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 module provides network connection allowing developers and OEMs to easily design their own customized device for embedded industrial hardware. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 56 programmable GPIO pins.

**Shorten the Development Time and Save Budget**

It is not easy for developers to make a specialized embedded device from scratch. Developing an embedded device requires a mastery of characteristic of each component to prevent delays and performance problems. In addition, it may take substantial time and effort to port to the operating systems then test the system 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 Eddy. It comes with SDK (Software Development Kit) and API (Application Programming Interface) for the developers to apply it to their own requirements.

**Development Kit**

Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Before integrating Eddy into the field, applications can be programmed and tested on the development board. The power, ready, status LEDs on the development board provide a visual guide to understanding the operating status of Eddy.

**Provides SDK, API and Source Codes**

Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

**LemonIDE SDK**

LemonIDE™ is an Eclipse based developing 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/++ compiler, source code editor, remote debugging and remote monitoring can be designed with this tool.

**Provides Windows Utility**

SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools helps the user to monitor accurately and administrate their designed products.

**Feature**

- ARM926EJ-S CPU (8MB Flash, 32/64 MB SDRAM)
- Supports 10/100 Ethernet PHY (Auto MDI/MDIX) with 4 channel UART
- Pin Header Interface (144 pins)
- Programmable GPIO (56 pins)
- Supports Various Peripherals: I2C, SPI, UART, MCI, ADC
- Two USB Hosts, One USB Device Provided
- Embedded Linux Included
- Supports Eclipse based SDK (LemonIDE)
- HW/SW Development Kit Provided
- Operating Temperature: -40 ~ 85°C
- CE, FCC, KC Certified

**Ordering Information**

<table>
<thead>
<tr>
<th>Model</th>
<th>Eddy-CPU v2.5</th>
<th>Eddy-CPU v2.5B</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Eddy-CPU v2.5</td>
<td>Eddy-CPU v2.5B</td>
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</table>

**Dimension**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>400MHz</td>
</tr>
<tr>
<td>Memory</td>
<td>8MB Flash, 32/64MB SDRAM</td>
</tr>
<tr>
<td>External Interface</td>
<td>19 bits Address / 16 bits Data Bus</td>
</tr>
<tr>
<td>Ethernet</td>
<td>10/100 Base-T (MAC PHY, Auto MDI/MDIX)</td>
</tr>
<tr>
<td>GPIO</td>
<td>Maximum 56 Programmable pins</td>
</tr>
<tr>
<td>Interface</td>
<td>ADC (4 channel 10 bit), SPI, TBI, USB 2.0 Full-Speed, NAND Flash Attachable, Serial 4 ports (Maximum 921.6kbauds)</td>
</tr>
<tr>
<td>UART</td>
<td>4 ports</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>3.3V (Maximum 200mA)</td>
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<tr>
<td>Dimension</td>
<td>25 (W) x 48.5 (L) x 8.5 (H) mm</td>
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<tr>
<td>Weight</td>
<td>9g</td>
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<tr>
<td>Network</td>
<td>TCP, UDP, Telnet, ICMP, DHCP, HTTP, TFTP, SNMP, SSH, SSL</td>
</tr>
<tr>
<td>Protocol</td>
<td>10/100Mbps MAC / PHY</td>
</tr>
<tr>
<td>OS</td>
<td>Embedded Linux</td>
</tr>
<tr>
<td>Management Tool</td>
<td>SNMP, Web Browser, PortView</td>
</tr>
<tr>
<td>Development Tool</td>
<td>LemonIDE, SDK</td>
</tr>
<tr>
<td>Firmware Update</td>
<td>JTAG, USB, Debug Port</td>
</tr>
<tr>
<td>Operating Environment</td>
<td></td>
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<tr>
<td>Operating Temperature</td>
<td>-40 ~ 85°C</td>
</tr>
<tr>
<td>Storing Temperature</td>
<td>-40 ~ 85°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>5 ~ 95% Non-Condensing</td>
</tr>
<tr>
<td>Certifications</td>
<td>KC, CE, FCC</td>
</tr>
</tbody>
</table>

**Overview**

Eddy-CPU is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy module provides network connection allowing developers and OEMs to easily design their own customized device for embedded industrial hardware. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 56 programmable GPIO pins.

