Embedded Computing Unit – ECU1

ECU1 is highly efficient industrial device powered by Linux embedded operating system suitable for extended set of industrial applications (connectivity, data acquisition, protocol conversion, remote maintenance, etc) due to its interfaces and optional accessories.

ECU1 has been designed for peripheral tasks and connecting various devices and machines to the Ethernet. Various communications options are available for different applications, such as Ethernet, 3G/GPRS, RS232, RS485, USB host 2.0, CAN. The integrated LINUX operating system and the freely programmable environment on a PC enable the ECU to quickly and easily solve a wide range of industrial applications.

Features

ECU1 has two fully assigned serial interfaces (1xRS232 SUB D9 and 1xRS485 Phoenix) as well as one internal, and two external USB ports, and optional CAN bus. It provides audio interface with codec, line in, line out, mic in and speaker out. The embedded industrial computer is easily integrated into Ethernet interface (2x10/100Mbps Ethernet LAN ports available). ECU1 is ideally designed for complex CPU-intensive applications. ECU1 is set up with 2GB onboard flash memory, micro SD connector , LCD and touch screen interfaces. Optional 3G/GPRS and GPS modules available, with external antennas.

Design

The extremely compact casing hardly heats up. The fanless (passively cooling) ECU1 has no rotating parts and is thus invariably fit for maintenance-free, non-stop operation. Due to its robust design, it is perfectly suited for tabletop use as well as for compact mounting on vehicles, control cabinets or other control panels. The tabletop version includes a high-quality 9 V switch-mode power supply pack. The ECU for mounting on vehicles is supplied with 24 V power module.

Advantages

The ECU features a compact design, 32-bit RISC CPU, low power input, and the open-source LINUX operating system. The system is ready to run, and the user is in a position to benefit from immediate access to a wide range of network services such as the HTTP, FTP, SSH, PPP, and TELNET servers as well as the FTP, SSH, and DHCP clients. Users also have the option to decide whether they want to develop their own software solutions for specific uses or utilize the offered extensive open source software. Last but not least, the embedded system provides fast boot times and safe operation.

Specifications

Embedded CPU board	Freescale i.MX 536 Cortex-A8 800MHz
Real-time clock	battery buffered
RAM	2 GB Flash, 512 MB DDR3 RAM
Interfaces	1 x RS232 SUB-D9 male (4wires) 1 x RS485 Phoenix connector (2wires) 2 x External USB 2.0, full-speed host 1xUSB OTG 2 x LAN 10/100 BaseT Ethernet, RJ45 connector
Operating system	LINUX, Kernel 2.4.x or 2.6.x
Power supply	9-36V DC[1)] jack
Casing	Steel
Measurements W/H/D	Approx. 170/90/100 mm
Operating/Storage temperature	-30° C and 60° C
Relative humidity	5% to 90% non-condensing
Standards	CE
Optional accessories on request:	3G/GPRS and GPS modules with external antenna
[1)]Further voltages on request Subject to change without prior notice.	