Eddy™ Serial V2.0

Serial to WiFi Embedded Modules

Main Features

- **32-bit ARM9 CPU / 4MB Flash / 32MB SDRAM**
- **802.11b/g Wireless(Max 54Mbps)**
- **RS232 or RS422/485 Serial Interface**
- **Max Serial Communication Speed : 921.6Kbps**
- **Pin Header / DB9 / TTL Interface**
- **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™
- **Operating Temp : -20 ~ 85˚C**

Eddy-WiFi modules enable a reliable wireless network connectivity (802.11b/g) to your serial devices with robust security. It is equipped with a powerful ARM926EJ-S (180MHz) processor and a sufficient memory capacity of 32MB SDRAM, 4MB Flash, which is run by Lemonix, based on stable real-time Linux 2.6.x. Eddy-WiFi modules provide developers and OEMs a flexible yet simple way to integrate wireless network connectivity to their products. LemonIDE, IDE based on Eclipse framework is also available to aid developers with an easy and simple means of programming their customized applications.

The best embedded solution for your customized application !

Eddys are distinguished with other embedded device servers in that it can upload and execute user's customized applications. With least amount of effort, developers can upload any socket / serial communication application that was desinged on standard Linux environment with no or little modification.

Eddys can be deployed in various industrial fields immediately as an embedded device server without any customization using its default functionality. Almost entire source codes for Eddy's functions are open to developers. Such openness provides users a chance to apply a wide variety of operations on Eddy, with considerably less limitations.

To help programmers work on their own application SDK (Software Development Kit) and LemonIDE an IDE(Integrated Development Environment) based on Eclipse is supported. With SDK, ready-to-run example codes and an easy to use LeomonIDE, developers can easily build their own applications for Eddys.

Eddy modules mounted on the Development Kit Board

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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 37us enabling a stable and reliable means of real time communication.
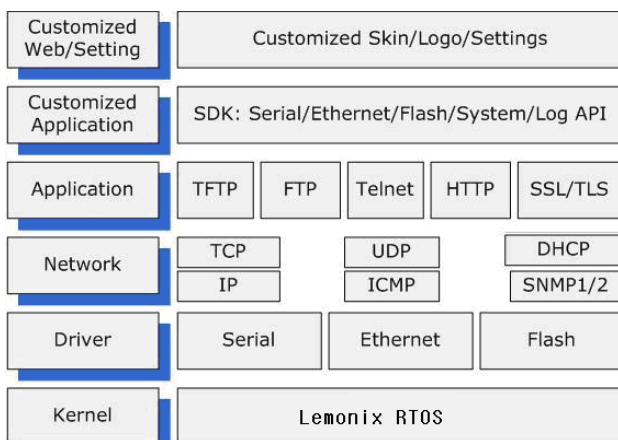

SDK, API & Source Codes Support

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.
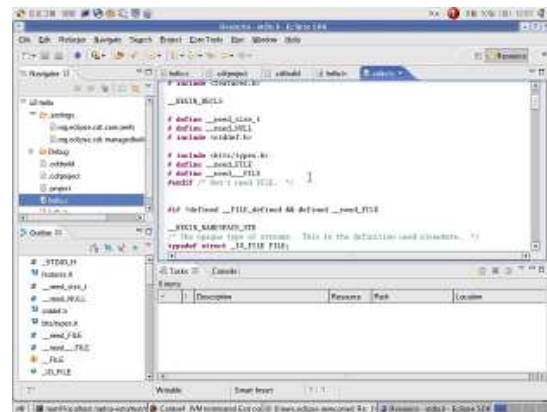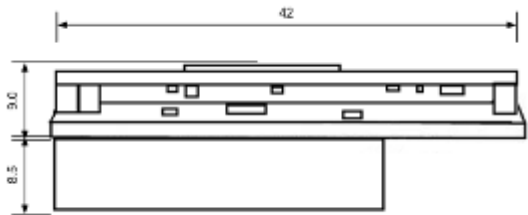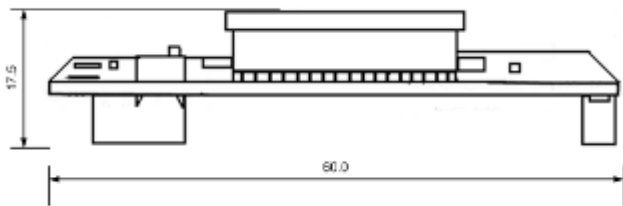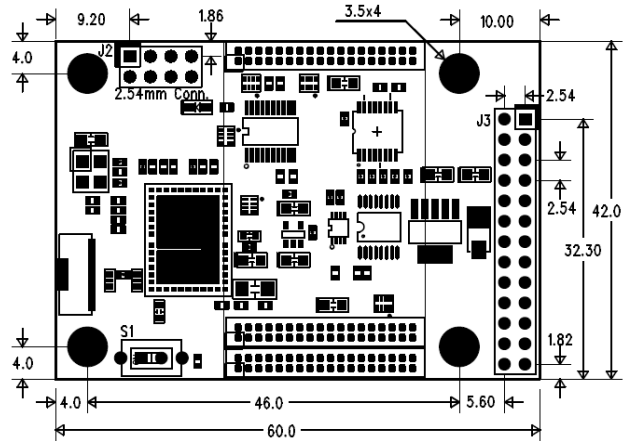