**Shorten the Development Time and Save Budget**

It is not easy for developers to make a specialized embedded device from scratch. Developing an embedded device requires a mastery of characteristic of each component to prevent delays and performance problems. In addition, it may take substantial time and effort to port to the operating systems then test the system 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 Eddy. It comes with SDK (Software Development Kit) and API (Application Programming Interface) for the developers to apply it to their own requirements.

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**Provides SDK, API and Source Codes**

Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

**LemonIDE SDK**

LemonIDE™ is an Eclipse based developing 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/++ compiler, source code editor, remote debugging and remote monitoring can be designed with this tool.

**Provides Windows Utility**

SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools helps the user to monitor accurately and administrate their designed products.

**Overview**

Eddy-CPU is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy module provides network connection allowing developers and OEMs to easily design their own customized device for embedded industrial hardware. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 56 programmable GPIO pins.

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Overview

Eddy-CPU/mp v2.5 is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy module provides network connection allowing developers and OEMs to easily design their own customized device for embedded industrial hardware. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 55 programmable GPIO pins.

Shorten the Development Time and Save Budget

It is not easy for developers to make a specialized embedded device from scratch. Developing an embedded device requires a mastery of characteristic of each component to prevent delays and performance problems. In addition, it may take substantial time and effort to port to the operating systems then test the system 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 Eddy. It comes with SDK (Software Development Kit) and API (Application Programming Interface) for the developers to apply it to their own requirements.

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Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Before integrating Eddy into the field, applications can be programmed and tested on the development board. The power, ready, status LEDs on the development board provide a visual guide to understanding the operating status of Eddy.

Feature

- **ARM926EJ-S CPU** (8MB Flash, 32 MB SDRAM)
- **Supports** 10/100 Ethernet PHY (Auto MDI/MDIX) with 4 channel UART
- **Pin Header Interface** (124 pins)
- **Programmable GPIO** (55 pins)
- **Supports Various Peripherals**: I2C, SPI, UART, MCI, ADC
- **Two USB Hosts**, **One USB Device Provided**
- **Embedded Linux Included**
- **Supports Eclipse based SDK (LemonIDE)**
- **HW/SW Development Kit Provided**
- **Operating Temperature**: -40 – 85°C
- **CE, FCC, KC Certified**

Provides SDK, API and Source Codes

Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

LemonIDE SDK

LemonIDE™ is an Eclipse based developing 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 file monitoring can be designed with this tool.

Provides Windows Utility

SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools help the user to monitor accurately and administrate their designed products.

Specification

| Interface          | ADC (4 channel 10bit), SPI, TN, USB 2.0
|                   | Full-Speed, NAND Flash Attachable, Serial 4 ports (Maximum 801kbps)
| UART              | 4 ports
|                   | #1: DCD, RXD, TXD, DTR, RTS, CTS, RI
|                   | #2/3/4: RXD, TXD, RTS, CTS (4 Signals only)
| Power Requirement | 3.3V (Maximum 200mA)
| Dimension         | 59.75 (W) x 44.6 (L) x 5.5 (H) mm
| Weight            | 8.6g

Network

- **Protocol**: TCP, UDP, Telnet, ICMP, DHCP, HTTP, TFTP, SNMP, SSH, SSL
- **Ethernet**: 10/100Mbps MAC / PHY

Software

- **DS**: Embedded Linux
- **Management Tool**: SNMP, Web Browser, PortView
- **Development Tool**: LemonIDE, SDK
- **Firmware Update**: USB, Debug Port

Operating Environment

- **Operating Temperature**: -40 – 85°C
- **Storing Temperature**: -40 – 85°C
- **Humidity**: 5 – 95% Non-Condensing

Certifications

- CE

Ordering Information

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<thead>
<tr>
<th>Eddy-CPU/mp v2.5</th>
<th>Eddy-CPU/mp v2.5</th>
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</table>

Dimension

unit: mm
Eddy-S4M v2.5

Overview
Eddy-S4M is a high-performance embedded CPU module with a powerful ARM core processor with mini PCI interface. This compact-sized Eddy module provides network connection allowing developers and OEMs to easily design their own customized hardware for embedded industrial use. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 55 programmable GPIO pins.

