

P r o g r a m m a b l e E m b e d d e d D e v i c e S e r v e r

*Serial Communication Experts*  
**SystemBase!**



# Embedded Module

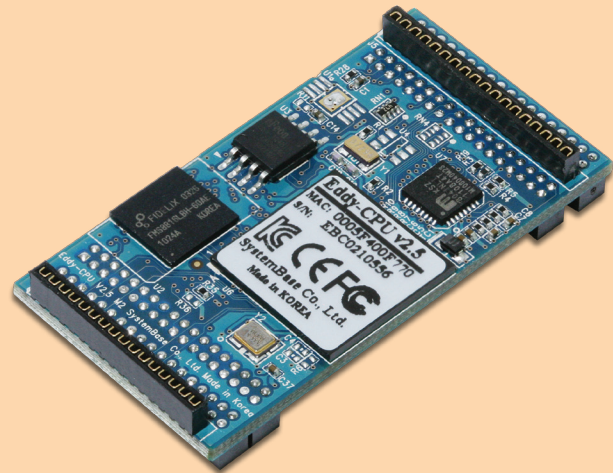
## Programmable Embedded Device Server

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# Eddy-CPU v2.5



## Overview

Eddy-CPU is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy-CPU module provides complete embedded network connectivity allowing developers and OEMs to easily design their own customized device that can be embedded in almost all hardware environments. Its features include 19bit address and 16 bit data bus interface to connect external devices, PHY interface for Ethernet connectivity and 56 programmable GPIO pins.

### Easy to design and Specialized to meet your need

It is not easy for developers to make a specialized embedded device from scratch. Embedded device development requires a mastery of each component's characteristic to prevent delays and performance problems. In addition, it may take substantial time and effort to port to the Operating Systems and then system test to prove the reliability of the hardware. Alternatively, you can order a customized hardware board, but it may not meet your exact expectations once delivered and typically comes at a significantly higher price. You can overcome all these challenges by choosing the Eddy-CPU. The high performance Eddy-CPU integrates a 32 bit ARM9 CPU (400MHz), 8MB DATA FLASH memory and 32MB SDRAM.

### SDK, API & Source Codes Support

Eddy allows you to upload and execute customized user applications. The open design enables developers to program their own socket/serial communication applications using an array of tools including a SDK (Software Development Kit), API (Application Programming Interface) and Source Code.

### LemonIDE™ Development Environment

LemonIDE™ is an Eclipse-based development environment. It provides a GUI that enables easy development of applications and firmware running on Linux. In addition, all the operations related to GNU C/C++ compiler, source code editor, remote debugging and remote monitoring can be processed in this environment.

### Development Kit

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment, applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

### Windows Utility Support

SystemBase provides powerful and free utilities to monitor and test your completed products over the network and the serial interface. Management utilities include, COM port redirector, PortView™ and TestView™. These tools enable accurate monitoring and administration of your product designs.

## Specification

### Hardware

CPU	ARM926EJ-S (400MHz)
Memory	8MB DATA FLASH , 32 MB SDRAM
External Interface	19 bits Address / 16 bits Data Bus
Ethernet Interface	10/100 Base-T ( MAC PHY, AUTO MDI/MDIX)
GPIO	Max. 56 Programmable I/O Pins

## » Features

- 32-bit ARM9 CPU core at 400MHz/8MB DATA FLASH / 32MB SDRAM
- Pin Header Interface (144 pin)
- 10/100 Ethernet PHY (Auto MDIX) & 4 UARTs
- Max 56 Programmable GPIO
- TWI (I2C), SPI, MCI, 4-channel ADC supported
- 2 USB Host, 1 USB Device supported
- Watchdog timer
- Supports SNMP
- Development Kit - SDK and API
- Operated by Embedded Linux
- Supported by Eclipse based IDE, LemonIDE™
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™
- Compact size easily fits into most hardware environments
- Operation Temp : -40 ~ 85°C

Interface	ADC (4 channel 10bit), SPI, TWI, USB 2.0 Full Speed, NAND Flash Attachable, Serial 4ports(MAX 921.6kbps)
Power Input	3.3 V (200 mA Max)
Dimensions	0.98(W) x 1.9(L) x 0.33(H) in 25(W) x 48.5(L) x 8.5(H) mm
Weight	0.31 oz / 9g

### Network

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

### Software

O/S	Embedded Linux
Management	SNMP, Web, PortView™
Uploads	TFTP, FTP, Web
Development Tools	LemonIDE™ & SDK
Flash Burning	JTAG, USB, Debug Port

