

Eddy-Serial

Programmable Embedded Device Server

Features

RS232/422/485 serial interfaces
 Max 921.6Kbps serial speed
 Easy & Fast Integration
 Program & run your own application
 SDK & API in Development Kit
 Small size to fit in any hardware
 32-bit ARM9 CPU / 4MB Flash / 8MB SDRAM
 Pin Header / DB9 / TTL interface
 10/100Mbps Ethernet port
 COM port redirection (virtual COM port)



Eddy-Serial series is an embedded device server module. This small module easily integrates on to your hardware design, supporting RS232, 422, and 485 interfaces at 921.6Kbps. Engineers can now add network interface to their hardware design in an easy, reliable, and faster manner. Also, user's application can be uploaded for maximized customization. Enjoy powerful features and benefits with high performance!

Program and Execute Your Own Customized Application Directly on the Module!

Eddy is distinguished with other embedded device servers in that it can upload customized user applications and execute them. With such feature, a user can upload any socket / serial communication application that can run on standard Linux environment with no or little modification. This openness gives users a chance to apply a wide variety of operations on the device server, with considerably less limitations. To help programmers work on their own application to be run on the device server, Eddy supports **SDK (Software Development Kit)** and cross-compile environment. With SDK and ready-to-run example codes, programmers can easily build up their own applications under the standard Linux environment. Cross compiler running on Linux will help the application run on Eddy with ease.



Eddy-S1/Pin attached on the Development Kit Board

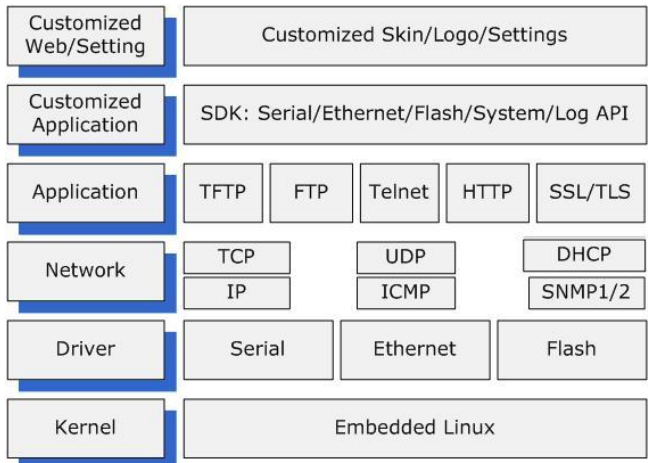
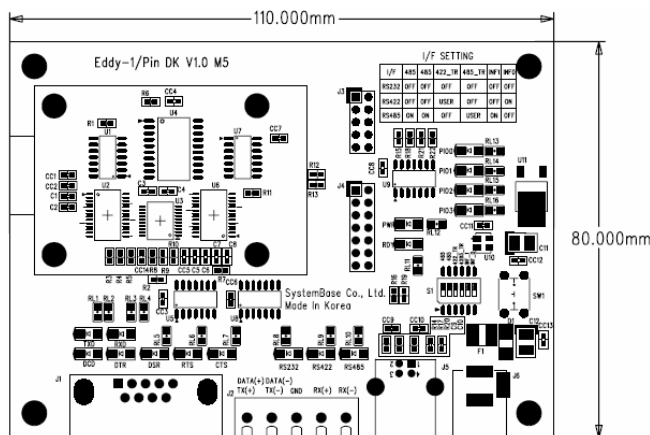
Ever Seen a Better Hardware?

Tired of constraints on your embedded device server's 8-bit CPU and 256KB memory? Eddy completely solves this problem by adopting a 32-bit ARM9 CPU with 168MHz clock, 4MB Flash memory, and 8MB SDRAM. Your applications can be large in size and will run faster, in a more stable manner under the embedded Linux operating system. And all these high-end hardware is embedded on a half of a credit card-sized board!