Shorten the Development Time and Save Budget
It is not easy for developers to make a specialized embedded device from scratch. Developing an embedded device requires a mastery of characteristic of each component to prevent delays and performance problems. In addition, it may take substantial time and effort to port to the operating systems then test the system 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 Eddy. It comes with SDK (Software Development Kit) and API (Application Programming Interface) for the developers to apply it to their own requirements.

Development Kit
Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Before integrating Eddy into the field, applications can be programmed and tested on the development board. The power, ready, status LEDs on the development board give a visual guide to understanding the operating status of Eddy.

Provides SDK, API and Source Codes
Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

Feature
- ARM926EJ-S CPU (8MB Flash, 32MB SDRAM)
- Supports 10/100 Ethernet PHY (Auto MDI/MDIX) with 4 channel UART
- Pin Header Interface (124 pins)
- Programmable GPIO (34 pins)
- Supports Various Peripherals: I2C, SPI, UART, MCI, ADC
- Two USB Hosts, One USB Device Provided
- Embedded Linux Included
- Supports Eclipse based SDK (LemonIDE)
- HW/SW Development Kit Provided
- Operating Temperature: -40 ~ 85°C
- CE, FCC, KC Certified

Specification

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Processor</th>
<th>ARM926EJ-S (400MHz)</th>
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<tbody>
<tr>
<td>Memory</td>
<td>8MB Flash, 32MB SDRAM</td>
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<tr>
<td>Ethernet</td>
<td>10/100 Base-T (MAC PHY, Auto MDIX)</td>
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<tr>
<td>GPIO</td>
<td>Maximum 34 Programmable pins</td>
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<tr>
<td>USB Specification</td>
<td>USB 2.0 Full-Speed (12Mbps), 2 hosts, 1 device port</td>
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<td>SD Memory Card</td>
<td>MicroSD (Maximum 16GB, SDHC)</td>
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<tr>
<td>ADC</td>
<td>4 channel 10 bit</td>
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<td>TWI (I2C)</td>
<td>Master, Multi-master and slave Mode</td>
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<tr>
<td>SPI</td>
<td>8 to 16 bits Programmable Data Length, Four External Peripheral Chips Selectable</td>
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<tr>
<td>MCI</td>
<td>MMC specification v3.11 / SDIO specification 1.1 / SD Card specification v1.0 up to 256 (12.5Mbps)</td>
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<tr>
<th>Network</th>
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<tr>
<td>Ethernet</td>
<td>10/100Mbps MAC / PHY</td>
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<th>OS</th>
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<tr>
<td>Management Tool</td>
<td>SNMP, Web Browser, PortView</td>
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<tr>
<td>Development Tool</td>
<td>LemonIDE, SDK</td>
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<thead>
<tr>
<th>Operating Environment</th>
<th>Operating Temperature</th>
<th>-40 ~ 85°C</th>
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<tbody>
<tr>
<td></td>
<td>Storing Temperature</td>
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Certification
- CE, FCC

Accessories

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<table>
<thead>
<tr>
<th>Ordering Information</th>
<th>Eddy-S4M v2.5, CD (Manual and Utility)</th>
</tr>
</thead>
</table>

Eddy-S4M v2.5, CD (Manual and Utility)
Eddy-CPU/WiFi v3.0

Overview

Eddy-CPU/WiFi is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy module provides wireless network, IEEE 802.11 b/g/n Wi-Fi, connection allowing developers and OEMs to easily design their own customized device for embedded industrial hardware. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 56 programmable GPIO pins.

Shorten the Development Time and Save Budget

It is not easy for developers to make a specialized embedded device from scratch. Developing an embedded device requires a mastery of characteristic of each component to prevent delays and performance problems. In addition, it may take substantial time and effort to port to the operating systems then test the system to prove the reliability of the hardware. Alternatively, you can order a customized hardware board, then test the system to prove the reliability of the hardware. You can overcome all these challenges by choosing Eddy. It comes with SDK (Software Development Kit) and API (Application Programming Interface) for the developers to apply it to their own requirements.

Development Kit

Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Before integrating Eddy into the field, applications can be programmed and tested on the development board. The power, ready, status LEDs on the development board provide a visual guide to understanding the operating status of Eddy.

