

SerialGate

(SG-1010Z/ALL, Eddy-ZigBee Module)

Catalog Material

2012.12. 05

SG-1010Z/ALL

Image



1 Port Serial to ZigBee Device Server

Highlights

- Support IEEE standards: IEEE 802.15.4 ZigBee PRO Standard
- Modulation: DSSS
- Supports AES
- Speed: Max 250Kbps
- 10/100Mbps Ethernet Port
- Operating Temperature suitable for industrial use (-40~85°C)
- RS232/RS422/RS485 Serial Port *1
RS232(DB9), RS422/RS485(Terminal Block)
- COM Port Redirector
Extended setting and monitoring through PortView™
- Firmware Update using Web, TFTP, Telnet
- Management through Web, Telnet, SSH, SNMP, PortView™
- Various configuration settings available
(Developers can modify S)
- LED showing Link, LAN & Serial status
- DIN rail can be installed.

Overview

SG-1010Z/ALL is a wireless serial device server, enabling serial devices to communicate on wireless LAN. With IEEE 802.15.4 ZigBee PRO standard, it can achieve maximum speed of up to 256Kbps. Specialized security features make SG-1010Z/ALL a feasible solution in industrial automation, manufacturing automation, medical devices, point of sale, any M2M2 or SCADA application with serial connectivity. Included Serial Port Emulator allows easy integration with existing serial communication applications.

Connect Serial Devices to Ethernet

Easily connect RS-232/422/485 serial devices to your network using the SG-1010Z/ALL

which can be conveniently placed next to your serial equipment.

Manageability

Configuration and management are quickly done by accessing the internal, secure web server or with PortView™ a Windows-based utility offers powerful tools for SerialGate device servers.

Mounting Flexibility

Integrated “mounting ears” affixed to the side enables easy and secure placement on any surface or to install on a DIN rail using a mounting bracket.

Powerful Management Utilities

SystemBase provides powerful and free utilities. COM port redirection software creates virtual COM ports so your application can talk to your serial devices over the Ethernet without any customization. PortView™ is a real-time management application that simplifies port status monitoring, diagnostics and managing devices attached to your SerialGate ports. TestView™ is a Windows based program used to test and evaluate the communication performance and stability of serial and LAN ports on SerialGate device servers.

Specification

Network

Communication	IEEE 802.15.4 and ZigBee
Speed	Max 250Kbps
Output	Power Up to 4.5dBm
Range	Up to 100 meters (in open areas)
Modulation	DSSS
Receive Sensitivity	-97dBm
Frequency	2.394GHz ~ 2.507GHz
Security	AES
Antenna	ANT 2.4Ghz 3DB, 1 x U.FL antenna

Protocols	TCP, UDP, Telnet, ICMP, DHCP, TFTP, HTTP, SNMP, SSH, SSL
LAN Port	10/100Mbps RJ45 Port x 1
Network	Static IP, DHCP

Serial

Port	1 Port Serial
Interface	RS232(DB9), RS422/485 (Terminal Block)
Speed	Max 921.6 Kbps
signals	RS232: TX, RX, DTR, DSR, CTS, RTS, DCD RS422: TX+, TX-, RX+, RX- RS485: TRX+, TRX,-
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
Management	PortView™, Web, Telnet
Setting	Web, Telnet
Security	SSH
COM Port Redirection	COM Port Redirector for Windows 2000 / XP / 2003 / Vista / 7 / 2008

Hardware

Processor	ARM926EJ-S(400MHz)
Flash Memory	8 MB
SDRAM	32 MB
LED	Ready, Serial, ZigBee
Power Input	DC 12V Adapter, Terminal Block Power Consumption: 2W
Dimensions	2.63(W) * 3.43(L) * 0.96(H) in 66.8(W) * 87.1(L) * 24.5(H) mm
Weight	6.5 oz / 186 g

Environmental

Dimension	-40°C ~ 85°C
Weight	-55°C ~ 125°C
Power	5 ~ 95% Non-condensing

Approvals

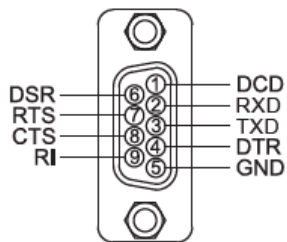
CE, FCC, KC

Ordering Info

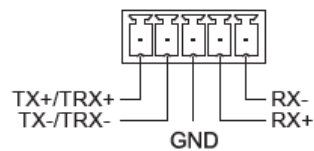
SG-1010Z/ALL	1 port RS232/422/485 to ZigBee & Ethernet Serial Device Server, DC9~30V Input Power
Package Contents	SerialGate, Direct LAN Cable, 3dBi antenna Power Adapter (DC12V), CD(Manual & Utility)