Development Kit

Eddy Development Kit helps developers test and evaluate Eddy easily. Evaluation board itself is a guideline for integrated hardware design with Eddy module mounted. With LED displays on Power, Ready, communication interface, GPIO, and serial line status, engineers can easily recognize the operation status of the module. Compile environment including the cross-compiler, simple code, documentation, and tools are included to accelerate integration and customization process.

LED	Power, Ready, Programmable IO Interface: RS232, RS422, RS485 Serial: TxD, RxD, DCD, DTR, DSR, RTS, CTS
Serial	1 * DB9 Male (RS232) 5P Terminal Block (RS422/RS485)
USB	Only for firmware upload
Reset	Hardware Reset Button
DIP Switches	Serial Interface / Terminal Resistor
Dimensions	110 * 80 mm
Power Input	5V DC (over 400mA)



Eddy Software Architecture

Customized & Open Applications

You can add or remove applications on your Eddy module to make it serve perfectly and exclusively for your own applications. Pre-compiled and optimized open source packages are provided for download. You can simply add new features to Eddy by creating your own version of firmware. Moreover, you can even design specific protocols or applications to meet the requirements of the environment that you install Eddy to. With such an open architecture, operation and performance of Eddy can be fully adjusted and controlled by users, and new features can be easily implemented.



Eddy DK Board

Eddy-S1/Pin

- For standard applications
- Programmable

Serial Port

1 (Pin Header)

Serial Interface

RS232/422/485

Ethernet Port

1 (RJ-45)

Ethernet Interface

10/100Mbps

GPIO

4

Programmable

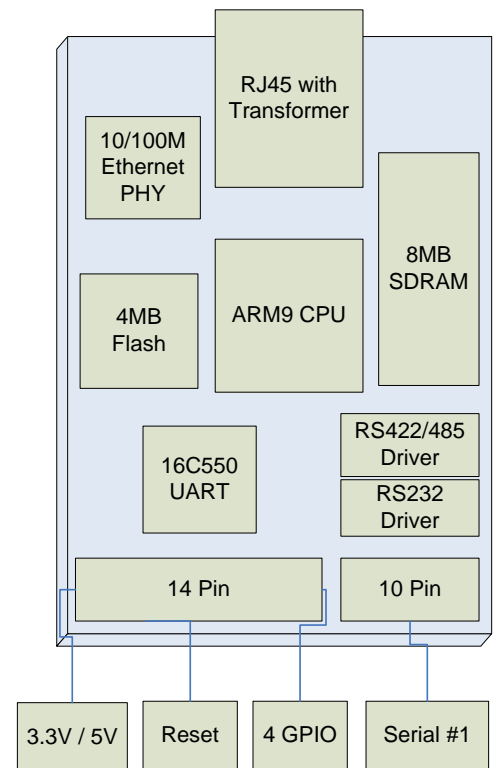
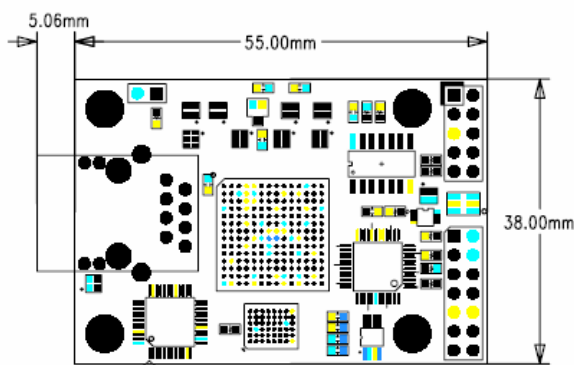
Yes

Power

3.3V / 5V

Dimension

55 * 38 mm



Eddy-S1/TTL

- For customized hardware
- Low cost / 9 GPIO

Serial Port

1 (TTL)

Serial Interface

TTL

Ethernet Port

1 (TTL)