### Environmental

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

### Approvals

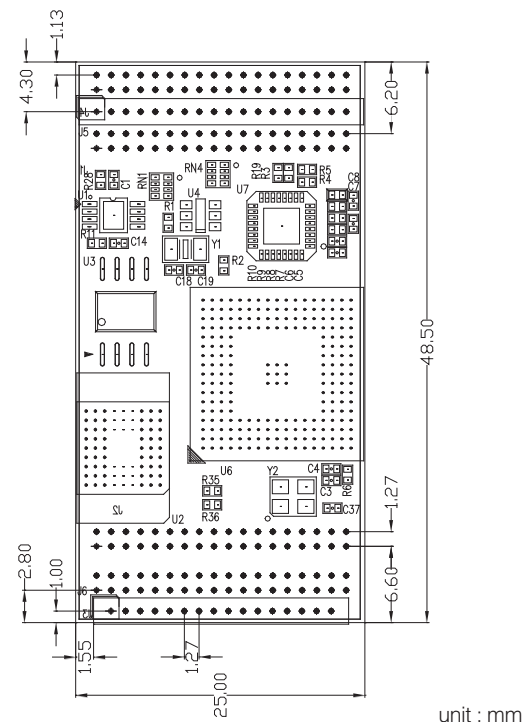
CE, FCC, KC

## Ordering Information

### Ordering Information

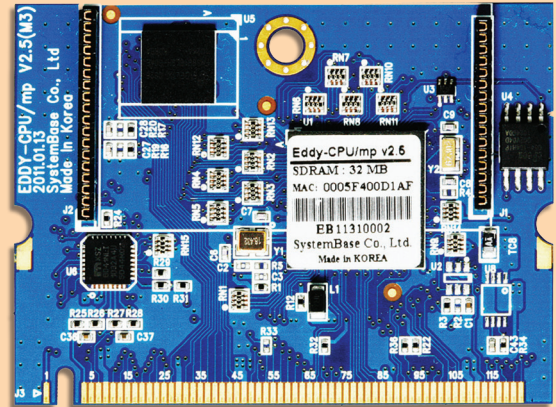
Eddy-CPU V2.5	Programmable Embedded Eddy-CPU v2.5 Module
Package Contents	Eddy-CPU v2.5 Module CD

## Dimension





# Eddy-CPU/mp v2.5



## Overview

Eddy-CPU is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy-CPU module provides complete embedded network connectivity allowing developers and OEMs to easily design their own customized device that can be embedded in almost all hardware environments. Its features include 16bit address and 16 bit data bus interface to connect external devices, PHY interface for Ethernet connectivity and 40 programmable GPIO pins.

### SDK, API & Source Codes Support

Eddy allows you to upload and execute customized user applications. The open design enables developers to program their own socket/serial communication applications using an array of tools including a SDK (Software Development Kit), API (Application Programming Interface) and Source Code.

### Development Kit

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment, applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

### Windows Utility Support

SystemBase provides powerful and free utilities to monitor and test your completed products over the network and the serial interface. Management utilities include, COM port redirector, PortView™ and TestView™. These tools enable accurate monitoring and administration of your product designs.

## Specification

### Hardware

CPU	ARM926EJ-S (400MHz)
Memory	8MB DATA FLASH , 32 MB SDRAM (64MB)
External Interface	16 bits Address / 16 bits Data Bus
Ethernet Interface	10/100 Base-T ( MAC PHY, AUTO MDI/MDIX)
GPIO	Max. 40 Programmable I/O Pins
Interface	ADC (4 channel 10bit), SPI, TWI, USB 2.0 Full Speed, NAND Flash Attachable, Serial 4ports(MAX 921.6kbps)
Power Input	3.3 V (200 mA Max)
Dimensions	2.35(W) x 1.75(L) x 0.22(H) in 59.75(W) x 44.6(L) x 5.5(H) mm
Weight	0.30 oz / 8.6g

### Network

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

### Software

O/S	Embedded Linux
Management	SNMP, Web, PortView™
Uploads	TFTP, FTP, Web
Development Tools	LemonIDE™ & SDK
Flash Burning	USB, Debug Port

## » Features

- 32-bit ARM9 CPU core at 400MHz/ 8MB DATA FLASH / 32MB (64MB) SDRAM
- Mini PCI Type Interface (124 pin)
- 10/100 Ethernet PHY (Auto MDIX) & 4 UARTs
- Max 40 Programmable GPIO
- TWI (I2C), SPI, MCI, 4-channel ADC supported
- 2 USB Host, 1 USB Device supported
- Watchdog timer
- Supports SNMP
- Development Kit - SDK and API
- Operated by Embedded Linux
- Supported by Eclipse based IDE, LemonIDE™
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™
- Operation Temp : -40 ~ 85°C

### Environmental

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

### Approvals

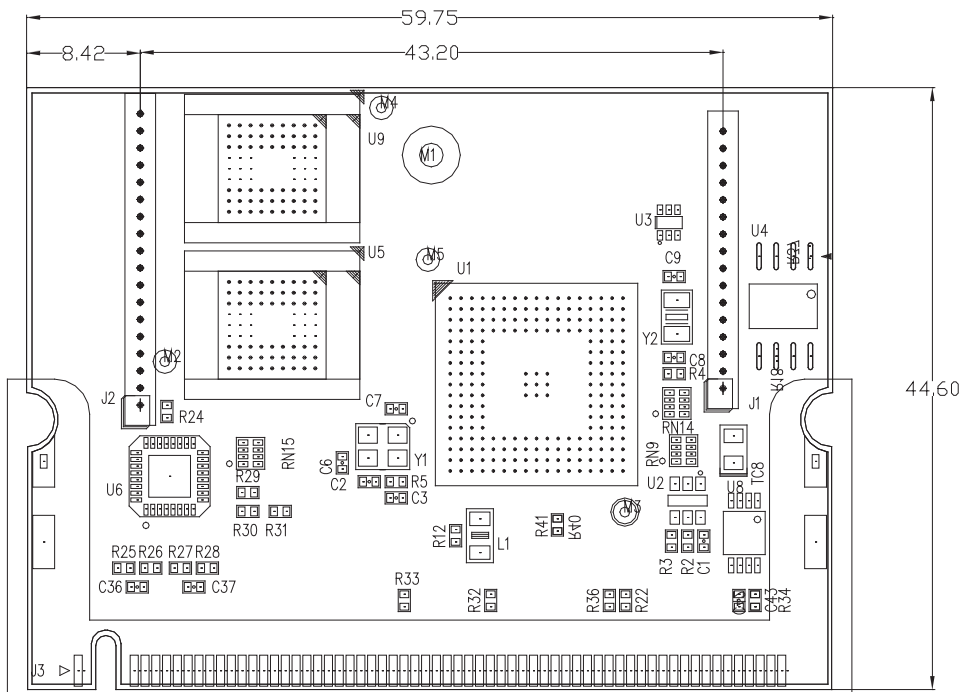
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## Ordering Information

