DEVELOPMENT KIT
i.MX25/51 Stand Alone System for Embedded Solutions

The i.MX25/51 SODIMM EMBEDDED solution is designed to speed up your development and integration process, and includes complex boards with a number of the most required peripherals. The kit is supplied together with documentation, source codes, Base Board and SODIMM Module schematic. Protected by stylish aluminum case, this product can be used directly within customer system or as an embedded computer running Linux, Android or Windows CE.

The i.MX25/51 based embedded development system has been designed as a fully functional **Embedded PC** or as a development platform for the Voipac i.MX25/51 SODIMM Module, so-called computer on module (COM), which includes all of the technologically and development demanding parts, thus significantly reduces one's own application development time.

The usage of the i.MX25 and i.MX51 based embedded systems is targeted /though not limited to/ at the following areas:

- - Network applications (gateways/routers/web servers)
- - Attendance systems
- - Building and industrial automation
- - Data processing systems & control units
- - Portable and handheld devices
- - Point of sale terminals
- - Gaming machines
- - Netbooks and multimedia systems
- - Security and surveilance systems
- - Autopilots and navigation systems

The 200pin SODIMM sized Single Board Computer just as the whole development system can be supplied in a number of standard and **customized configurations** thus allowing fine tuning of the targeted device specification. A single module exchange represents a possibility of getting powerful system out of economic one. The i.MX25/51module comes with a preinstalled OS based on Linux kernel 2.6 and GNU utilities. Support for Windows CE and other operating systems is available from the third parties.

The development kit is used to get acquainted with the platform and represents the possibility of **parallel SW and HW development**. At the final stage of design period, the developed application can be easily placed into your own, more economic base board together with the Voipac SODIMM Module. All 200 pins of the i.MX25/51 Module can be accessed via the base board headers. Voipac provides the **schematics of the i.MX25 SODIMM Base Board and i.MX25/51 SODIMM Module** to make the custom baseboard design even easier.

The i.MX25/51 Development kit further provides connectors, configurable switches, buttons, GPIO pins and LEDs for simple user interaction, thus simplifying programming of one's own applications. Among the most significant attributes of the i.MX platform is low power drain with excellent MIPS/mW performance enabling usage in a battery-operated devices, high CPU performance, plenty of available interfaces and glueless connectivity to various passive and active LCDs with 4-wire resistive touch screens. The DVI-I connector provides direct connectivity to a generic CRT or TFT screens.

Besides all the standard PC peripherals, the system provides numerous communication channels as well as universal expansion slots and connectors.

Support for the nonstandard customer's peripherals or customized base board design, prototyping, certification or production is provided upon request.

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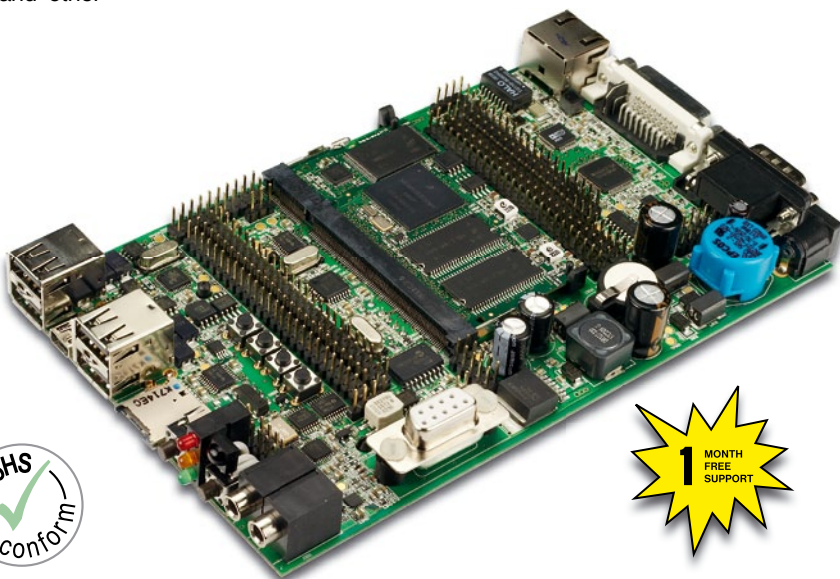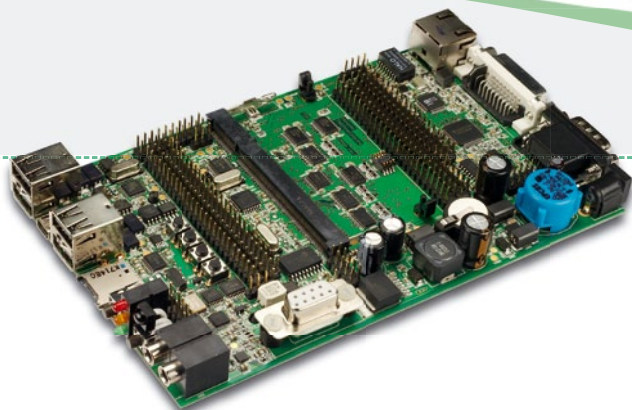
i.MX25 Base Board Top View

