ProMik Selects AMD's Kria SOM to Accelerate XDM-Series In-System Programming Solution

Kria SOM Speeds up End-of-Line Flash Programming

PARTNER

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INDUSTRY

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CHALLENGES

ProMik was building a new series of high-speed flash programming modules used for on-board programming in electronic production. It was looking for an integrated SoC solution to overcome the speed bottlenecks that are sometimes encountered when using disparate devices.

SOLUTION

The Kria K26 SOM from AMD simplifies product development and deployment with an integrated solution that features pre-built hardware and familiar design software.

RESULTS

With the Kria SOM, ProMik is able to accelerate its in-system programming solution to achieve high-performance parallel processing and flashing.

AMD TECHNOLOGY AT A GLANCE

Kria SOM

ProMik recently unveiled its XDM Series, a new generation of high-speed flash programming modules featuring technology from AMD.

XDM-ETH is a high-speed flash programming unit supporting the latest automotive Ethernet standards. This tool is used for on-board programming in electronic production. It is the most-powerful end-of-line programming tool to leverage ProMik Bootloader technology, with fast flash programming speed and cyber security built in.

The XDM-USB high-speed download module supports USB3 standards and achieves lower production costs for demanding applications that involve high-density MCUs, NAND, and NOR memories. This product targets automotive multimedia and infotainment instrument clusters.

Both products leverage the Kria™ K26 system-on-module (SOM) from AMD to run the Linux 5.10 operating system, and power concurrent high-speed data processing.

CHALLENGE

"When we started with the development of the new XDM Series we were looking for an SoC rather than trying to combine an MCU with an FPGA," said Jens Rosenberger, marketing manager at ProMik. "In the past (when using separate devices) we sometimes experienced a speed bottleneck between the FPGA and MCU."

Rosenberger said the company began to develop a prototype for its next-generation programmers based on a SOM device from another company. A basic board was developed and put into operation, but there were some problems in the design process.

The company then learned about AMD's Kria SOM.

SOLUTION

Offered in both commercial and industrial grades, the Kria K26 SOM simplifies product development and deployment by combining pre-built hardware and familiar design software into an integrated solution. The SOM features a custom-built Zynq™ UltraScale+™ MPSoC device designed into a small form factor card and comes with production-ready apps for industrial and machine vision applications.

"We became aware of the Kria SOM directly during the market launch," Rosenberger said. "Prototypes of the XDM-ETH were developed and tested on Kria, and a functioning design was created very quickly."

Because we were able to develop this product over a very short period of time, we decided to switch development of our MSP2300Net to the Kria SOM, and then began developing the XDM-USB on Kria as well.

"The Kria SOM offers a large number of interfaces with good spatial arrangement for sensible routing of the base board," Rosenberger said. He added that support from FAE partner, EBV, was very helpful, along with improving documentation and support in AMD's Vivado™ design tool.

RESULT

"AMD offers good products at good prices," Rosenberger said. "With the new Kria module, we found the right solution. It meets our requirements and gives us big FPGA capabilities that allow us to save all needed configurations on the chip. At the same time, the powerful MCU on-board enables high-performance, parallel processing and flashing."

WANT TO LEARN MORE?

About AMD's Kria SOM

About ProMik

About ProMik

ProMik manufactures customized flashing and testing systems and is a leading supplier of in-system programming (ISP) equipment for high-volume board manufacturing. The company offers a range of innovative components, systems, and services that simplify flashing requirements and continuously improve efficiency. Key served markets include automotive, consumer, industrial, healthcare, and aerospace.

About AMD

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