Ethernet Interface

10/100Mbps

GPIO

9

Programmable

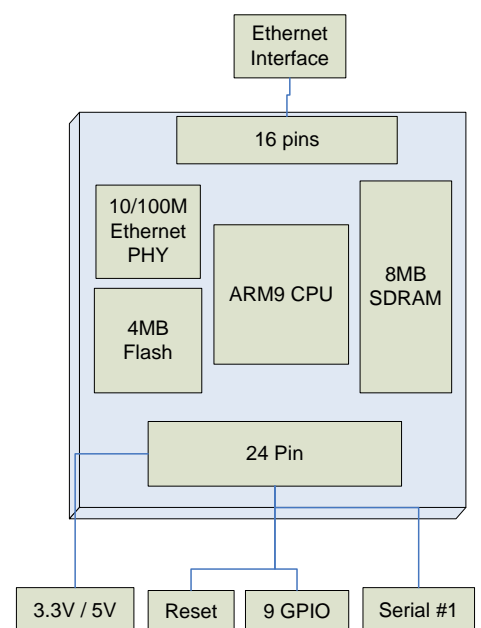
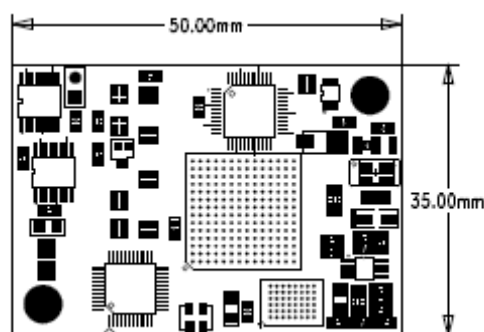
Yes

Power

3.3V / 5V

Dimension

50 * 35 mm



Eddy-S1/DB9

- Off-the-shelf functionality
- DB9 / Reset Switch / LED

Serial Port

1 (DB9)

Serial Interface

RS232/422/485

Ethernet Port

1 (RJ-45)

Ethernet Interface

10/100Mbps

GPIO

0

Programmable

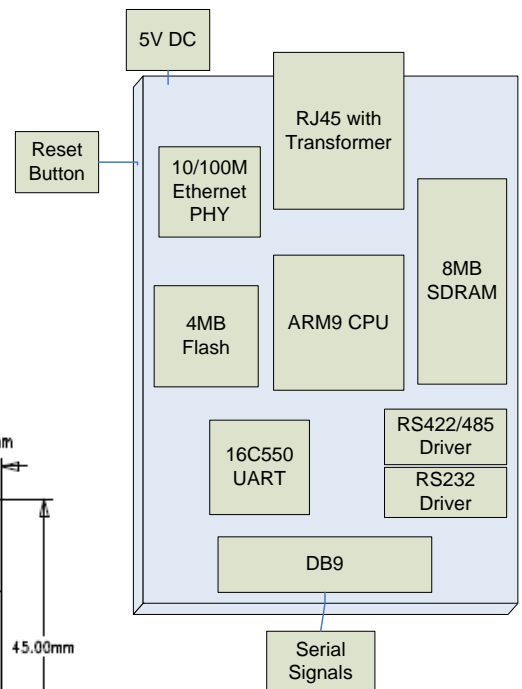
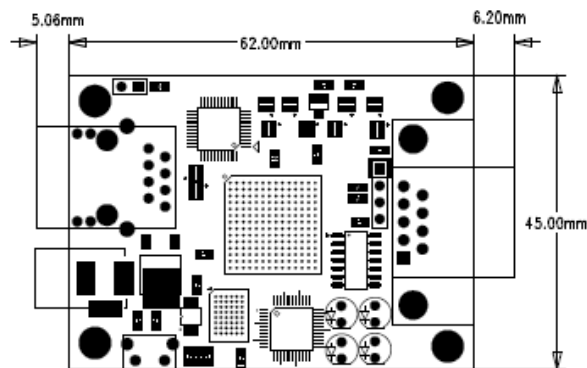
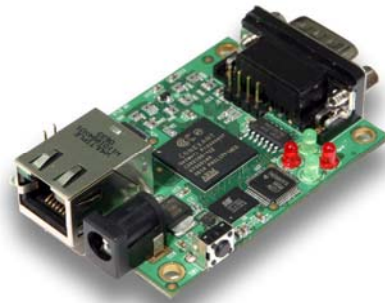
Yes