i.MX25 Base Board Bottom View

**i.MX25 + i.MX51 SODIMM Module
(both designed for i.MX25 Base Board)**

JTAG Cable and CD ROM

i.MX25 Base Board Hardware Specification:

Connectors:

1x RJ45 (10/100Mbps Ethernet)
1x DVI-I (Dual Link) Conector, Digital+Analog
1x RS232 DSUB9 male connector (terminal output)
1x CAN DSUB9 female connector
4x USB-Host
1x USB mini 2.0 OTG Host/Device
2x Jack stereo 3.5mm (stereo LINE IN/OUT, Microphone mono IN)
1x microSD™ Socket
1x MMC/SD Socket
1x Smart Card Reader Socket
1x DDR1 2.5V SODIMM 200pin Socket
1x JTAG (board-to-board pitch compression connector)
1x RESET push button
1x POWER push button
4x USER Push Button
1x Power Jack 5.5/2.1mm
3x LED HOLDER Stacked

Headers:

4x DEBUG 2x25pin, 2.54mm header
1x LCD 2x20pin, 2.54mm header
1x AUDIO 2x5pin, 2.54mm header
2x USB 1x2pin, 2.54mm header
1x TOUCH 4pin, 2.54mm header
1x JTAG 2x10pin, 2.54mm header
1x I2C 1x4pin, 2.54mm header
1x UART2 2x5pin, 2.54mm header
1x SPI 2x5pin, 2.54mm header
1x CAN 1x4pin, 2.54mm header
1x MSP430 PROG 1x4pin, 2.54mm header
1x BOOTMODE 1x3pin, 2.54mm header

Real Time Clock battery backup
POWER SUPPLY: 9-30V

Key Chips:

USB251x (USB HUB)
SGTL5000 (Audio codec)
DS1339 (Real Time Clock)
TSC2046 (Touch screen controller)
MCP2515 (CAN controller)
SI4705 (FM Radio)
TDA8029 (Smart Card Reader)
DS2411 (Serial number chip)
MSP430F20x2 (16-bit MCU)
SHF 5110 (IR Sensor)
ADV7125 (RGB video output)
TFP410 (DVI Video output)
SST25VF016B (SPI Flash)
AT24Cxx (I2C EEPROM)

The i.MX25/51 EMBEDDED PC Development kit includes:

- i.MX25/51 SODIMM Module
  in BASIC / PROfessional / MAXimum configuration
- i.MX25 Base Board (designed for i.MX25 and i.MX51 SODIMM Module)
- JTAG cable with serial line
- Support CDROM with source code, schematics, applications,
  i.MX25 Base Board Altium Designer files, etc…
  (entitles for the 1-month-free technical support)
- Aluminium case set
- Serial port cable
- Crossover Ethernet cable
- 200pin SODIMM socket
- JTAG pitch compression connector

Dimensions in mm	Length	x Width	x Height
i.MX25/51 SODIMM Module	67.6	38	4.5
i.MX25 Base Board	165	105	25
i.MX25/51 EMBEDDED PC (Aluminum case)	168	112	30

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