Eddy™-S4M V2.5 Module

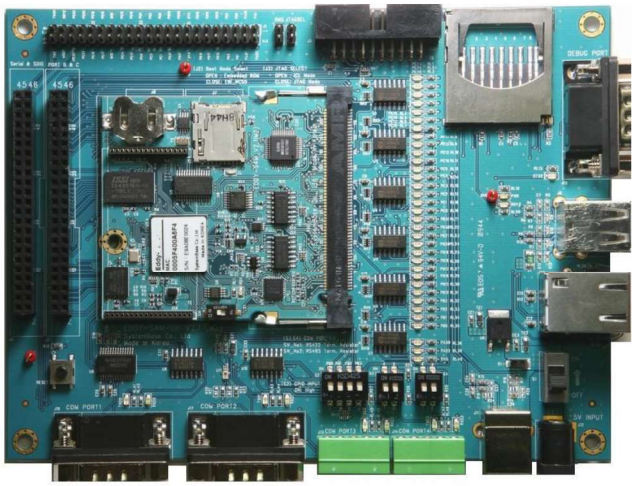
Embedded Module

Highlight

- ARM9 CPU / 8MB Data Flash / 32MB SDRAM
- miniPCI Type Interface(124 pin)
- 10/100 Ethernet PHY (Auto MDIX) & 4 Serial
- 4 Serial Port : 2 x RS232 & 2 x COMBO(422/485)
- RTC(I2C) with 3V Lithium battery
- TWI(I2C), SPI, MCI, 4-channel ADC Support
- Max 34 Programmable GPIO
- Support Dev Kit with SDK, API
- Embedded Linux Kernel
- Supported by Eclipse based IDE LemonIDE™
- Watchdog timer support
- Provides easy-to-use Windows utilities
  COM Port Redirector, PortView™, TestView™
- Size : 59.75 x 61.80 x 7.6mm
- Operating Temp : -40 ~ 85°C

Eddy-S4M is a high-performance embedded module with powerful ARM9 core processor. This Eddy-S4M 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.

Eddy-S4M include Ethernet PHY, Serial 4 Channel, RTC with Battery, microSD, 4ch ADC, temperature sensor, max 34 programmable GPIO pins. .



Eddy-S4M on 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.

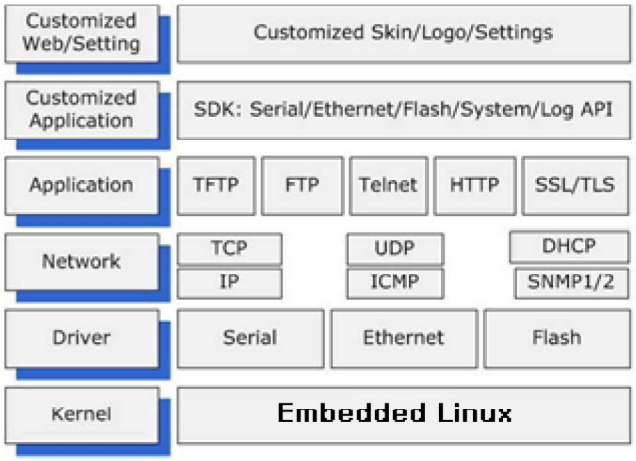
Eddy-CPU provides the solution to all of these concerns. Eddy-CPUs are equipped with powerful 32bit ARM9 CPU (400MHz), 8MB Data Flash Memory, 32MB SDRAM and customized embedded Linux fully compatible to this hardware. You don't have to waste needless hours struggling with bible-thick databooks and porting 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 32MB 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



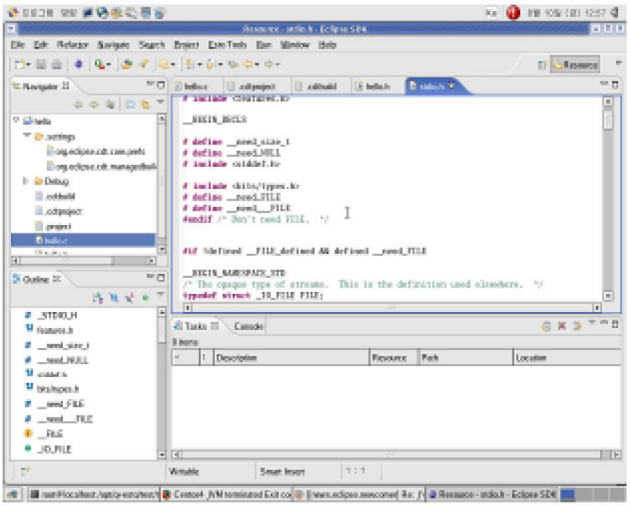
SDK, API & Source Codes Support

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 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 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-S4M 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, Temperature Sensor, 34 GPIO Channels, USB Host/Client, Ethernet, microSD 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.

