# Eddy™ CPU v2.5 Module

Embedded CPU Module

Main Features

- ● ARM9 CPU / 8MB Data Flash / 32(64)MB SDRAM
- ● Pin Header Interface (1.27mm, 144 pin)
- ● 10/100 Ethernet PHY (Auto MDIX) & 4 UARTs
- ● Max 56 Programmable GPIO
- ● Supported by Dev Kit including SDK, API
- ● Embedded Linux Kernel
- ● Supported by Eclipse based IDE LemonIDE™
- ● Watchdog timer
- ● TWI (I2C), SPI, MCI, 4-channel ADC
- ● Provides easy-to-use Windows utilities COM Port Redirector, PortView™, TestView™
- ● Compact sized to fit into any hardware
- ● Operation Temperature: -40 ~ 85°C
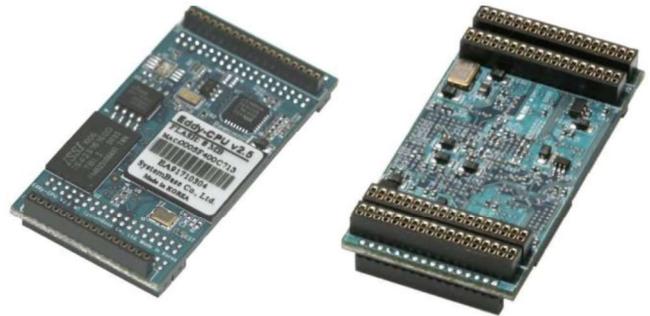
Eddy-CPU is a high-performance embedded CPU module with powerful ARM9 core processor. This compact-sized Eddy-CPU module provides complete embedded network connectivity, allowing developers and OEMs to design their own customized device that can be applied to almost any hardware environments. Its features include 19 bit address and 16 bit data bus interface to connect external device, PHY interface for Ethernet connectivity, and max 56 programmable GPIO pins.

Experience the powerful and flexible features of E CPU optimized for your special applications hardware.
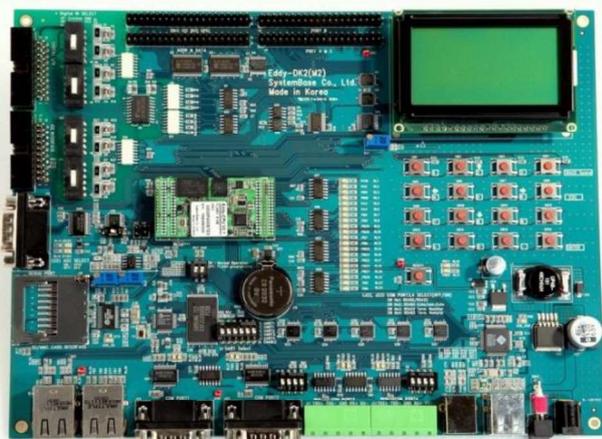
Eddy modules mounted on the Development Kit Board

Design your own applications faster and easier.

Designing an embedded device is not an easy task. CPU, memory and other complicated hardware specs must be considered into count and reviewed. Having to go over every component of your embedded device is not only difficult but also very time consuming, and this often leads to sloppy designs. You also have to port and customize your OS so that it would be fully compatible to your embedded device which is also a very difficult task.

Ordering a customized hardware board may be an alternative, only if you are willing to pay a high price or can meet a minimum MOQ which usually exceeding easily thousands.

Eddy-CPU provides the solution to all of these concerns. Eddy-CPUs are equipped with powerful 32bit ARM9 CPU (400MHz), 8MB Data Flash Memory, 32/64MB SDRAM and customized embedded Linux fully compatible to this hardware. You don't have to waste needless hours struggling with bible-thick databooks and porting OS. You can concentrate on what matters the most; your application, and that with least amount of time and effort.

Industry's Most Powerful Specs

Tired of constraints on your embedded device server's 8-bit CPU and 256KB memory? Eddy provides a simple and complete relief to these concerns by adopting a 32-bit ARM9 CPU with 400MHz clock, 8MB Data Flash memory, and 32/64MB SDRAM. Your applications can be large in size and will run faster, in a more stable manner under the embedded Linux operating system.

