

Synopsys and KYOCERA Document Solutions, Inc.

KYOCERA Meets Power, Cost and Time-to-Market Goals for Multifunction Printer Chipsets With DesignWare IP



“With Synopsys’ silicon-proven, high-quality DesignWare IP, we accelerated our time-to-market by up to a year and delivered energy-efficient products.”



Yoshihiro Osada

Sr. Manager, R&D Development 31, Software 3 R&D Division, Corporate Software Development Division, KYOCERA Document Solutions, Inc.

Business

KYOCERA Document Solutions, Inc. is a manufacturer of document imaging solutions and document management systems including energy-efficient monochrome and color printers, multifunction products and wide format systems.

Challenges

- ▶ Acquire IP solutions that meet power consumption requirements
- ▶ Ease integration effort of new processor architecture
- ▶ Deliver differentiated SoCs ahead of the competition while minimizing risk and cost

Synopsys Solutions

DesignWare® IP including:

- ▶ Ethernet MAC 10/100/1G Controller
- ▶ USB 2.0 Host and Dual Role Device Controller
- ▶ PCI Express® Controller
- ▶ AMBA® APB® timers and AMBA AXI® Fabric

Benefits

- ▶ Reduced integration risk by acquiring quality, silicon-proven IP from a single vendor
- ▶ Accelerated time-to-market by up to a year
- ▶ Reduced power consumption
- ▶ Received excellent support from a knowledgeable and responsive local technical support team

Overview

Over the years, KYOCERA has leveraged their printers and multifunction products, incorporating long-life technology alongside their comprehensive software technologies to add environmental and economic value to their customers’ document workflow.

In recent years, the proliferation of mobile information devices and cloud computing has led to the need for the ability to perform document-related tasks anywhere at any time. The increasing popularity of information sharing means that the need for data management and security services is also growing.

The role KYOCERA envisions for themselves is not confined simply to sales and maintenance services for document management equipment, but also extends to providing the customer with total document solutions leading to improved operational efficiency.

KYOCERA develops SoCs that leverage new image processors and incorporate unique functionalities, while meeting cost, power and time-to-market requirements. To meet these requirements and based on a long established history, KYOCERA chose Synopsys as their IP solutions provider.



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High-Quality DesignWare IP Solutions

Today, the company uses a broad range of Synopsys standards-based interface IP to meet power, cost and time-to-market requirements. “We needed the IP integration to be easy and straightforward,” said Yoshihiro Osada. “That was the reason we selected Synopsys as our solutions provider for high-quality IP.”

The silicon-proven, easy to integrate Synopsys Ethernet MAC 10/100/1G IP is used in KYOCERA’s multifunction printer chipsets. The configurable Ethernet IP reduced power consumption allowing KYOCERA to meet their energy-saving product requirements.

In addition, Synopsys’ certified DesignWare USB IP ensured interoperability with other USB-enabled products and offered low power consumption as well as small area for lower silicon cost.

Synopsys’ DesignWare IP for PCI Express incorporated the required functionality into KYOCERA’s differentiated SoC. The high-performance Synopsys IP is low in power and latency and is compliant to the latest PCI Express specification.

Expert and Responsive Services and Support

“With our tight project schedule, it was critical for us to easily interact with a knowledgeable and responsive local technical support team. Synopsys provided us with exactly what we needed to efficiently deliver our low-power designs,” said Yoshihiro Osada.

Building Future Products

KYOCERA expects to continue leveraging Synopsys’ high-quality DesignWare IP to deliver innovative, next-generation multifunction printers that are energy efficient and durable, minimize running costs and offer network functionality. “We look forward to collaborating with and benefiting from Synopsys as one-stop source for hardware and software development.” Said Yoshihiro Osada