Power

5V DC (over 400mA)

Dimension

62 * 45 mm



Eddy-S2/Pin

- Powerful serial features
- 2 serial ports

Serial Port

2 (Pin Header)

Serial Interface

RS232/422/485

Ethernet Port

1 (RJ-45)

Ethernet Interface

10/100Mbps

GPIO

4

Programmable

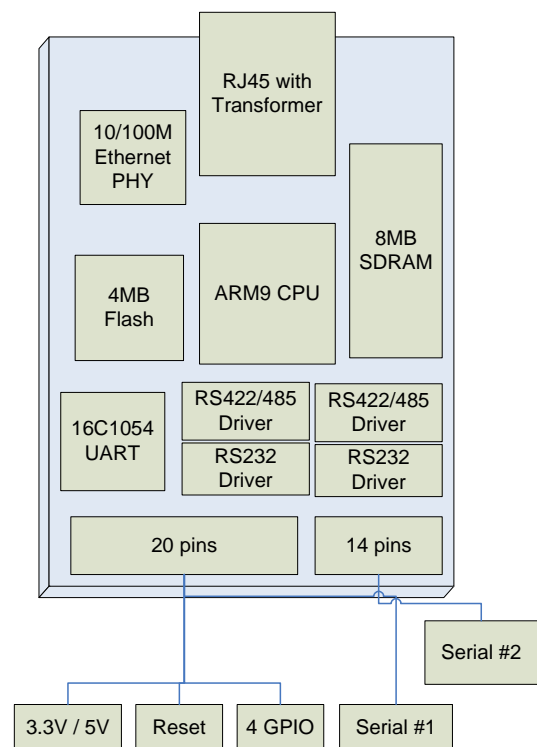
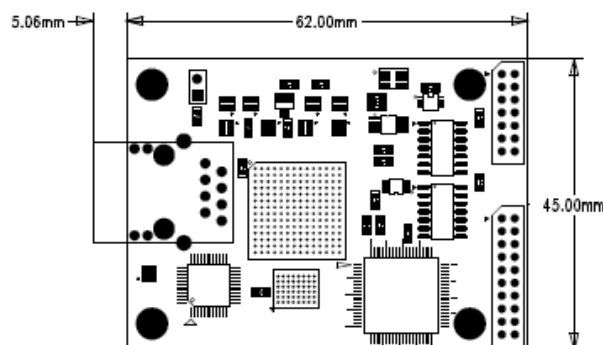
Yes

Power

3.3V / 5V

Dimension

62 * 45 mm



Eddy-S1/DB9-PoE

- Off-the-shelf functionality
- DB9 / Reset Switch / LED

Serial Port

1 (DB9)

Serial

RS232/422/485

Ethernet 포트

1 (RJ-45)