Embedded Linux Kernel

Embedded Linux built on Linux kernel 2.6.x
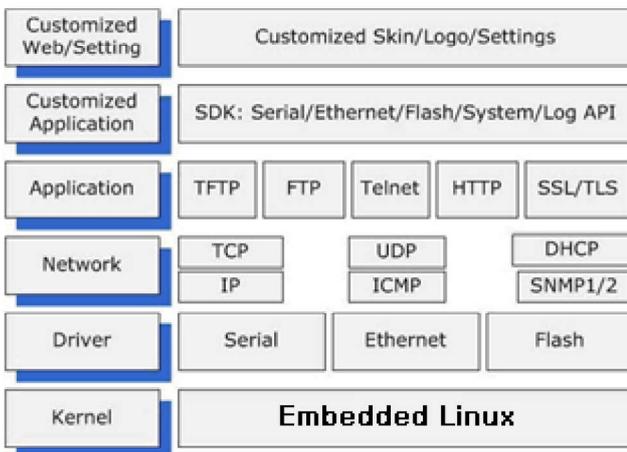
SDK, API & Source Codes Support

Eddy is distinguished with other embedded device servers in that it can upload and execute customized user applications. To enable developers to program their own socket/serial communication applications with least amount of time and effort, SystemBase provides arrays of development support including, SDK (Software Development Kit), API (Application Programming Interface) and Source Codes to assist developments. Example sources, loaded on Eddy-CPU device, are provided to help Eddy users who want to run applications on Eddy-CPU. By using the source, user only needs to modify an application if necessary.

Eclipse based LemonIDE™ Support

LemonIDE is an integrated development environment built on open source Eclipse framework. LemonIDE provides an easy & effective GUI (Graphical User Interface) for Application and Firmware Developments that runs on embedded Linux

LemonIDE encompasses GNU C/C++ Compiler, Source Code Editor and Debugger delivering a one-stop development environment solution to embedded developers with conveniences of simple mouse click execution.
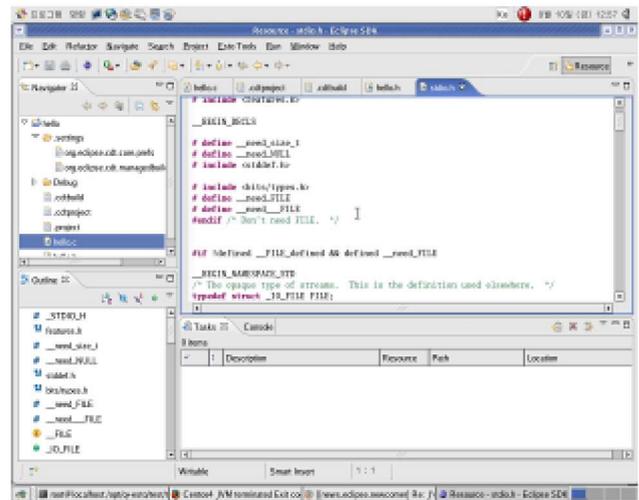
Development Kit

Eddy Development Kit provides an easy testing and evaluation environment for Eddy applications. Before integrating Eddy to user's hardware, applications are first programmed and tested on the development board. RTC, Four Serial Channel, Temp/Light Sensor, 16 DIO Channels, 56 GPIO Channels, LCD, Key Pad, USB Host/Client, Two LAN Channels, SD, NAND, EEPROM on the development board provides the optimized environment to understanding Eddy's operating status.

Windows Utility Support

High featured and easy-to-use utilities to monitor and test your finalized products over network or serial interface are provided with no additional cost. SystemBase management utilities; COM port redirector, PortView and TestView enables an accurate monitor and full administration of your inventions.

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Since 1987

Eddy™ CPU Specifications

Hardware

CPU	ARM926EJ-S (400 MHz)
Memory	8MB Data Flash, 32/64 MB SDRAM
External I/F	19 bit addr / 16 bit data bus
Ethernet I/F	10/100 Base-T Auto MDI/MDIX
UARTs	4port, support up to 921.6Kbps - 1 : Full Signal - 2,3,4, : RxD, TxD, RTS, CTS only
USB 2.0 FS	2 Host /1 Device port, 2.0 FS(12Mbps)
ADC	4-channel 10 bit ADC
TWI(I2C)	Master, Multi-master and slave mode
SPI	8- to 16-bit Programmable Data Length Four External Peripheral Chip Selects
GPIO	Max. 56 Programmable I/O Pins
Power Input	3.3 V (200 mA Max)
Dimensions	25 x 48.5 x 6.2 mm
Weight	8.3 g
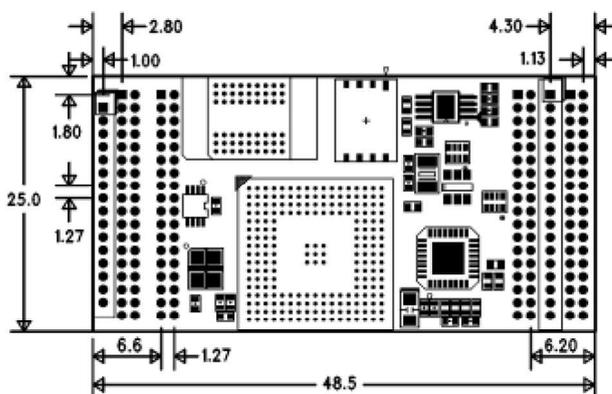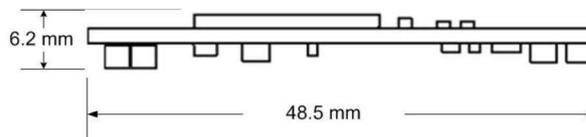
Network