### Ordering Information

Eddy-CPU/mp v2.5	Programmable Embedded CPU Module 8MB DATA Flash Memory
Package Contents	Eddy-CPU/mp v2.5 Module, Utilities & Documents CD

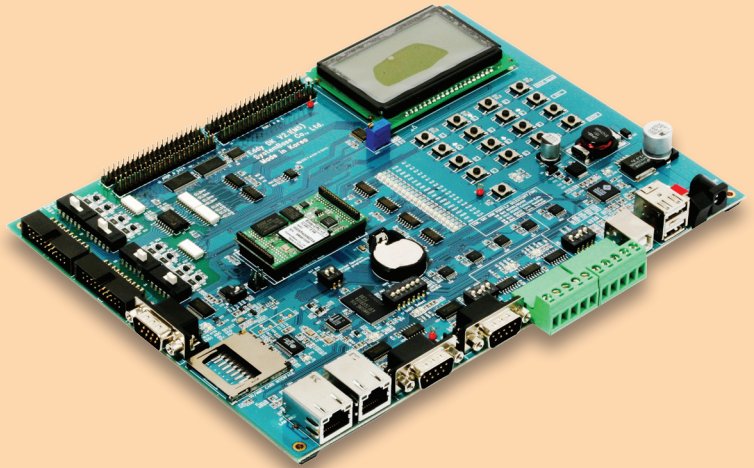
## Dimension



unit : mm

Sales Inquiry : sales@sysbas.com  
 Technical Support : tech@sysbas.com

# Eddy-DK v2.1



## Overview

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment, applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

### SDK (Software Development Kit)

Eddy allows you to upload and execute customized user applications. The open design enables developers to program their own socket/serial communication applications using an array of tools including a SDK (Software Development Kit), API (Application Programming Interface) and Source Code.

### LemonIDE™ Development Environment

LemonIDE™ is an Eclipse-based development environment. It provides a GUI that enables easy development of applications and firmware running on Linux. In addition, all the operations related to GNU C/C++ compiler, source code editor, remote debugging and remote monitoring can be processed in this environment.

### Windows Utility Support

SystemBase provides powerful and free utilities to monitor and test your completed products over the network and the serial interface. Management utilities include, COM port redirector, PortView™ and TestView™. These tools enable accurate monitoring and administration of your product designs.

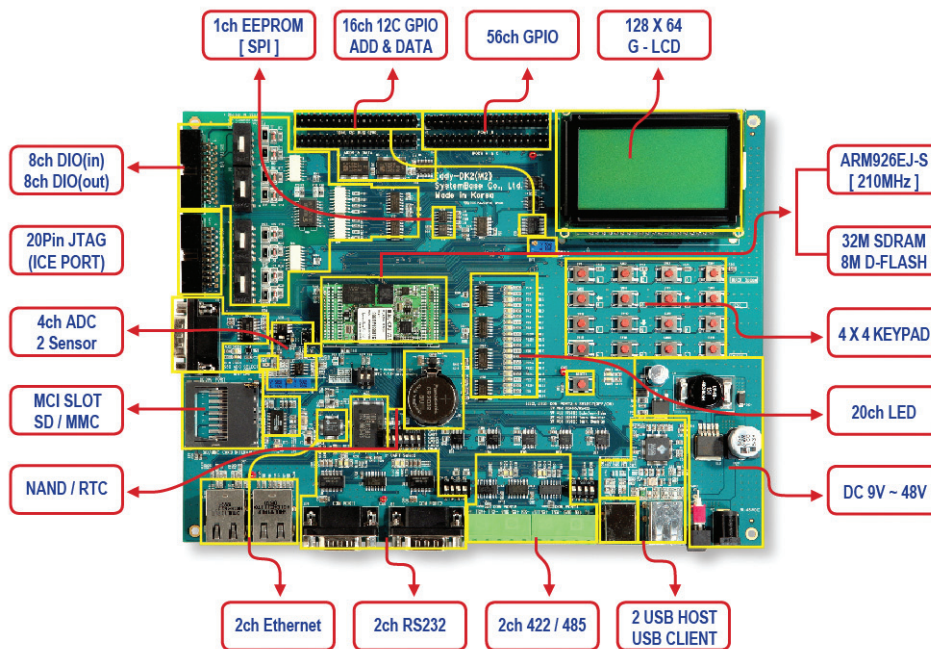
## Specification

### Hardware

NAND Flash	256MB, 8bit I/F
SD Card Connector	Push type, Up to 16GB/12.5Mbps
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, 255 mAh
LED	Power, Ready, 20 Programmable IO, Console & Serial TxD, RxD
Switch	- Serial or GPIO Select - RS422/485 Select - DIO : Common VCC or GND Select - 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	Debugging & Flash programming
Reset Button	Factory Default & Warm Boot
Input Power	9-48VDC
Dimensions	9.44(W) x 7.08(L) x 0.72(H) in 240(W) x 180(L) x 18.30 (H) mm

## » Features

- Eclipse based IDE - LemonIDE™
- GUI Development Environment
- C/C++ Compiler
- Source Code Editor
- Remote Debugging, Remote Monitoring
- SDK including API & Source Codes
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™

