

ECUcore

32-BIT SINGLE BOARD COMPUTER SUBASSEMBLIES

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Insert-ready 32-bit Single Board Computers

Based on the accumulated experience of numerous customer projects, the ECUcore series combines a state-of-the-art hardware design with integrated operating system and extended software support.

ECUcore-5484

Focusing on applications that require a high degree of embedded computing power, the ECUcore-5484 combines a fast CPU, a performance optimized memory layout and a variety of communication interfaces. It targets applications that require high-speed data acquisition and real-time communication, such as Ethernet POWERLINK.

ECUcore-9G20

Based on a fast ARM9 CPU, the ECUcore-9G20 combines outstanding performance and features required to build embedded applications for sophisticated machine controls. Besides Ethernet and CAN, the board is equipped with USB2.0 host and device ports. A freely programmable on-board FPGA allows realizing highly complex peripheral units.

ECUcore-5208

The ECUcore-5208 was designed and optimized for typical low-cost applications such as point-of-sale and access control. The board offers numerous communication interfaces and a NAND flash for mass data storage. The address/data bus leading towards the outside provides the most effective degrees of freedom for connecting own in-/output circuits.

ECUcore-1130

Equipped with four CAN interfaces, Ethernet, 3 serial ports, and an on-board FPGA, the ECUcore-1130 is an ideal solution for embedded control applications that require high computing power combined with high demands in networking. In combination with the PXROS-HR operating system this board is predestinated to safety critical applications.




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Feature Overview

| | ECUcore-5484 | ECUcore-9G20 | ECUcore-5208 | ECUcore-1130 |
|---|---|---|--|---|
| Controller | Freescale MCF5484 with ColdFire V4e Core | Atmel AT91SAM9G20 with ARM926EJ-S Core | Freescale MCF5208 with ColdFire V2 Core | Infineon TC1130 with TriCore V1.2 Core |
| Frequency (internal) | 200MHz | 400MHz | 166MHz | 150MHz |
| RAM (min/max) | 64/128MB DDR-SDRAM | 32/64MB SDR-SDRAM | 16/32MB SDR-SDRAM | 32/64MB SDR-SDRAM |
| FLASH (min/max) | 16/32MB (NOR) | 16/64MB (NOR) | 4/8MB (NOR) 32/64MB NAND Flash | 16/128MB (NOR) |
| EEPROM | 2/32kB (SPI) | - | 2/32kB (SPI) | 2/32kB (SPI) |
| Interfaces | | | | |
| Fast Ethernet | 2x 10/100 Mbps | 10/100 Mbps | 10/100 Mbps | 10/100 Mbps |
| CAN | 2 | 1 | 1 | 4 |
| UART | 4 | 4 | 3 | 3 |
| USB | device | 2x host, 1 device USB2.0 | - | device |
| SPI | 1 | 1 | 1 | 2 |
| I2C | 1 | 1 | 1 | 2 |
| Others | - | SSC | - | 2x MLI, 2x 16-bit CAPCOM |
| Board features | | | | |
| DMA | • | • | - | • |
| MMU | • | • | - | • |
| Watchdog | • | • | • | • |
| Temperature Sensor | • | • | • | • |
| RTC | • | • | • | • |
| FPGA/PLD | CPLD or FPGA (encryptable) | FPGA (encryptable) | - | FPGA (encryptable) |
| Operating Temperature | -40°C ... +85°C | -40°C ... +85°C | -40°C ... +85°C | -40°C ... +85°C |
| Operating System | Linux | Linux | µClinux | PXROS |
| Programmable in | C/C++, IEC61131-3 | C/C++, IEC61131-3 | C/C++, IEC61131-3 | C/C++ |
| Middleware | CANopen Protocol Stack Source Code Ethernet POWERLINK Protocol Stack Source Code | | | |
| Integrated Development Environment | Enhanced Eclipse-based integrated development environment (IDE) GNU C/C++ Toolchain Source- and assembly-level debugger Comprehensive user documentation in HTML and PDF | | | |
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