Protocol	TCP, UDP, Telnet, ICMP, DHCP, TFTP, HTTP, SNMP 1&2, SSH, SSL
Ethernet	10/100Mbps MAC / PHY
Network Connection	Static IP, DHCP

Software

O/S	Embedded Linux Kernel 2.6.21
Mgt Tools	SNMP, Web, PortView
Uploads	TFTP, FTP, Web
Dev Tools	LemonIDE & SDK

## Environmental

Operating Temp	-40 ~ 85 °C
Storage Temp	-60 ~ 150 °C
Humidity	5 ~ 95% Non-Condensing

Approvals

CE Class A, FCC Class A, RoHS Compliant

Ordering Information

Eddy-CPU v2.5	Embedded CPU Module	v2.5	32MB SDRAM
Eddy-CPU v2.5B	Embedded CPU Module	v2.5	64MB SDRAM

(Unit : mm)

Eddy™ Development Kit Specifications

Hardware

NAND Flash	256MB, 8 bit I/F
SD Card Connector	Push Type, Up to 16 GB MMC / SD Card / MC Supported
USB Connector	1 x Device 2 x HOST, Dual-Port
LCD Module	128 x 64 Dots Matrix Structure
KEY	4 x 4 Matrix
Battery Holder	3V Lithium Battery, 235 mAh
LED	Power, Ready, 20 Programmable IO, Console & Serial TxD, RxD
I2C Interface	16bit I2C BUS GPIO
SPI Interface	2 KB EEPROM
MCI Interface	SD Card, MMC Socket
ADC Interface	Temp / Light Sensor
Digital I/O	8 Port Input, 8 Port Output
Switch	Serial or GPIO Select RS422/485 Select DIO : Common VCC or GND Select NAND/Data Flash Programming
Jumper Switch	Boot Mode Select, JTAG Select
Serial Port	2 x RS232 DB9 Male 2 x RS422/485 Terminal Block (RS422 & RS485 Selected by S/W)
Console Port	DB9 Male
LAN Port	2 x RJ45
ICE Port	Used for Flash Programming
Reset Button	Factory Default & Warm Boot
Input Power	9-48VDC
Dimensions	240 x 180 mm
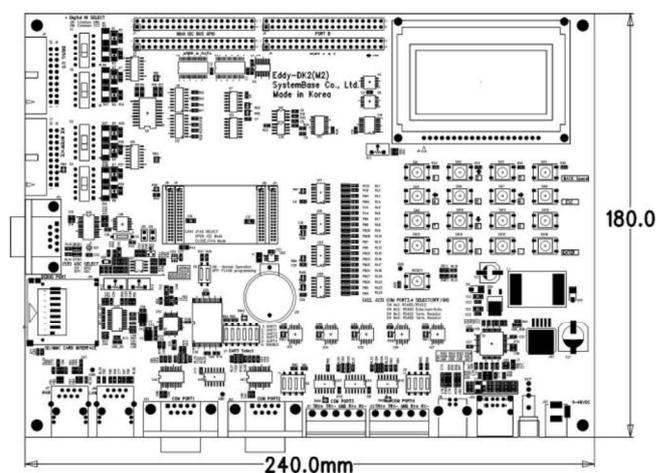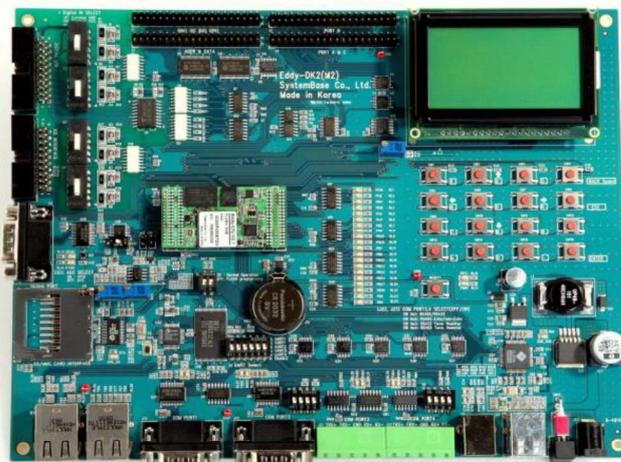
Ordering Information

Eddy DK v 2.1	Eddy v2.1 Development Kit

Package

Test Board & Eddy-CPU V2.5 Module

Specifications are subject to change without notice.

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