Pin Assignment

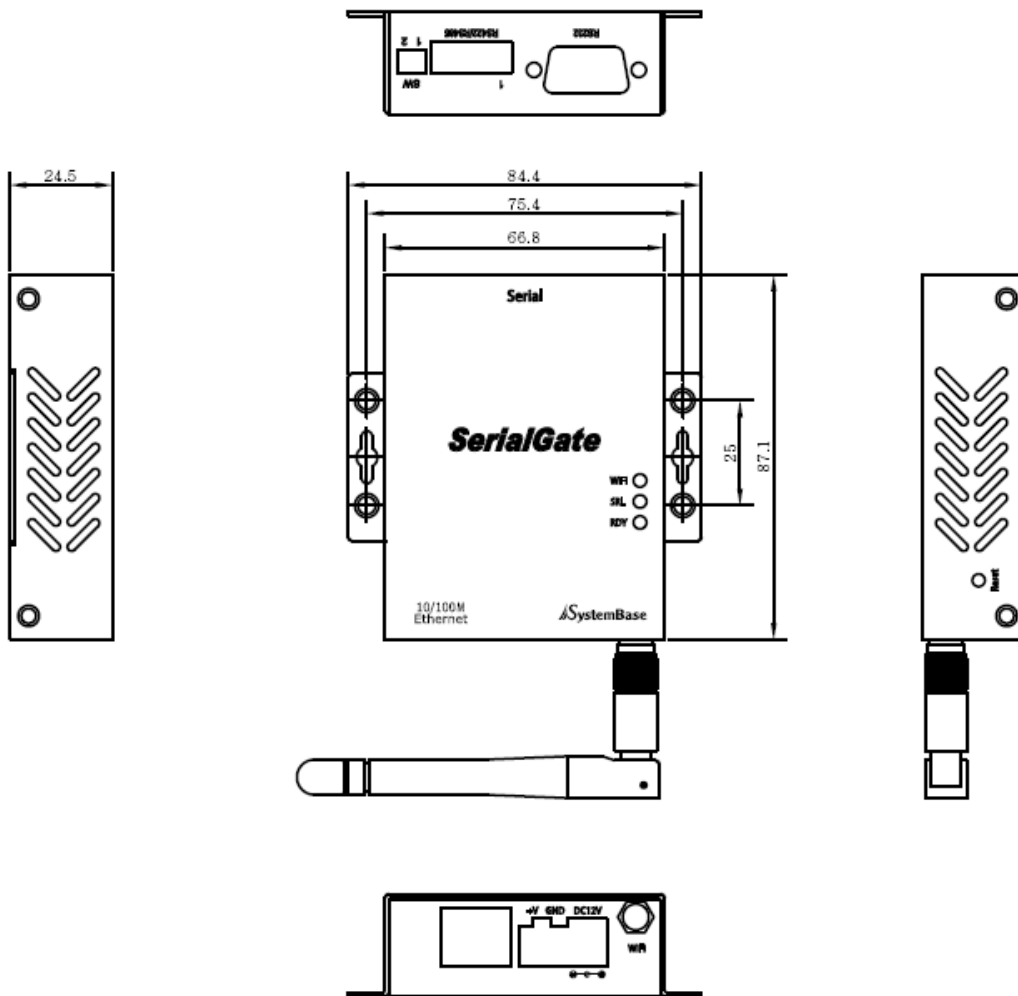
DB9M/RS232



Terminal Block RS422/485



Dimension



Eddy-CPU/ZigBee v1.0



Features

- Support IEEE standards: IEEE 802.15.4 ZigBee PRO Standard
- Modulation: DSSS, Supports AES & Shield CAN
- Speed: Max 250Kbps, Interface: RS232(TTL Level)
- Operating Temperature Suitable for Industrial Use (-40°C ~ 125°C)
- 32bit ARM9 CPU core at 400MHz / 8MB DATA FLASH / 32MB SDRAM
- Pin Header Interface (144 pin)
- Operated by Embedded Linux
- Support USB2.0 host interface
- Supported by Dev Kit including SDK, API
- Portable and mini-size to fit into any hardware design.
- Operation Temp: -40 ~ 85 °C

Overview

Using IEEE802.15.4 ZigBee Pro Standard mode to communicate with Serial Interface, Eddy-ZigBee V1.0 is ZigBee module which is one of Eddy-CPU v2.5 series used with extended connector. Its module size and Pin Assignment for Interface Pin are designed to make it compatible with our Eddy-CPU v2.5 series and SG-1010/ALL, SG-1020/ALL. To connect with Eddy-CPU v2.5 series, use RS-232 Interface(TXD3, RXD3, CTS3, RTS3).