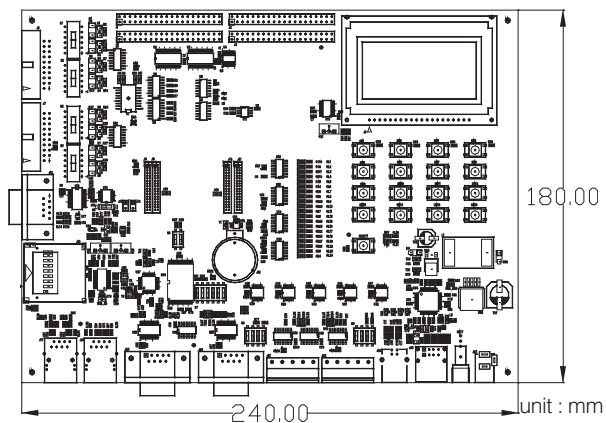


## ■ Ordering Information

### Ordering Information

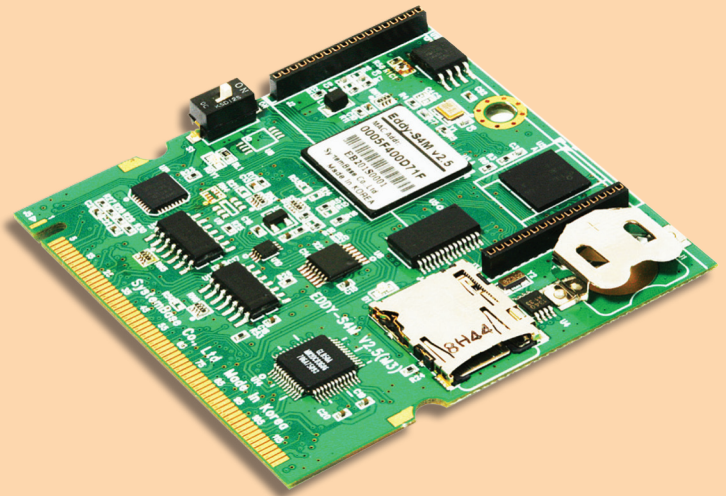
Eddy-DK v2.1	Eddy-CPU v2.5 Development Kit
Package Contents	Eddy Development Board Eddy-CPU v2.5 Module SDK / IDE / Compiler / Document / Utilities CD LAN Cable, Serial Cable, USB Cable, Power Adaptor

## ■ Dimension





# Eddy-S4M v2.5



## Overview

Eddy-S4M is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy-CPU module provides complete embedded network connectivity allowing developers and OEMs to easily design their own customized device that can be embedded in most all hardware environments. Its features include interface to connect external devices, PHY interface for Ethernet connectivity and 34 programmable GPIO pins.

### SDK, API & Source Codes Support

Eddy allows you to upload and execute customized user applications. The open design enables developers to program their own socket/serial communication applications using an array of tools including a SDK (Software Development Kit), API (Application Programming Interface) and Source Code.

### Development Kit

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment, applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

### Windows Utility Support

SystemBase provides powerful and free utilities to monitor and test your completed products over the network and the serial interface. Management utilities include, COM port redirector, PortView™ and TestView™. These tools enable accurate monitoring and administration of your product designs.

## Specification

### Hardware

CPU	ARM926EJ-S (400MHz)
Memory	8MB Data Flash, 32 MB SDRAM
Ethernet Interface	10/100 Base-T (MAC PHY, AUTO MDI/MDIX)
UARTs	4ports, support up to 921.6Kbps -1: DCD, RXD, TXD, DTR, DSR, RTS, CTS, RI -2, 3, 4: RXD, TXD, RTS, CTS only
USB 2.0	FS 2 Host /1 Device port, 2.0 FS(12Mbps)
SD CARD	MicroSD Support (Max 16GB, SDHC)
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	MMC spec v3.11 / SDIO spec v1.1 / SD Card Spec v1.0 Up to 2GB, 12.5Mbps
GPIO	Max. 34 Programmable I/O Pins
Power Input	3.3 V (200 mA Max)
Dimensions	2.35(W) x 2.43(L) x 0.29(H) in 59.75(W) x 61.80(L) x 7.3(H) mm
Weight	0.5 oz / 14.2g

### Network

Protocol	TCP, UDP, Telnet, ICMP, DHCP, TFTP, HTTP, SNMP, SSH, SSL
Ethernet Interface	10/100 Base-T (MAC PHY, AUTO MDI/MDIX)
Network Connection	Static IP, DHCP

## » Features

- ARM9 CPU / 8MB DATA Flash / 32MB SDRAM
- 10/100Base-T with Auto MDI/MDIX
- 3 USB 2.0 FS(12Mbps) Host
- MicroSD Support (max 16GB, SDHC Support)
- 2 RS232 & 2 RS422/RS485 (w/Auto Toggle)
- WDT & RTC with Battery(CR1220) Support
- Max 34 Programmable GPIOs
- Supported by Development Kit including
- Development Kit - SDK and API
- Operated by Embedded Linux
- Easy to use Eclipse based IDE, LemonIDE™
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™
- Power input : 3.3V DC
- Dimension : 59.75 X 61.80 mm
- Operating Temp : -40~85°C

### Software

O/S	Embedded Linux
Management	SNMP, Web, PortView™
Uploads	TFTP, FTP, Web
Development Tools	LemonIDE™ & SDK

