

# Eddy™ CPU V2.0

## Embedded CPU Module

### Main Features

- 32-bit ARM9 CPU / 4MB Flash / 32MB SDRAM
- Pin Header Interface(108 pins)
- 10/100 Ethernet PHY (Auto MDIX) & 2 UARTs
- Max 16 Programmable GPIO
- Supported by Dev Kit including SDK, API
- Operated by Real Time Linux - Lemonix™
- Supported by Eclipse based IDE LemonIDE™
- Provides easy-to-use Windows utilities  
COM Port Redirector,  
PortView™, TestView™
- Compact sized to fit into any hardware
- Operation Temp : -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 all hardware environments. It's features include 16bit address and 8 bit data bus interface to connect external device, PHY interface for Ethernet™ connectivity, and 16 programmable GPIO pins.

Experience the powerful and flexible features of Eddy-CPU optimized for your special applications and hardware.



Eddy modules mounted on the Development Kit Board

### Design your applications faster and easier.

Designing an embedded device is not an easy task. CPU, memory and other complicated hardware specs must be considered 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. Also a very difficult task.

Ordering a tailored hardware board may be an alternative, only if you are willing to pay a high price or can meet a high MOQ with units usually exceeding thousands.

Eddy-CPU provides a simple solution to all of these concerns. Eddy-CPU's are equipped with powerful 32bit ARM9 CPU (180MHz), 4MB Flash Memory, 32MB SDRAM and customized real time embedded Linux, Lemonix 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 180MHz clock, 4MB Flash memory, and 32MB SDRAM. Your applications can be large in size and will run faster, in a more stable manner under the real time embedded Linux operating system, Lemonix.

## Real Time Linux - Lemonix™

Lemonix is a Real Time Linux built on Linux kernel 2.6.x. Standard Linux kernel 2.6.x has been revised to support Real Time capability while retaining the stable traits and merits of Linux kernel 2.6.x. Real time scheduler, preemptive kernel and lock-break methods have been implemented on Lemonix to guarantee a maximum response latency of under 100us enabling a stable and reliable means of real time communication.

Customized Web/Setting	Customized Skin/Logo/Settings				
Customized Application	SDK: Serial/Ethernet/Flash/System/Log API				
Application	TFTP	FTP	Telnet	HTTP	SSL/TLS
Network	TCP	UDP	DHCP		
	IP	ICMP	SNMP1/2		
Driver	Serial	Ethernet	Flash		
Kernel	Lemonix RTOS				

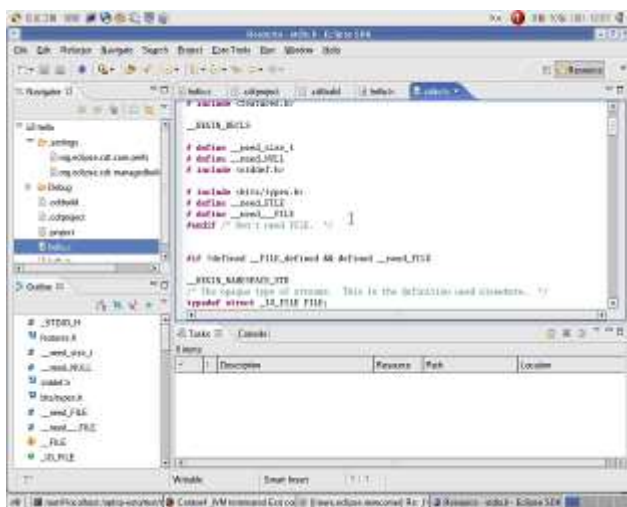
## SDK, API & Source Codes Support

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.

## Eclipse based IDE - 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 SystemBase's embedded real time Linux, Lemonix

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. Power, Ready, Communication Interface, and GPIO Serial Signal Status LEDs on the development board provides a visual guide in understanding Eddy's operating status.

## Windows Utility Support

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

# Eddy™ CPU V2.0

## Specifications

### Hardware

CPU	ARM926EJ-S(180 MHz)
Memory	4MB Flash, 32 MB SDRAM
External I/F	16 bit / 8 bit data bus
Ethernet I/F	10/100 Base-T(PinHeader, TTL Level)
GPIO	Max. 16 Programmable I/O Pins
Power Input	3.3 V (200mA max.)
Dimensions	25 x 42 x 6 mm
Weight	7 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	Lemonix Real Time Linux
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