Ethernet 인터페이스

10/100Mbps

GPIO

0

Programmable

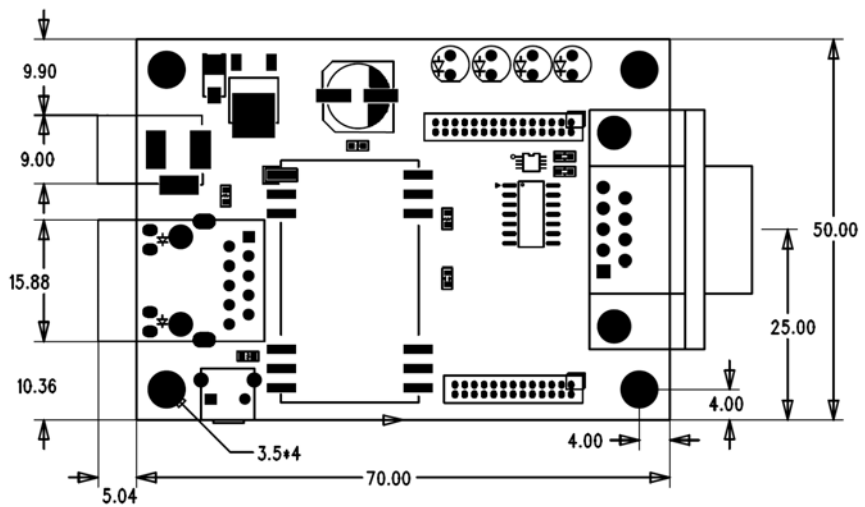
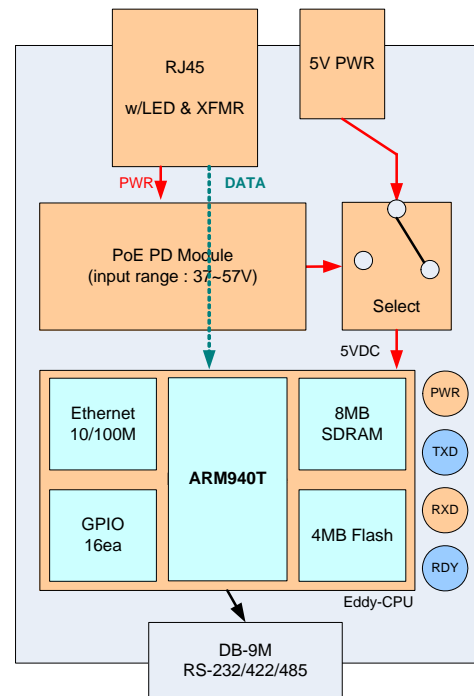
Yes

Power

5V power jack
or PoE(48V)

Dimension

70 * 50 mm



Specifications

Network

Protocols	TCP, UDP, Telnet, SSH, SSL/TLS, DDNS, ICMP, DHCP, TFTP, HTTP, SNMP 1 & 2
LAN Port	10/100Mbps RJ-45 Port * 1 (Eddy-S1/Pin, S1/DB9, S2/Pin, S1/DB9-PoE) 10/100Mbps TTL * 1
Connection Type	Static IP, DHCP

Serial

Port	1 (Eddy-S1/Pin, S1/TTL, S1/DB9, S1/DB9-PoE) 2 (Eddy-S2/Pin)
Interface	Selectable RS232/RS422/RS485
Speed	Max 921.6 Kbps
Signals	TX, RX, DTR, DSR, CTS, RTS, DCD
Protection	15KV Surge Protection for all signals
UART	16C550 with 16 byte FIFO (Eddy-S1/Pin, S1/TTL, S1/DB9) 16C1054 with 256 byte FIFO (Eddy-S2/Pin only)
Data Bits	5, 6, 7, 8
Stop Bits	1, 2
Parity	None, Even, Odd
Flow Control	RTS/CTS, Xon/Xoff

Software

O/S	Embedded Linux (Kernel 2.4.x)
Mgmt. Tools	SNMP, Portview, Web
Configuration	Telnet, Web, Portview
Security	Telnet, Web ID/Password SSH, SSL/TLS
Application Upload	TFTP, FTP, Web
Web Service	Embedded Web Server
COM Port Redirection	SystemBase COM Port Redirector for Windows 98/ME/2K/XP/2003