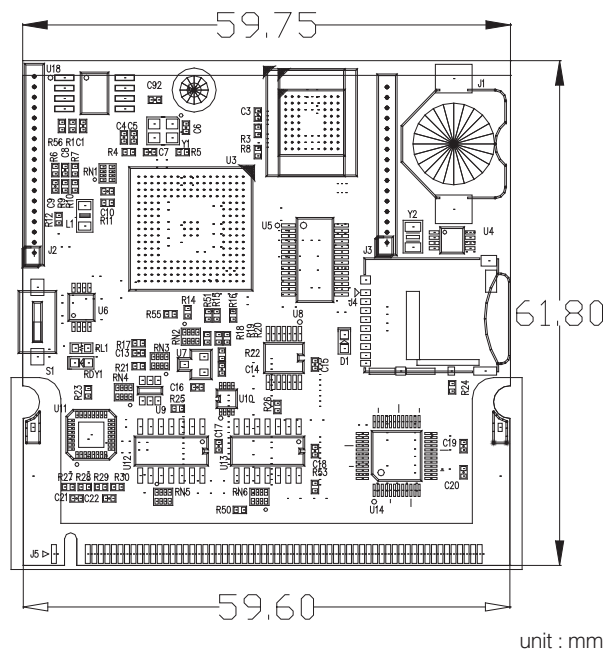
### Environmental

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

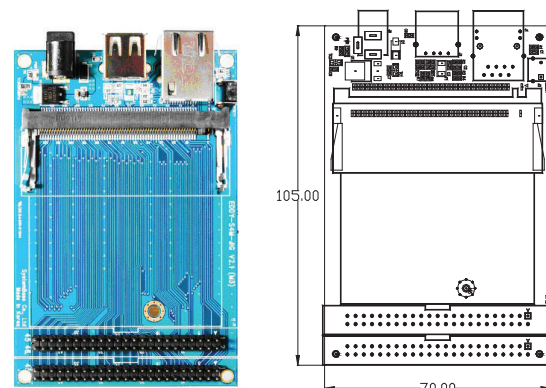
### Approvals

CE, FCC
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### Dimension



### Accessory



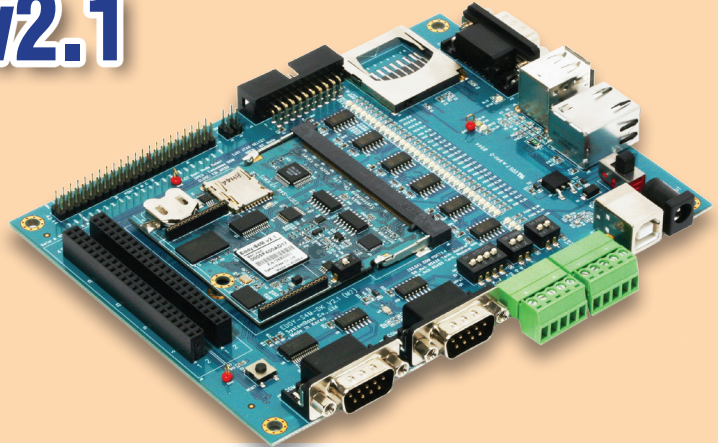
## Ordering Information

### Ordering Information

Eddy-S4M v2.5	Programmable Embedded Eddy-S4M v2.5 Module
Package Contents	Eddy-S4M v2.5 Module Utilities & Documents CD

Sales Inquiry : sales@sysbas.com  
 Technical Support : tech@sysbas.com

# Eddy-S4M-DK v2.1



## Overview

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment, applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

### SDK (Software Development Kit)

Eddy allows you to upload and execute customized user applications. The open design enables developers to program their own socket/serial communication applications using an array of tools including a SDK (Software Development Kit), API (Application Programming Interface) and Source Code.

### LemonIDE™ Development Environment

LemonIDE™ is an Eclipse-based development environment. It provides a GUI that enables easy development of applications and firmware running on Linux. In addition, all the operations related to GNU C/C++ compiler, source code editor, remote debugging and remote monitoring can be processed in this environment.

### Windows Utility Support

SystemBase provides powerful and free utilities to monitor and test your completed products over the network and the serial interface. Management utilities include, COM port redirector, PortView™ and TestView™. These tools enable accurate monitoring and administration of your product designs.

## Specification

### 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
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

## » Features

- Eclipse based IDE - LemonIDE™
- GUI Development Environment
- C/C++ Compiler
- Source Code Editor
- Remote Debugging, Remote Monitoring
- SDK includes API and Source Code
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™

Reset Button	Factory Default & Warm Boot
JIG Connector	22x23pin socket, which connect JIG board to confirm problems
Expansion Header	2x22pin Header, used to test GPIO of Eddy-S4M
Input Power	5VDC
Dimensions	5.64(W) x 4.23(L) x 0.72(H) in 160(W) x 120(L) x 18.30(H) mm

### Software

O/S	Embedded Linux
Management Tools	SNMP, Web, PortView™
Uploads	TFTP, FTP, Web
Development Tools	LemonIDE™ & SDK

### Environmental

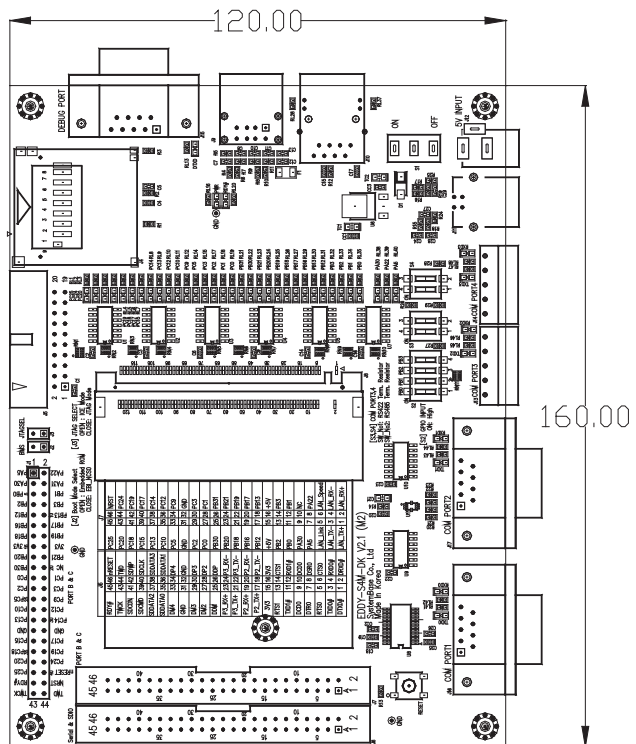
Protocol	TCP, UDP, Telnet, ICMP, DHCP, TFTP, HTTP, Supports SNMP, SSH, SSL
Ethernet	10/100Mbps MAC / PHY
Network Connection	Static IP, DHCP