Specifcation

Hardware

- Processor: ARM926EJ-S (400MHz)
- Memory: 8MB Flash, 32/64MB SDRAM
- External Interface: 19-bit Address / 16 bits Data Bus
- Ethernet: 10/100 Base-T (MAC PHY, Auto MDI/MDIX)
- GPIO: Maximum 56 Programmable pins
- Interface: ADC (4 channel 10 bit), SPI, TWI, USB 2.0 Full-Speed, NAND Flash Attachable, Serial 4 ports (Maximum 921.6kbps)

Wi-Fi

- Specification: 802.11b/g/n
- Modulation Scheme: 802.11b: CCK, DQPSK, DBPSK
- Air Interface: 5MHz band 2.4 GHz – 2.484GHz
- Transmission Power: 802.11b: 16 dbm (1Mbps) 802.11g: 14 dbm (54Mbps) 802.11n: 14 dbm (20MHz BW, MCS7), 13 dbm (40MHz BW, MCS7)
- Received Signal Power: 802.11b: -65 dbm(MCS 15_HT20) 802.11g: -68 dbm(MCS 7_HT20), -65 dbm(MCS15_HT20)
- Security: WEP 64bit/128 bit data encryption WPA, WPA-PSK, WPA2, WPA2-PSK (Includes TKIP/AES)

Feature

- IEEE 802.11 b/g/n (Wi-Fi) Compliant
- Maximum Communication Speed: 54Mbps
- Compliant with Various Wireless Securities
- ARM926EJ-S CPU (8MB Flash, 32/64 MB SDRAM)
- Supports 10/100 Ethernet PHY (Auto MDI/MDIX) with 4 channel UART
- Pin Header Interface (144 pins)
- Programmable GPIO (56 pins)
- Supports Various Peripherals: I2C, SPI, UART, MCI, ADC
- Two USB Hosts, One USB Device Provided
- Embedded Linux Included
- Supports Eclipse based SDK (LemonIDE)
- HW/SW Development Kit Provided
- Operating Temperature: -10 ~ 70°C

Operating Environment

- Operating Temperature: -10 ~ 70°C
- Storing Temperature: -20 ~ 70°C
- Humidity: 5 ~ 95% Non-Condensing

Certifications

- KC, CE, FCC

Ordering Information

- Eddy-CPU v2.5, WiFi Module v3.0, U.FL to RP-SMA Cable, Antenna, CD (Manual and Utility)

Dimension (WiFi Module Only)

- UART: 4 ports
  #1: DCD, RXD, TXD, QTR, DSR, RTS,CTS, RI
  #2/4: RXD, TXD, RXD, RTS, CTS (4 Signals only)
- Power Requirement: 3.3V (Maximum 200mA)
- Dimension: 45.2 (W) x 28 (L) x 8.8 (H) mm
- Weight: 14.5g

Provides SDK, API and Source Codes

Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

LemonIDE SDK

LemonIDE™ is an Eclipse based developing 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 designed with this tool.

Provides Windows Utility

SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools helps the user to monitor accurately and administrate their designed products.

Dimensions (WiFi Module Only)

- UART: 4 ports
  #1: DCD, RXD, TXD, QTR, DSR, RTS,CTS, RI
  #2/4: RXD, TXD, RXD, RTS, CTS (4 Signals only)
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IOT EXPERTS

Embedded Module

» Reference

- Sales: marketing@sysbas.com
- Technical Support: www.solvline.com

- 100m (Open Area)
- 5 ~ 95% Non-Condensing
- TCP , UDP , Telnet, ICMP , DHCP , HTTP , TFTP , SNMP , SSH, SSL
- 8MB Flash, 32/64MB SDRAM

IOT EXPERTS

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- 100m (Open Area)
- 5 ~ 95% Non-Condensing
- TCP , UDP , Telnet, ICMP , DHCP , HTTP , TFTP , SNMP , SSH, SSL
- 8MB Flash, 32/64MB SDRAM
Eddy-CPU/BT v2.1

Overview
Eddy-CPU/BT is a high-performance embedded CPU module with a powerful ARM9 core processor. This compact-sized Eddy module provides wireless network, Bluetooth Specification v2.0 with EDR (Enhanced Data Rate), connection allowing developers and OEMs to easily design their own customized device for embedded industrial hardware. To connect to external devices it has 19bit address and 16 bit data bus interface, PHY interface for Ethernet connectivity and 56 programmable GPIO pins.