Eddy™-S4M v2.5 Specifications

Hardware

CPU	ARM926EJ-S (400 MHz)
Memory	8MB Data Flash, 32 MB SDRAM
Ethernet I/F	10/100 Base-T Auto MDI/MDIX
Serial	Port 0,1 : RS232 Port 2,3 : COMBO
USB 2.0 FS	3 Host /1 Device Port, 2.0 FS (12Mbps)
RTC	Real Time Clock, DS1340U-33+, I2C I/F
Battery holder	CR1220(38mAh) 3V Lithium Battery
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
MCI	SD Spec V2.0 [SDHC], MMC Spec V4.2 USB to SD Controller, 16GB, 12Mbits/s
GPIO	Max. 34 Programmable I/O Pins
Power Input	3.3 V (200 mA Max)
Dimensions	59.75 x 61.8 x 7.6 mm
Weight	15 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

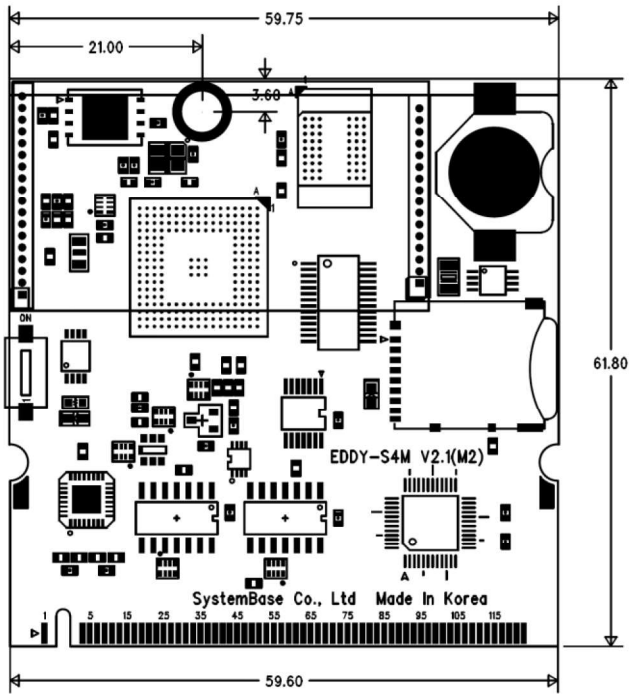
CE Class A, FCC Class A, RoHS Compliant

Ordering Information

Eddy-S4M v2.5	Eddy-S4M v2.5 Module

Package

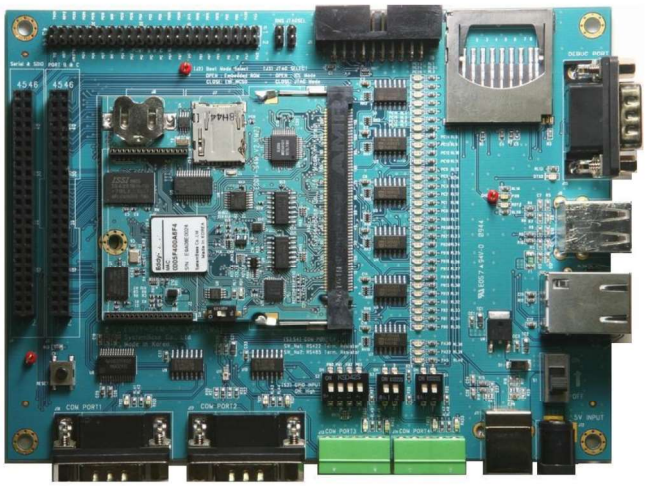
Eddy-S4M v2.5	Eddy-S4M v2.5 Module Utility / Document CD