## Ordering Information

### Ordering Information

Eddy-S4M-DK V2.1	Eddy-S4M v2.5 Development Kit
Package Contents	Test Board & Eddy-S4M v2.5 Module SDK / IDE / Compiler / Utility / Document CD LAN Cable, Serial Cable, Jumper, 5V Adaptor

## Dimension



unit : mm



# Eddy-CPU/WiFi v3.0



## Overview

Eddy-WiFi, WLAN 802.11b/g/n module gives your laptop or desktop a versatile way to wirelessly connect to one of two wireless networks (802.11b, 802.11g, 802.11n) that operate in 2.4GHz frequency band. You simply plug into USB port of desktop without opening the casing of computer. The pocketed-size design can be carried easily anywhere. The 128bit WEP and WPA, WPA2 Encryption protects your wireless network from eavesdroppers. Eddy-WiFi support Linux 2.6.x drivers.

### High Performance Specification

Compared to the existing embedded modules with only an 8bit CPU and 256Kb memory, Eddy-CPU boasts its high performance design with 400MHz clock, 8MB DATA FLASH memory, 32MB SDRAM and 32bit ARM9 CPU. Embedded Linux operating system enables your applications to run faster and more stable.

### LemonIDE™ Development Environment

LemonIDE™ is an Eclipse-based development environment. It provides a GUI that enables easy development of applications and firmware running on Linux. In addition, all the operations related to GNU C/C++ compiler, source code editor, remote debugging and remote monitoring can be processed in this environment.

### Development Kit

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment, applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

## Specification

### Hardware

CPU	ARM926EJ-S (400MHz)
Memory	8MB DATA FLASH, 32 MB SDRAM
External Interface	19 bits Address / 16 bits Data Bus
Ethernet Interface	10/100 Base-T (MAC PHY, AUTO MDI/MDIX)
GPIO	Max. 56 Programmable I/O Pins
Interface	ADC (4 channel 10bit), SPI, TWI, USB 2.0 Full Speed, NAND Flash Attachable, Serial 4ports (MAX 921.6Kbps)
UART	- 1: DCD, RXD, TXD, DTR, DSR, RTS, CTS, RI(Full Signal) - 2, 3 : RXD, TXD, RTS, CTS only
Power Input	3.3 V (200mA Max)
Dimensions	1.78(W) x 1.1(L) x 0.35(H) in 45.20(W) x 28(L) x 8.8(H) mm
Weight	0.51 oz / 14.5g

### WiFi Characteristics

Standard	802.11b/g/n
Modulation	802.11b:CCK, DQPSK, DBPSK 802.11g:64 QAM, 16 QAM, QPSK, BPSK 802.11n:BPSK, QPSK, 16-QAM, 64-QAM
Frequency Band	ISM band 2.4GHz ~ 2.484GHz
Output Power	802.11b:16 dBm (11Mbps) 802.11g:14 dBm (54Mbps) 802.11n:14 dBm (20MHz BW,MCS7) 13 dBm (40MHz BW,MCS7)
RX sensitivity	802.11b:-84dBm@11MHz 802.11g:-73dbm@54MHz 802.11n:-71dBm(MCS 7_HT20)

## » Features

- Operate at ISM frequency bands (2.4GHz)
- IEEE standards support: IEEE 802.11b/g/n
- Support IEEE 802.11i encryption/decryption engine, including 64-bit/128-bit WEP, TKIP, and AES
- Supports Wi-Fi alliance WPA, WPA2 security
- 32-bit ARM9 CPU core at 400MHz / 8MB DATA FLASH / 32MB SDRAM
- Pin Header Interface (144 pin)
- Operated by Embedded Linux
- Support USB2.0 host interface
- Development Kit - SDK and API
- Portable and compact to fit into most hardware designs
- Operation Temp: -10 ~ 70°C

RX sensitivity	-68dBm(MCS 15_HT20) -68dBm(MCS 7_HT40) -65dBm(MCS 15_HT40)
Security	WPA, WPA-PSK, WPA2, WPA2-PSK, WEP 64bit & 128bit , IEEE 802.11x, IEEE 802.11i
Working distance	60 - 120m, depending on surrounding Environment
Data Rate	802.11b: 11, 5.5, 2, 1 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 802.11n: 20 MHz BW: 130, 1117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6.5 40 MHz BW: 270, 243, 216, 162, 150, 135, 121.5, 108, 81, 54, 40.5, 27, 13.5 (unit: Mbps)
Antenna	ANT 2.4Ghz 3DB, 1 x U.FL

## Network

Protocol	TCP, UDP, Telnet, ICMP, DHCP, TFTP, HTTP, Supports SNMP, SSH, SSL
Ethernet Interface	10/100Mbps MAC
Network Connection	Static IP, DHCP