Development Kit

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.
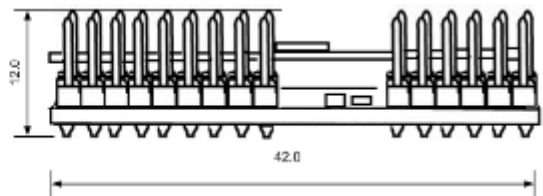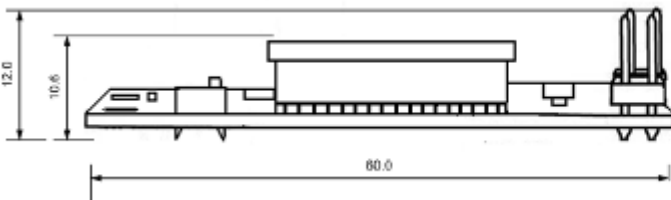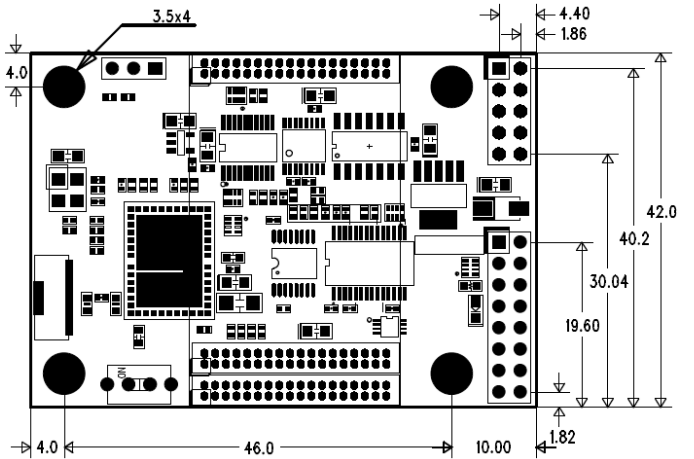
Windows Utility Support

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.
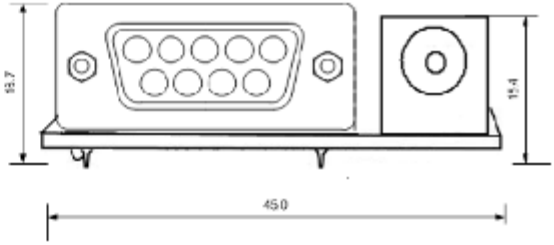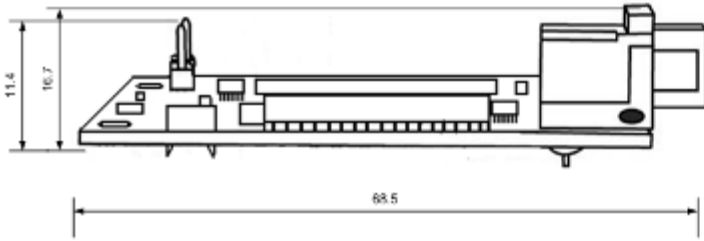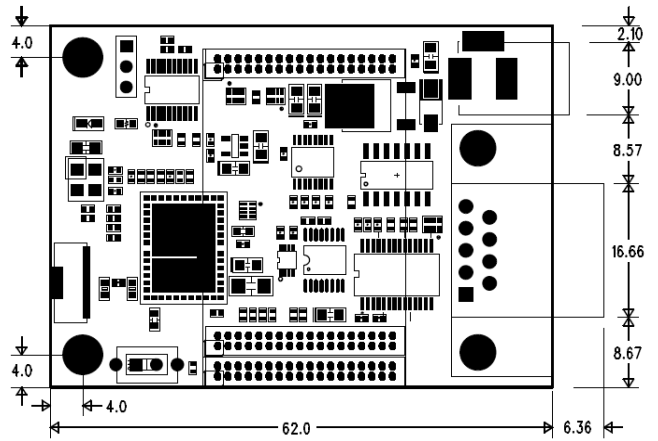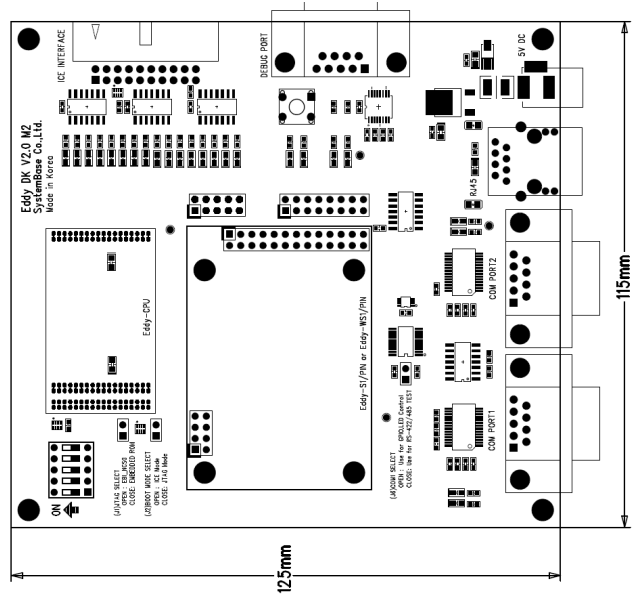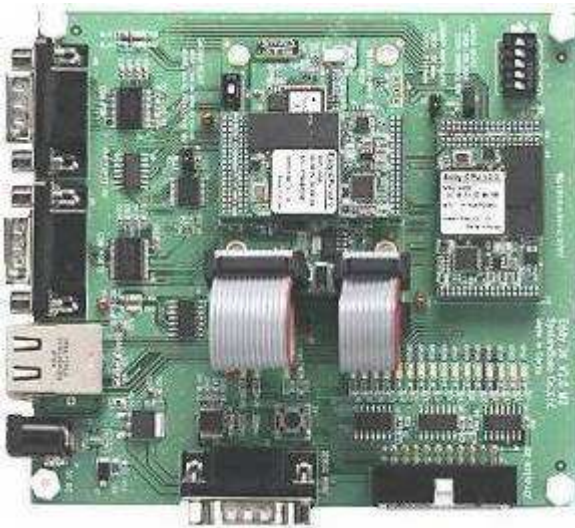
Eddy-WS1/TTL