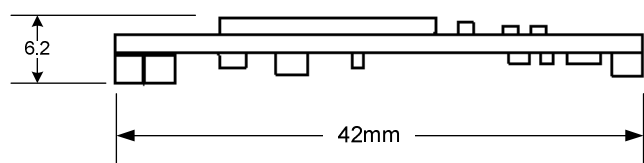
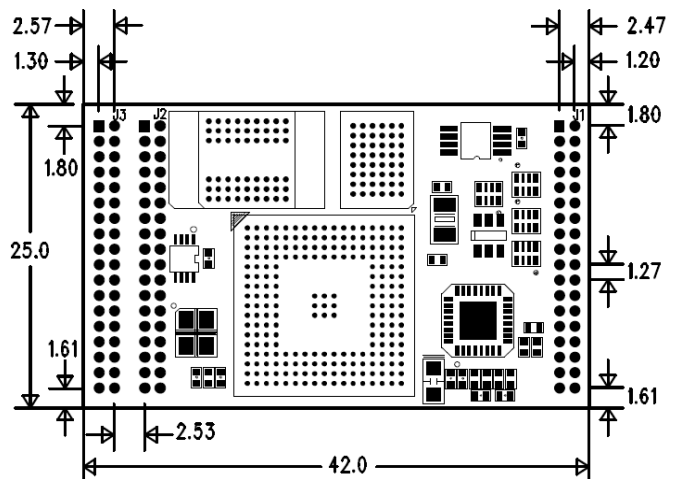
CE Class A, FCC Class A, RoHS Compliant
---

### Ordering Information

Eddy-CPU	Embedded CPU Module
----------	---------------------

### Package

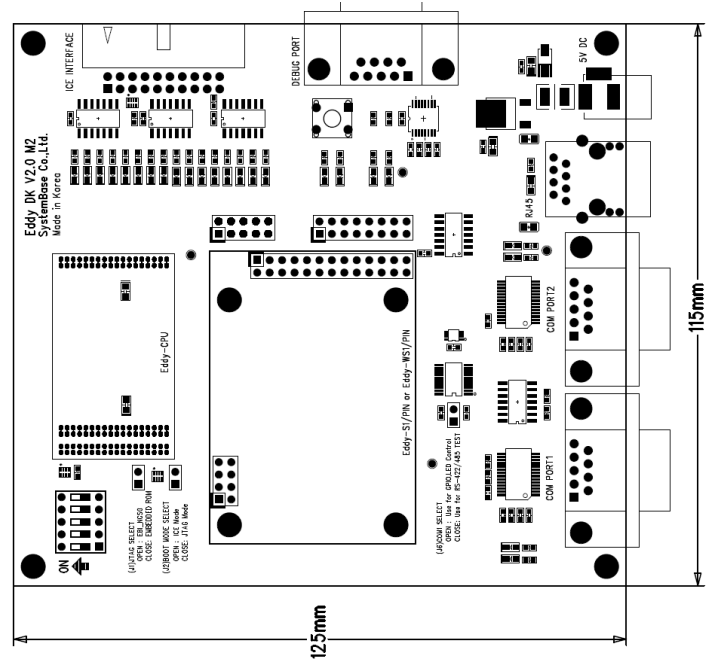
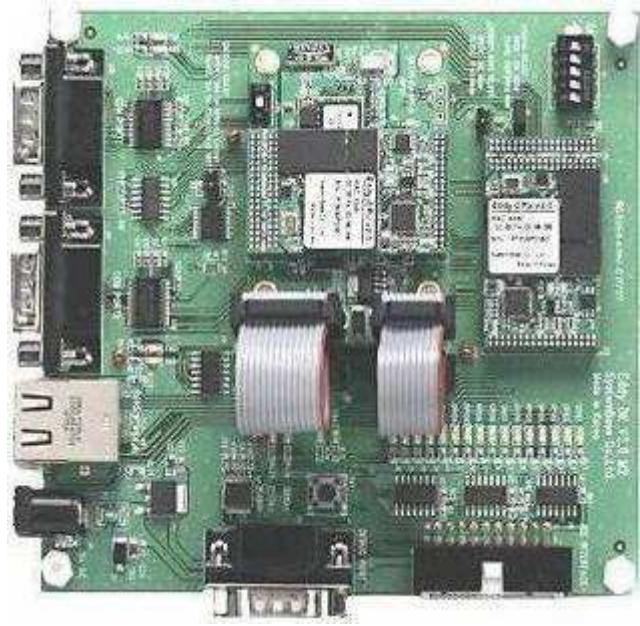
Eddy-CPU	Eddy-CPU Module Utility/Document CD
----------	--



# Eddy™ Development Kit Specifications

## Hardware

LED	Power, Ready, 16 Programmable IO, Console and Serial TxLED, RxLED
Switch	Product Setting Switch
Jumper Switch	Boot Mode Select,, JTAG Select, RS422/485 Select
Serial Port	2 x DB9 Male Port 1 : (RS232, RS422, RS485) Port 2 : RS232 Only
Console Port	1 x DB9 Male (RS232)
LAN Port	1 x RJ45
ICE Port	Used for Flash Image uploads
Reset Button	Factory Default & warm boot
Serial Interface	RS232, RS422/RS485 Selectable (RS422 & RS485 selected by S/W)
Module Connection Socket	108 Pin header for Eddy-CPU Connections 26 Pin header for Eddy-S1/PIN or Eddy-WS1/PIN Connections 34 Pin TTL for Eddy-WS1/TTL Connections
Input Power	5V DC (400 mA)
Dimensions	115 x 125 mm



## Ordering Information

Eddy DK Eddy Development Kit

## Package

Eddy DK Test Board & Eddy-CPU Module  
SDK/IDE/Compiler/  
Utility/ Document CD  
LAN Cable, Serial Cable,  
Pin Header Cable, Board Support,  
Jumper, Power Adaptor, Power Cable