## Environmental

Operating Temp	-10 ~ 70°C
Operating Voltages	3.3V±5% I/O supply voltage

## Approvals

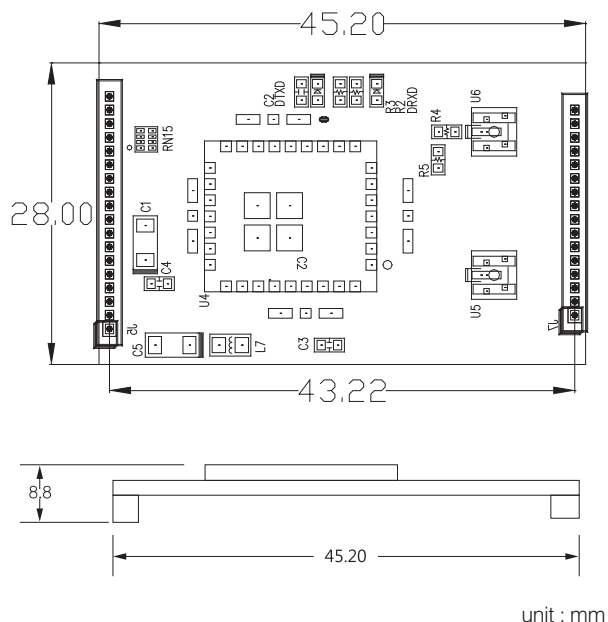
CE, FCC, KC

## Ordering Information

### Ordering Information

Eddy-CPU/WiFi v3.0	Embedded CPU WiFi Module
Package Contents	Eddy-WiFi v3.0 Module, U.FL to RP-SMA Cable, Antenna & Utilities/Documents CD

## Dimension (WiFi Module Only)



Sales Inquiry : sales@sysbas.com  
 Technical Support : tech@sysbas.com

# Eddy-CPU/BT v2.1



## Overview

Eddy CPU/ BT Bluetooth Module enables reliable serial to Bluetooth connectivity. This robust and secure module supports Bluetooth Spec v2.0 +EDR Class1 to your devices. It is equipped with a powerful ARM9G20(400MHz) processor, 8MB DATA FLASH, 32MB SDRAM and supports Embedded Linux 2.6.21, 56 programmable GPIO pins and Windows/Linux operable IDE, LemonIDE provides you with an easy and simple way to program customized applications. Eddy-CPU/BT provides a flexible yet simple way to integrate Bluetooth connectivity into your products.

### High Performance Specification

Compared to the existing embedded modules with only an 8bit CPU and 256Kb memory, Eddy-CPU boasts its high performance design with 400MHz clock, 8MB DATA FLASH memory, 32MB SDRAM and 32bit ARM9 CPU. Embedded Linux operating system enables your applications to run faster and more stable.

### SDK, API & Source Codes Support

Eddy allows you to upload and execute customized user applications. The open design enables developers to program their own socket/serial communication applications using an array of tools including a SDK (Software Development Kit), API (Application Programming Interface) and Source Code.

### Development Kit

The Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Therefore, before integrating Eddy into the hardware environment,

applications can be first programmed and tested on the development board. Power, Ready, Communication Interface and GPIO Serial Signal status LEDs on the development board provide a visual guide to understanding Eddy's operating status.

### Windows Utility Support

SystemBase provides powerful and free utilities to monitor and test your completed products over the network and the serial interface. Management utilities include, COM port redirector, PortView™ and TestView™. These tools enable accurate monitoring and administration of your product designs.

## Specification

### Hardware

CPU	ARM926EJ-S (400MHz)
Memory	8MB DATA FLASH , 32 MB SDRAM
External Interface	19 bits Address / 16 bits Data Bus
Ethernet Interface	10/100 Base-T ( MAC PHY, AUTO MDI/MDIX)
GPIO	Max. 56 Programmable I/O Pins
Interface	ADC (4 channel 10bit), SPI, TWI, USB 2.0 Full Speed, NAND Flash Attachable, Serial 4ports (MAX 921.6kbps)
UART	-1: DCD, RXD, TXD, DTR, DSR, RTS, CTS, RI(Full Signal) -2, 3 : RXD, TXD, RTS, CTS only

## » Features

- 32-bit ARM9 CPU core at 400MHz/8MB DATA FLASH / 32MB SDRAM
- Pin Header Interface (144 pin)
- Bluetooth Spec V2.0+EDR Class1 support
- 10/100 Ethernet PHY (Auto MDIX)
- Max 56 Programmable GPIO
- Watchdog timer
- SNMP supported
- Development Kit - SDK and API
- Operated by Embedded Linux
- Supported by Eclipse based IDE, LemonIDE™
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™
- Compact size easily fits into most hardware environments
- Operation Temp : -20 ~ 85°C

Power Input	3.3 V (200 mA Max)
Dimensions	1.78(W) x .98(L) x 0.33(H) in 45.20(W) x 25(L) x 8.5(H) mm
Weight	0.51 oz / 14.5g

### Network

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

### Wireless

Transmit Power	Bluetooth : +18dBm
Distance	Upto 100 meters (Line of Sight(LDS))

### Software

O/S	Embedded Linux
Management	SNMP, Web, PortView™
Uploads	TFTP, FTP, Web
Development Tools	LemonIDE™ & SDK
Flash Burning	JTAG, USB, Debug Port

### Environmental

Operating Temp	-20 ~ 85°C
Storage Temp	-60 ~ 150°C
Humidity	5 ~ 95% Non-Condensing