Shorten the Development Time and Save Budget
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Development Kit
Eddy Development Kit provides an easy testing and evaluation platform for Eddy applications. Before integrating Eddy into the field, applications can be programmed and tested on the development board. The power, ready, status LEDs on the development board provide a visual guide to understanding the field, applications can be programmed and tested on the platform for Eddy applications. Before integrating Eddy into the field, applications can be programmed and tested on the development board. The power, ready, status LEDs on the development board provide a visual guide to understanding the operating status of Eddy.

Provides SDK, API and Source Codes
Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit) API (Application Programming Interface) and source codes, developers can program their own socket/socket communication applications.

LemonIDE SDK
LemonIDE™ is an Eclipse based developing 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++ compiler, source code editor, remote debugging and remote monitoring can be designed with this tool.

Provides Windows Utility
SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools help the user to monitor accurately and administrate their designed products.

Feature
- Bluetooth Specification v2.0 + EDR Compliant (Class I)
- Maximum Communication Distance: 100m
- ARM926EJ-S CPU (8MB Flash, 32/64 MB SDRAM)
- Supports 10/100 Ethernet PHY (Auto MDI/MDIX) with 4 channel UART
- Pin Header Interface (144 pins)

Programmable GPIO (56 pins)
- Supports Various Peripherals: I2C, SPI, UART, MCI, ADC
- Two USB Hosts, One USB Device Provided
- Embedded Linux Included
- Supports Eclipse based SDK (LemonIDE)
- HW/SW Development Kit Provided
- Operating Temperature: -20 ~ 85°C

Specifications
- UART: 4 ports
- Power Requirement: 3.3V (Maximum 200mA)
- Dimension: 45.2 (W) x 28 (L) x 8.8 (H) mm
- Weight: 14.5g

Bluetooth
- Specification: v2.0 + EDR
- Transmission Power: +18dBm
- Maximum Distance: 100m (Open Area)

Network
- Protocol: TCP, UDP, Telnet, ICMP, DHCP, HTTP, FTP, SNMP, SSH, SSL
- Ethernet: 10/100Mbps MAC / PHY

Software
- OS: Embedded Linux
- Management Tool: PortView
- Development Tool: LemonIDE, SDK
- Firmware Update: JTAG, USB, Debug Port

Operating Environment
- Operating Temperature: -20 ~ 85°C
- Storing Temperature: -20 ~ 85°C
- Humidity: 5 ~ 95% Non-Condensing

Certifications
- KC

Ordering Information
Eddy-CPU/BT v2.1
- Eddy-CPU v2.5, BT Module v2.1, U.FL to RP-SMA Cable, Antenna, CD (Manual and Utility)

Dimension (BT Module Only)
Eddy-CPU/ZB v1.0

**Overview**

Eddy-CPU/ZB v1.0 is an Eclipse-based development environment that provides a GUI enables easy development of applications and firmware running on Linux. In addition, all operations related to GNU C/C++ compiler, source code editor, remote debugging and remote monitoring can be designed with this tool.

**Operating System**

Eddy allows you to upload and execute customized user applications. With provided SDK, Software Development Kit, API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

**ZigBee**

ZigBee is a low-power, low-cost, high-performance, low-data-rate wireless solution that supports ZigBee Pro compliant networks. It is designed to be easily deployed in applications that require low-latency, low-energy consumption, and real-time data transfer.

**Provides SDK, API and Source Codes**

Eddy provides access to the application layer of ZigBee, allowing developers to easily create and test their own ZigBee applications. The ZigBee module supports multiple network topologies, enabling flexibility in deployment scenarios.