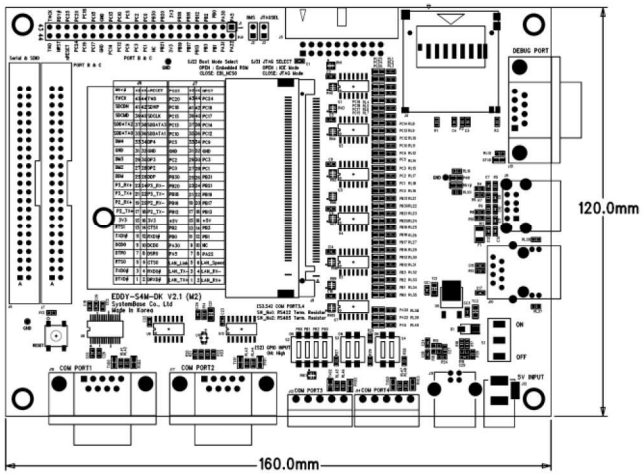


Eddy™-S4M Development Kit Specifications

Hardware

Serial Port	2 x RS232 DB9 Male 2 x RS422/485 5pin Terminal Block (S/W Selectable & with Auto toggle)
SD Card Connector	Push Type, Up to 16 GB MMC / SD Card / MC supported
ADC Interface	Light Sensor
USB Connector	1 x Device 2 x HOST, Dual-Port
LAN Port	RJ45 with transformer
DEBUG Port	DB9 Male
Switch	Power ON/OFF RS422/485 Termination resistor GPIO input test (Off : Low, ON : High)
LED	Power, Ready, 34 Programmable IO, Console & Serial TxD, RxD LED
JTAG Port	Used for downloading code and single-stepping through programs
Reset Button	Factory Default & Warm Boot
JIG Connection socket	2x23pin socket, which connect JIG board to confirm problems
Expansion Header	2x22pin Header, used to test GPIO of Eddy-S4M
Input Power	5VDC
Dimensions	160 x 120 mm





Ordering Information

Eddy-S4M DK V2.5	Eddy-S4M DK v2.5 Development Kit

Package

Eddy-S4M DK v2.5	Test Board & Eddy-S4M v2.5 Module SDK / IDE / Compiler / Utility / Document CD LAN Cable, Serial Cable, 5V Adaptor

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Specifications are subject to change without notice.

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Eddy™-S4M JIG Specifications

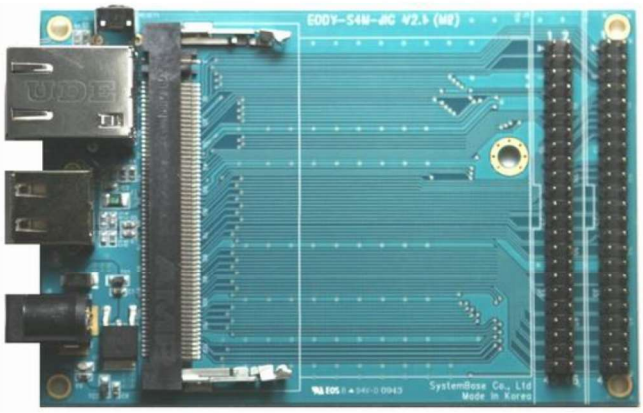
USB Connector	1 x Device 2 x HOST, Dual-Port
LAN Port	RJ45 with Transformer
Reset Button	Factory Default & Warm Boot
Expansion HDR	2x23pin, used to connect most functions of S4M to externalS4M
Input Power	5 VDC
Dimensions	70 x 105 mm

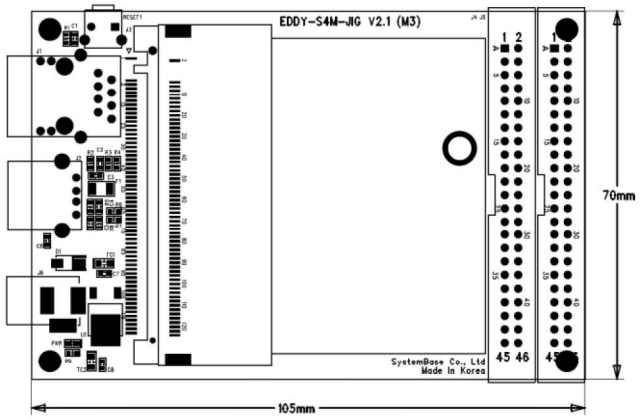
Ordering Information

Eddy-S4M JIG	Eddy-S4M JIG
Eddy-S4M/PIN V2.5	Eddy-S4M V2.5 + Eddy-S4M JIG

Package

Eddy-S4M JIG	Only Eddy-S4M JIG Board
Eddy-S4M/PIN v2.5	Eddy-S4M v2.5 + Eddy-S4M JIG Utility / Document CD





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