### Approvals

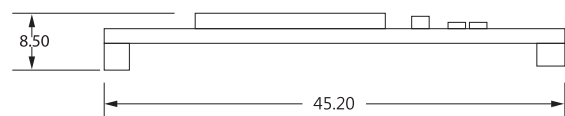
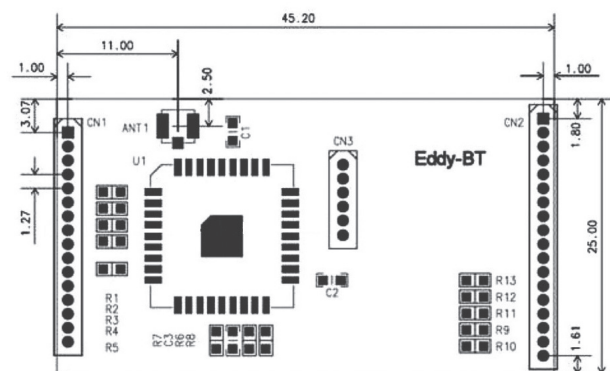
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## Ordering Information

### Ordering Information

Eddy-CPU/BT v2.1	Embedded CPU BT Module
Package Contents	Eddy-CPU/BT v2.1 Module Antenna & Utilities/Documents CD

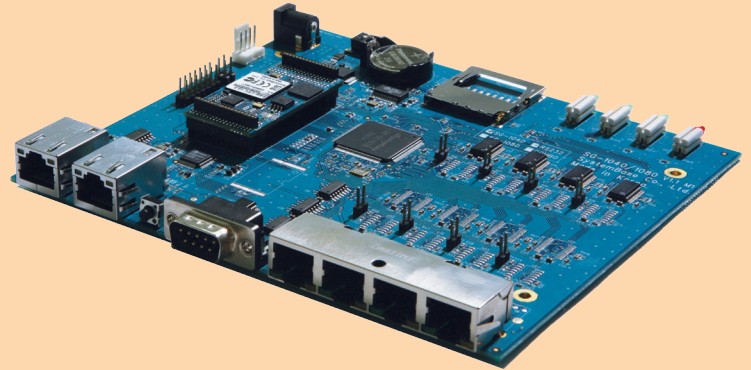
## Dimension (BT Module Only)



unit : mm

**Sales Inquiry** : sales@sysbas.com  
**Technical Support** : tech@sysbas.com

# Eddy-S4/8 Device Server



## Overview

Eddy S4/8 Device Server enables you to easily embed a serial control server to connect serial devices to the network. Eddy S4/8 Device Server integrates a powerful ARM9 CPU(400 MHz), 8MB Flash and 32MB SDRAM and supports two 10/100 Ethernet ports. The module is available in a 4 or 8 port model and support for either RS-232 or Combo (RS-422, RS-485).

### *High Performance Specification*

Tired of constraints on your embedded device server's 8-bit CPU and 256KB memory, Eddy S4/8 device server eliminates these concerns by adopting a 32-bit ARM9 CPU with 400MHz clock, 8MB Data Flash memory and 32MB SDRAM. Your applications will run faster and more stable under the embedded Linux operating system.

### *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 reviewed and followed carefully. Having to go over every component of your embedded device is not only difficult but also very time consuming. You also have to port and customize your OS so that it will be fully compatible to your embedded device which is equally as difficult. The Eddy S4/8 Device Server provides the best solution to resolve all the hard problems and challenges.

### *Eclipse based IDE, LemonIDE™*

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 development running on Linux. LemonIDE™ incorporating GNU C/C++ compiler, source code editor and debugger delivers a one-stop development environment solution to embedded developers with the conveniences of simple mouse click execution.

## » Features

- ARM9 CPU (400MHz)/ 8MB Data Flash / 32MB SDRAM
- 2 \* 10/100 Ethernet PHY (Auto MDIX)
- 4/8 UART 256 FIFO inside RS232, Combo(RS422/RS485)
- Embedded Linux Kernel 2.6.21
- Sample application and driver source provided
- LemonIDE™ (Eclipse based IDE)
- Includes easy-to-use Windows utilities, COM Port Redirector, PortView™ and TestView™
- Operating Temp : 0 ~ 50°C

## ■ Specification

### Hardware

CPU	ARM9 (400 MHz)
Memory Ethernet I/F	8MB Serial Flash, 32 MB SDRAM 2 * 10/100 Base-T Auto MDI/MDIX
UARTs	Support up to 921.6 Kbps SB16C1058 256 FIFO Inside Full Signal Support
Power	Input 5.0 V (200 mA Max)
Dimensions	6.0(W) x 6.4(L) x .76/1.14(H) in 152.3(W) x 162.8(L) x 19.2/28.9(H) mm
Weight	3.46 oz / 98g

### Software

O/S	Embedded Linux
Protocol	TCP, UDP, Telnet, ICMP, DHCP, TFTP, HTTP
Mgt Tools	SNMP, Web, PortView™
Uploads	TFTP, FTP, Web
Network Connection	Static IP, DHCP
Open Source	Busybox 1.5, ddns 1.8 dropbear 0.5, iptables 1.3.7 matrixssl 1.8.3, net-snmp 5.4.1 thttpd 2.25d, openssl 0.9.8i vsftpd 2.05

Device Driver Source	Ethernet , RTC, MMC
Application Source	TCP_Server, TCP_Client UDP_Server, UDP_Client BlueTooth, WiFi
Dev Tools	LemonIDE™ & SDK API

### Environmental

Operating Temp	0 ~ 50°C
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## ■ Ordering Information

### Ordering Information

Eddy-S4-RS232	Eddy-S4 Device Server (RS232)
Eddy-S4-Combo	Eddy-S4 Device Server (Combo)
Eddy-S8-RS232	Eddy-S8 Device Server (RS232)
Eddy-S8-Combo	Eddy-S8 Device Server (Combo)

### Package

Eddy-S4	Eddy-S4 Device Server SDK & Document CD
Eddy-S8	Eddy-S8 Device Server SDK & Document CD