**Specifications**

- **Processor**: ARM926EJ-S (400MHz)
- **Memory**: 8MB Flash, 32/64MB SDRAM
- **External Interface**: 19-bit Address / 16-bit Data Bus, 10/100 Base-T (MAC PHY, Auto MDI/MDIX)
- **GPIO**: Maximum 56 Programmable pins
- **Interface**: ADC (4 channel 10 bit), SPI, TWI, USB 2.0, Full-Speed, NAND Flash Attachable, Serial 4 ports (Maximum 921.6 kbps)
- **UART**: 4 ports
- **Power Requirement**: 3.3V (Maximum 200mA)
- **Dimension**: 45.2 (W) x 28 (L) x 8.8 (H) mm
- **Weight**: 14.5g
- **Maximum Communication Distance**: 100m
- **Maximum Communication Speed (ZigBee)**: 250kbps
- **ARM926EJ-S CPU (8MB Flash, 32/64 MB SDRAM)**
- **Supports 10/100 Ethernet PHY (Auto MDI/MDIX) with 4 channel UART**
- **Supported Communication Protocols**: TCP, UDP, Telnet, ICMP, SSH, SSL, HTTP, TFTP, SNMP, SSH, SSL, SSH
- **Supported Operating Systems**: Linux, Windows, Mac OS, Android, iOS
- **Supported Application Protocols**: ZigBee, Z-Wave, Bluetooth, BLE
- **Supported Topologies**: Point to point (1:1), star (1:N), tree topology and more
- **Supported Security Protocols**: AES
- **Supported Memory**: 8MB Flash, 32/64MB SDRAM
- **Supported Interfaces**: UART, SPI, TWI, USB 2.0, Full-Speed, NAND Flash Attachable, Serial 4 ports (Maximum 921.6 kbps)

**Certifications**

- **KC**
- **Eddy-CPU v2.5, ZB Module v1.0, U.FL to RP-SMA Cable, Antenna, CD (Manual and Utility)**

**Ordering Information**

- Eddy-CPU/ZB v1.0
- Eddy-CPU v2.5, ZB Module v1.0, U.FL to RP-SMA Cable, Antenna, CD (Manual and Utility)

**Dimension (ZigBee Module Only)**

- **Height**: 28.0mm
- **Width**: 43.2mm
- **Depth**: 45.2mm
Eddy-DK v2.1

Overview
Eddy-DK (Development Kit) is a development kit for Eddy-CPU series, a high-performance embedded CPU module with a powerful ARM9 core processor. Instead of spending expensive budget and time to design the base board for Eddy-CPU, this kit allows developers to easily design their own customized device for embedded industrial hardware and test it. It provides most of peripheral connectors with LCD and switches to check the operations of Eddy-CPU.

Provides SDK, API and Source Codes
Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

LemonIDE SDK
LemonIDE™ is an Eclipse based developing 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 designed with this tool.

Provides Windows Utility
SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools helps the user to monitor accurately and administrate their designed products.

Feature
- Supports Eclipse based SDK (LemonIDE)
- HW/SW Development Kit Provided
- Windows Utilities Provided
- Supports GUI Developing Environment
- Supports C/C++ Compiler
- Source Code Editor Provided
- Supports Remote Debugging and Monitoring
- Operating Temperature: 0 ~ 50°C

Specification

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAND Flash</td>
<td>256MB, 8 bit</td>
</tr>
<tr>
<td>SD Card Connector</td>
<td>Push Type, Maximum 16GB (12Mbps)</td>
</tr>
<tr>
<td>USB Connector</td>
<td>USB 2.0 Full-Speed (12Mbps), 2 hosts, 1 device port</td>
</tr>
<tr>
<td>LCD Module</td>
<td>128 x 64 Text LCD</td>
</tr>
<tr>
<td>Keys</td>
<td>4 x 4 Matrix</td>
</tr>
<tr>
<td>Battery</td>
<td>3V Lithium Battery (CR2032)</td>
</tr>
<tr>
<td>LED</td>
<td>Power, Ready, 20 Programmable I/O, Console and Serial Tx/Rx, Rx/Rx</td>
</tr>
<tr>
<td>Switches</td>
<td>Serial/SPi16 Selection, RS422/485 Selection, DIO. Common VCC or GND Selection, Programming</td>
</tr>
<tr>
<td>Serial Ports</td>
<td>Two RS232 (DE-09P), Two RS422/485 (Terminal Blocks) - RS422 or RS485 Selectable by SW</td>
</tr>
<tr>
<td>Console Port</td>
<td>DE-09P (DB9 Male)</td>
</tr>
<tr>
<td>Ethernet Ports</td>
<td>Two RJ45</td>
</tr>
<tr>
<td>ICE Port</td>
<td>Debugging or Flash Programming</td>
</tr>
<tr>
<td>Reset</td>
<td>Factory Default or Warm Boot</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>9 ~ 48 VDC</td>
</tr>
<tr>
<td>Dimension</td>
<td>240 (W) x 180 (L) x 18.3 (H) mm</td>
</tr>
</tbody>
</table>

