PLCcore-5208

IEC 61131-3 AND C/C++ PROGRAMMABLE SINGLE BOARD COMPUTER

Order Information
PLCcore: 3390014, 3390015
Kit: KIT-158

Contact: sales@systec-electronic.com

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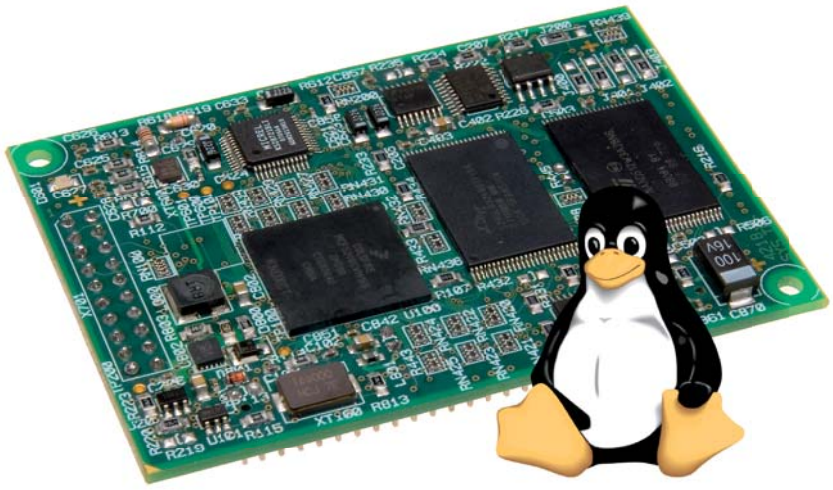

Low-cost, OEM-able 32-bit Embedded PLC

Where Embedded meets IEC 61131-3

The PLCcore-5208 is an insert-ready, low-cost and OEM-able Single Board Computer. The on-board firmware of the PLCcore-5208 includes the operating system µClinux and a pre-installed IEC 61131-3 runtime kernel with integrated CANopen Manager. The module enables the integration of a compact and high-performance Hard PLC into customized, user-specific applications at minimal effort - without having to pay additional development or runtime license fees for the IEC 61131-3 runtime kernel. The board combines all high-speed components on a very compact, low-EMI-multilayer circuit board. Due to its comprehensive and high-performance software, it is suitable for various applications under industrial conditions.

The address/data bus lead to the outside offers to the user greatest possible degrees of freedom for designing in-/output circuits of the PLCcore-5208. Hence, the peripheral equipment of the module can be adjusted to respective requirements in a flexible way. The source code of the I/O driver is available as Driver Development Kit (DDK). This allows for implementing own I/O connections without intervention on the IEC 61131-3 runtime kernel. Realizing the process image as Shared Memory makes possible the easy, bidirectional data exchange with other µClinux programs running in parallel to the PLC.

The comprehensive CANopen library of the PLCcore-5208 includes a CiA 302-conform CANopen Manager. By supporting the automatic node configuration, it allows for flexible extensibility of the module via CANopen units and Plug & Play. Moreover, the PLCcore-5208 uses the CiA 314 device profile for "IEC 61131-3 programmable devices" (former CiA 405) . Thus, easy data exchange with other CANopen modules is possible.

In addition to the CAN interface, the PLCcore-5208 features other numerous on-board communication interfaces. This provides for not only exchanging data and events with other nodes via CANopen network, but also via Ethernet and serial interfaces (UART) (e.g. superior central control, I/O slaves etc.). Hence, the module is well-suitable as central unit in distributed automation systems and as communication gateway. Filing the PLC program in the on-board Flash disk of the module allows for easy updating during runtime and autarchic restart after power breakdown.

Development Kit PLCcore-5208

The PLCcore-5208 was designed to be plugged onto a carrier board. Both, the module and a development board as a reference carrier board, are included in the Development Kit PLCcore-5208. The carrier board contains the I/O connectors required for immediate start-up of the module as well as other interface circuitry not provided on the SBC module itself. The Development Kit provides an excellent platform to evaluate controllers, develop software as well as specify and determine the feasibility of new embedded designs based on the PLCcore-5208.

Designed For:

Low-cost machine controls
Communication gateways
Point-of-sale and access control

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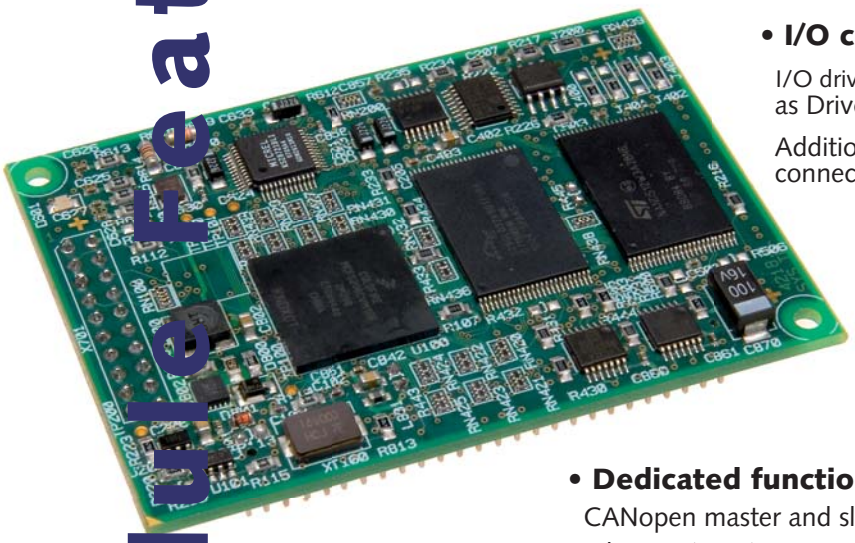
Module Features



- **Hardware:**
  - 32-bit Freescale MCF5208, 166MHz
  - up to 64 MiB user application memory
  - Connection of user-specific I/O circuits possible via address/data bus leading towards the outside
  - On-board RTC and Temperature sensor
  - 3.3 VDC Single-voltage power supply
- **Software - IEC 61131-3:**
  - Running µClinux operating system
  - IEC 61131-3 runtime kernel pre-installed
  - Programmable in IEC 61131-3 as well as in C/C++
  - Fully featured CANopen Manager with automatic node configuration (CiA 302 and CiA 314)
- **I/O configuration:**
  - I/O driver sources are available as Driver Development Kit (DDK)
  - Additional peripheral units connectable via address/data bus and I2C
- **Communication interfaces:**
  - 1x 10/100 Mbps Fast Ethernet, on-board PHY
  - 1x CAN2.0B with CANopen manager
  - 3x UART
- **Dedicated function blocks for:**
  - CANopen master and slave services
  - Ethernet (UDP) communication
  - Serial interfaces
  - Real Time Clock (RTC)
  - Non-volatile memory
- **Additional on-board software:**
  - FTP Server
  - HTTP Server
  - Telnet Server
- **Operating temperature range:**
  - Industrial: -40°C to +85°C

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Release 11/2009