

## Benefits

- ▶ Significantly cut development time while meeting power and area requirements
- ▶ Obtained a pre-qualified Bluetooth PHY IP solution that met key performance goals
- ▶ Achieved desired yield in production
- ▶ Accelerated time-to-production by easily integrating interoperable Bluetooth PHY IP into their products

## Overview

Sino Wealth started its operations in 1994 and passed the ISO9001 certification in April of 2004. Its core values of specialization, differentiation and high-quality along with its team of experts have made Sino Wealth a trusted partner for companies around the world developing unique and differentiated products.

Sino Wealth needed a wireless IP solution with distinct characteristics and advantages for its latest IC design that included built-in LCD and real time clock (RTC) drivers, up to 10 channels and a 12-bit analog-to-digital converter. The IC for a microprocessor is used in human interface devices (HID), health and wellness, industrial, and retail applications.

Working with an aggressive design schedule, a set of key design requirements and quality standards, “Sino Wealth needed a silicon-proven, qualified wireless IP solution for easy integration into our existing implementation,” said Zhang.

“We evaluated other solutions and chose Synopsys’ silicon-proven DesignWare Bluetooth PHY IP to enable our customers to deliver a differentiated product to market ahead of the competition.”

—Slug Zhang, CA SBU Director, Sino Wealth Electronics

### High-Quality DesignWare IP Solutions

Sino Wealth conducted a comprehensive evaluation process that ultimately resulted in their selection of Synopsys’ DesignWare Bluetooth PHY IP. “DesignWare Bluetooth Low Energy PHY IP met our key design requirements and quality standards. We strongly believe that the PHY IP offers better performance, lower power consumption, and is easy to integrate into customers’ SoCs, compared to other available solutions” said Zhang.

To meet their aggressive power requirements, Sino Wealth leveraged the PHY’s low-power architecture with different power modes, designed to the latest Bluetooth low energy specification. Using Synopsys’ pre-qualified Bluetooth IP, Sino Wealth quickly achieved Bluetooth qualification for their products. Synopsys’ compact Bluetooth PHY IP with integrated voltage regulators simplified system design and reduced area. The high-quality IP solution allowed Sino Wealth to achieve a high yield in production.

Sino Wealth needed a wireless IP solution that they could easily incorporate into their products, for which they relied heavily on Synopsys’ RF design expertise and DesignWare Bluetooth Low Energy PHY IP. “The PHY’s Interoperability with our existing RF IP made the integration easy and saved us a lot of development time,” says Zhang.

### Building Future Products

Advanced power and performance features of the PHY IP along with Synopsys’ team of engineering experts made it possible for Sino Wealth to reduce their time-to-production. “Our existing Bluetooth low energy products have been put into production because of Synopsys’ great support during the development stage,” said Zhang.

Sino Wealth continues to collaborate with Synopsys on its unique IP requirements as they continue to deliver unique ICs to customers.

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