Operating Environment
- Operating Temperature: 0 ~ 50 °C
- Storing Temperature: -20 ~ 70 °C
- Humidity: 5 ~ 95% Non-Condensing

Ordering Information
Eddy-DK v2.1 Eddy-CPU v2.5 Module, Eddy-DK v2.1 Board, LAN Cable, Power Adapter, USB Cable, Serial Cable, CD (SDK, Manual and Utility)
**Eddy-S4M-DK v2.1**

**Overview**

Eddy-S4M-DK (Development Kit) is a development kit for Eddy-S4M, a high-performance embedded CPU module with a powerful ARM® core processor. Instead of spending expensive budget and time to design the base board for Eddy-S4M, this kit allows developers to easily design their own customized device for embedded industrial hardware and test it. It provides most of peripheral connectors with LCD and switches to check the operations of Eddy-S4M.

**Provides SDK, API and Source Codes**

Eddy allows you to upload and execute customized user applications. With provided SDK (Software Development Kit), API (Application Programming Interface) and source codes, developers can program their own socket/serial communication applications.

**LemonIDE SDK**

LemonIDE™ is an Eclipse based developing 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 designed with this tool.

**Provides Windows Utility**

SystemBase provides powerful and free utilities to monitor and test the final products over the network or the serial interface designed by the users. Management utilities include, COM port Redirector, PortView™ and TestView™. These tools helps the user to monitor accurately and administrate their designed products.

**Feature**

- Supports Eclipse based SDK (LemonIDE)
- HW/SW Development Kit Provided
- Windows Utilities Provided
- Supports GUI Developing Environment
- Supports C/C++ Compiler
- Source Code Editor Provided
- Supports Remote Debugging and Monitoring
- Operating Temperature: 0 ~ 50°C

**Specification**

**Hardware**

- **Serial Ports**: Two RS232 (DE-09P), Two RS422/485 (Terminal Blocks) - RS422 or RS485 Selectable by SW
- **SD Card Connector**: Push Type, Maximum 16GB (12Mbps), MMC / SD Card / MCU Supported
- **ADC**: Light Sensor
- **USB Connector**: USB 2.0 Full-Speed (12Mbps), 2 hosts, 1 device port
- **LED**: Power, Ready, 34 Programmable I/O, Console and Serial TxD, RxD
- **Switches**: Power Supply, Enable Terminal Resistor at RS422/485, GPIO Input Test (Off: Low, On: High)
- **Console Port**: DE-09P (DB9 Male)
- **Ethernet Port**: RJ45
- **JIG Connector**: Two 2 x 23 pin Sockets (Checking Problems when Connected to JIG Board)
- **Expansion Header**: 2 x 22 pin Header (Test Eddy-S4M GPIO)
- **Reset**: Factory Default or Warm Boot
- **Power Requirement**: 5 VDC
- **Dimension**: 160 (W) x 120 (L) x 18.3 (H) mm

**Software**

- **OS**: Embedded Linux
- **Management Tool**: SNMP, Web Browser, PortView
- **Development Tool**: LemonIDE, SDK

**Network**

- **Protocol**: TCP, UDP, Telnet, ICMP, DHCP, HTTP, TFTP, SNMP, SSH, SSL
- **Ethernet**: 10/100Mbps MAC / PHY

**Operating Environment**

- **Operating Temperature**: 0 ~ 50°C
- **Storing Temperature**: -20 ~ 70°C
- **Humidity**: 5 ~ 95% Non-Condensing

**Ordering Information**

Eddy-S4M-DK v2.1, Eddy-S4M v2.5 Module, Eddy-S4M-DK v2.1 Board, LAN Cable, Power Adaptor, USB Cable, Serial Cable, Jumper, CD (SDK, Manual and Utility)