Hardware

Processor	32-bit ARM9 Processor with 168MHz
Flash Memory	4 MB
SDRAM	8 MB
GPIO (Programmable IO)	4 (Eddy-S1/Pin, Eddy-S2/Pin, Eddy-S1/TTL) 0 (Eddy-S1/DB9, Eddy-S1/DB9-PoE)
LED	100Base-Tx Link, LAN Tx (Eddy-S1/Pin, S2/Pin) Power, Ready, Serial Tx, Rx (Eddy-S1/DB9, Eddy-S1/DB9-PoE) None (Eddy-S1/TTL)
Power Input	3.3V model or 5V model available (Eddy-S1/Pin, S1/TTL, S2/Pin) 5V DC (Eddy-S1/DB9, Eddy-S1/DB9-PoE)
Power Consumption	260mA / 1.5W
Dimensions	55* 38mm (Eddy-S1/Pin) 50 * 35mm (Eddy-S1/TTL) 62 * 45mm (Eddy-S1/DB9, S2/Pin) 70 x 50 mm (Eddy-S1/DB9-PoE)
Weight	19g (Eddy-S1/Pin) 10g (Eddy-S1/TTL) 32.3g (Eddy-S1/DB9) 45g (Eddy-S1/DB9-PoE) 21.9g (Eddy-S2/Pin)

Environmental

Operating Temp.	0 ~ 50 °C
Storage Temp.	-20 ~ 80 °C
Humidity	5 ~ 95% Non-Condensing

Approvals

CE Class A, FCC Class A, RoHS compliant

Selection Guide

	Eddy-S1/Pin-3	Eddy-S1/TTL-3	Eddy-S1/DB9	Eddy-S2/Pin-3	Eddy-S1/DB9-PoE
	Eddy-S1/Pin-5	Eddy-S1/TTL-5		Eddy-S2/Pin-5	
CPU	ARM940T (168MHz)				
Memory	4MB Flash / 8 MB SDRAM				
Serial	RS232/422/485	TTL	RS232/422/485	RS232/422/485	RS232/422/485
Serial Port	1 * Pin Header	1 * TTL	1 * DB9	2 * Pin Header	1 * DB9
Ethernet	10BASE-T/100BASE-TX				
Ethernet Port	1 * RJ45	1 * TTL	1 * RJ45	1 * RJ45	1 * RJ45
GPIO	4	4	없음	4	없음
Power	3.3V , 5V pin input	3.3V , 5V pin input	5V power jack	3.3V , 5V pin input	5V power jack ,PoE(48V)
Size	55 x 38 mm	50 x 35 mm	62 x 45 mm	62 x 45 mm	70 x 50 mm
Programming	Support	Support	Support	Support	Support

Ordering Information

Eddy-S1/Pin-3	1-port embedded module sw/programmability & 3.3V power (Pin Header serial interface)
Eddy-S1/Pin-5	1-port embedded module sw/programmability & 5V power (Pin Header serial interface)
Eddy-S1/TTL-3	1-port embedded module sw/programmability & 3.3V power (TTL serial interface)
Eddy-S1/TTL-5	1-port embedded module sw/programmability & 5V power (TTL serial interface)
Eddy-S1/DB9	1-port embedded module sw/programmability & 5V power (DB9 serial interface)
Eddy-S2/Pin-3	1-port embedded module sw/programmability & 3.3V power (Pin Header serial interface)
Eddy-S2/Pin-5	1-port embedded module sw/programmability & 5V power (Pin Header serial interface)
Eddy-S1/DB9-PoE	1 port embedded module PoE (Power Over Ethernet) Support sw/programmability & 5V power (DB9 serial interface)
Eddy-Serial DK	Development Kit for Eddy-Serial

Package Contents



Eddy-S1/Pin	Eddy-S1/Pin Module Manual / Utility CD
Eddy-S1/TTL	Eddy-S1/TTL Module Manual / Utility CD
Eddy-S1/DB9	Eddy-S1/DB9 Module Manual / Utility CD
Eddy-S2/Pin	Eddy-S2/Pin Module Manual / Utility CD
Eddy-S1/DB9-PoE	Eddy-S1/DB9-PoE Module Manual / Utility CD
Eddy-Serial DK	Evaluation Board, Eddy Module (1EA), SDK/Compiler/Utility/Doc. CD, USB Cable for Firmware Download, LAN Cable, Serial Cable, Pin Header Cable, Board Support, Jumper, Power Adapter, Power Cable