Eddy-WS1/PIN

Eddy-WS1/DB9

Eddy™ Development Kit

Eddy™ Serial to WiFi Modules Specifications

		WS1/TTL	WS1/PIN	WS1/PIN-C	WS1/DB9	WS1/DB9-C
H/W	CPU	ARM926EJ-S (180MHz)				
	Memory	4MB Flash / 32 MB SDRAM				
	LED	None			2 LEDs(Data, Ready)	
	GPIO	4			N/A	
	Power Input	3.3V ~ 5V Pin Input			5V Power Jack	
	Power Consumption	5V / 290 mA (1.5 W Max)				
	Dimensions	60x42x12mm	60 x 42 x 16 mm		62 x 45 x 19 mm	
S/W	Operating System	Real Time Linux Lemonix (Kernel 2.6.x)				
	Mgmt. Tools	SNMP, Portview, Web				
	Terminal	Telnet, SSH				
	Application Upload	TFTP, FTP, Web				
	Web Service	Embedded Web Server				
Serial	Serial Interface	RS232	RS232	RS422/485	RS232	RS422/485
	Serial Port	1 x TTL	1 x Pin Header		1 x DB9	
	Serial Speed	150 ~ 921.6 Kbps				
	Signals	TX, RX, DTR, DSR, CTS, RTS, DCD				
	Data Bits	5, 6, 7, 8				
	Stop Bits	1, 2				
	Parity	None, Even, Odd				
	Flow Control	RTS/CTS, Xon/Xoff				
	Console Port	RS232 Console port				
Network	Communication Std	802.11b/g Wireless				
	Frequency	2.4GHz ISM Band				
	Wireless Security	WEP-64bit/128bit, WPA-PSK, WPA-EAP, WPA2-PSK, WPA2-EAP				
	Antenna	Chip Antenna with 2dBi gain				
	Output Power	802.11g : 13 dBm(20mW), 821.11b : 15 dBm(32mW)				
	Data Rate	Wireless: Max 54Mbps				
	Connection Type	Static IP, DHCP				
	Protocol	TCP, UDP, Telnet, SSH, SSL/TLS, DDNS, ICMP, DHCP, TFTP, HTTP, SNMP 1 & 2				
Environmental	Operating Temp	-20 ~ 85 °C				
	Storage Temp	-60 ~ 150˚C				
	Humidity	5 ~ 95% Non-Condensing				
Programming		Support				
Approvals		CE Class A, FCC Class A, RoHS compliant				

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Eddy™ Development Kit Specifications

	Eddy Development Kit
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
Power Input	5V DC (400 mA)
Dimensions	115 X 125 mm

Ordering Information

WS1/TTL	RS232 TTL Interface 3.3 ~ 5V Power Input
WS1/Pin	RS232 PIN Header Interface 3.3 ~ 5V Power Input
WS1/Pin-C	RS422/485 PIN Header Interface 3.3 ~ 5V Power Input
WS1/DB9	RS232 DB9 Serial Interface 5V(power jack) Power Input
WS1/DB9-C	RS422/485 DB9 Serial Interface 5V(power jack) Power Input
Eddy DK	Eddy Development Kit

Package

WS1/TTL	WS1/TTL Module Manual / Utility CD
WS1/Pin WS1/Pin-C	WS1/Pin or WS1/Pin-C Module Manual / Utility CD
WS1/DB9 WS1/DB9-C	WS1/DB9 or WS1/DB9 -C Module Manual / Utility CD
Eddy DK	Test Board & 1 Eddy Module, SDK/IDE/Compiler/ Documents/Utility CD LAN Cable, Serial Cable, Pin Header Cable, Board Support, Jumper, Power Adaptor, Power Cable

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