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

Processor	ARM926EJ-S(400MHz)
Memory	8 MB 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

ZigBee Characteristics

Communication	IEEE 802.15.4 and ZigBee
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Output	Power Up to 4.5dBm
Range	Up to 100 meters (in open areas)
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Data Bits	5, 6, 7, 8
Stop Bits	1, 2
Parity	None, Even, Odd
Flow Control	RTS/CTS, XON/XOFF

Environmental

Operating Temp	-40°C ~ 85°C
Operating Voltages	3.3V +- 5% I/O Supply Voltage

Approvals

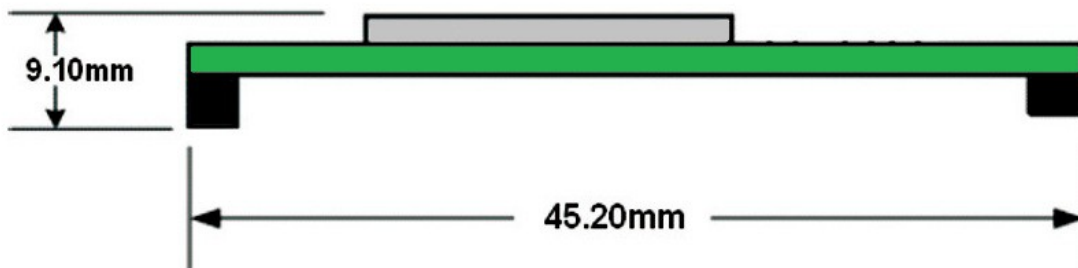
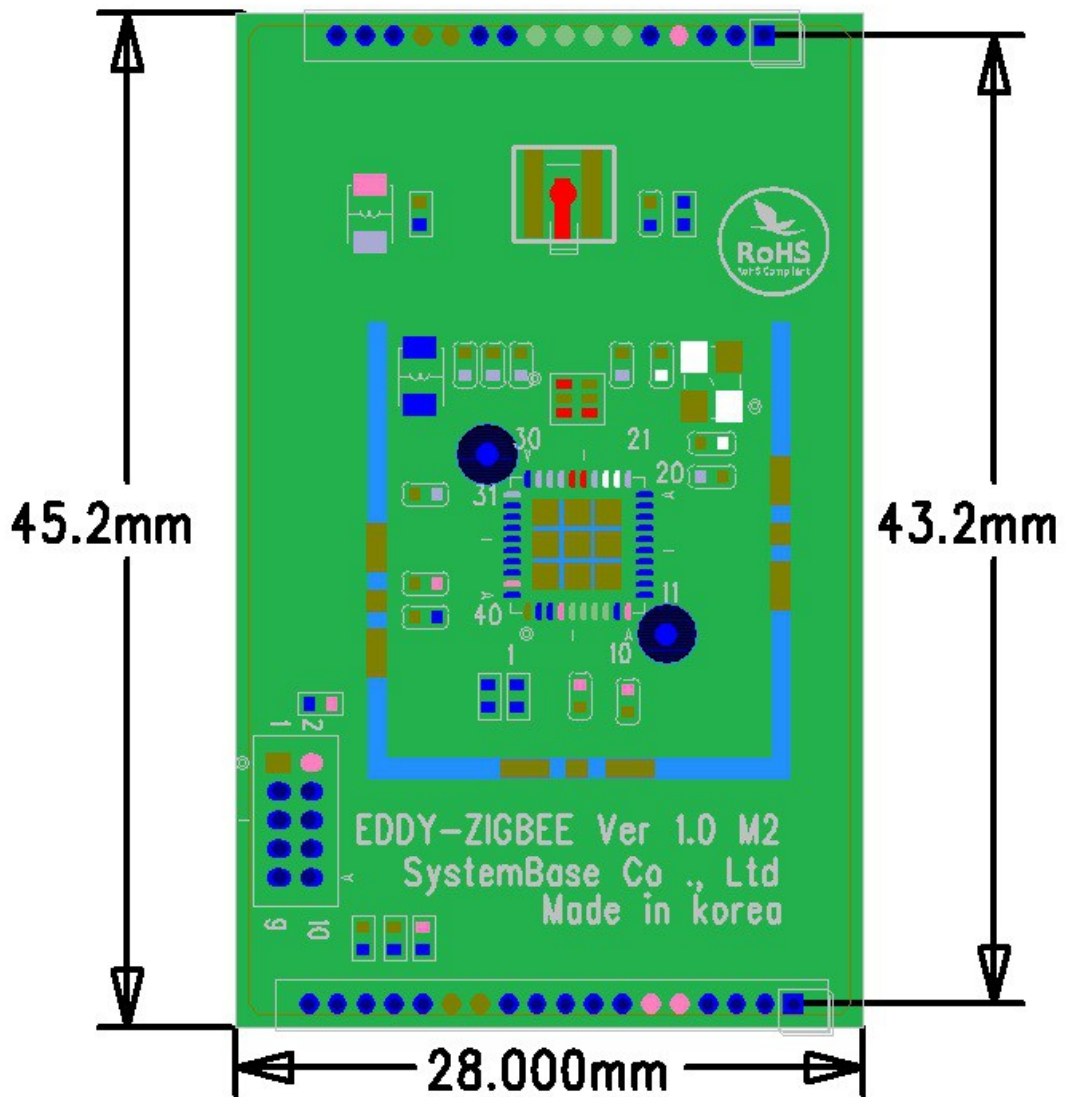
CE, FCC, KC

Ordering Information

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Eddy-CPU/ZigBee v1.0	Embedded CPU ZigBee Module
Package Contents	Eddy-ZigBee v1.0 Module U.FL to RF-SMA cable, Antenna & Utilities/Documents CD

Dimension (ZigBee Module Only)



Unit : mm