CAN Newsletter Online

SYSTEM-ON-MODULE

FPGA implementation

The Miami system-on-module from Topic (Netherlands) is based on the Xilinx's Zynq-7015/7030 system-on-chip. It is a solution for today's embedded systems.

The Miami system-on-module (Photo: Topic)

THE MODULE COMBINES A HIGH PERFORMANCE (ARM-BASED) application microprocessor with FPGA logic in a single chip. It integrates all system components required to bring the system alive including memory, power supply, debugging, and connectivity. 140 pins are available on the system-on-module connector for programmable interfaces including up to two CAN slots. Other interfaces are LAN, up to eight analog channels, UART, I^2C, SPI, USB, and more.

The unit's platform makes it a solution for applications that require high processing power, high speed interfaces, a high level of reliability, the ability to optimize system interfaces, and perform real-time analytics and control, says the company. The module comes with an actively supported main-line Linux distribution, including a template field-programmable gateway array (FPGA) implementation connecting to the carrier board connector.

Typical application areas are ones that use an application processor together with an FPGA, including but not limited to (secure) communications, aerospace and defense, audio / video applications, medical and industrial imaging. The product's dimensions are 65 mm x 68,4 mm, it provides software selectable carrier board I/O voltages, support for SATA3, and comes with a temperature range of -40 °C to +85 °C. Other features are its low power operation with 32-bit wide DDR3L 512 MiB, a QSPI Flash with 64 MiB, and NAND flash.