

ZigBee Wireless Networking Solutions

ZigBee OEM DIP/SMD Modules

ZigBee Serial Adapter

ZigBee USB Adapter



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SENA
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Sena Technologies expanding the wireless and wired world with a comprehensive offering of hardware, software, management tools, and connected services for machine-to-machine (M2M) communication and our product portfolio is broad and diverse, allowing it to accomplish things for customers that other cannot. SENA partners with Distributors, resellers, system integrators and original equipment manufactures (OEMs), and vertical markets worldwide to offer wired and wireless solutions that meet the unique needs of the following markets: IT/Telecom, Retail/POS, Industrial plant management, Residential home control, Commercial Building control, Personnel health care, Energy management & Efficiency, Access control and Security.

The value of SENA solutions is proven in millions of network-enabled devices around the world that add intelligence to business. Discover for yourself the benefits of Sena products. We provide a lifecycle of services to help you plan, design, implement, and operate your device network in today's rapidly changing environment.

Additional Sales and Product information are only moments away.

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Systematic Quality Assurance

To ensure the best quality of products, Sena maintains the utmost quality assurance system throughout the entire life cycle of products by conducting various types of tests in each stage of R&D, production, inspection, and technical support before product deployment.

Technical Support

With years of rich field experiences in various industries, Sena is committed to continuously provide the highest quality of pre-sales and post-sales support for VAR/SI's and end-users. Sena provides various channels for communication with customers through e-mail, telephone and online support system. At our website, we provide:

- Product manual and technical material
- Case studies and white papers
- The latest software / firmware
- Knowledge database
- My Q&A section

Sena is dedicated to continuously develop all of its customer-support practices to enhance the latest technologies, and demands of its customers.



Product Overview

ZigBee OEM DIP/SMD Modules

The ProBee-ZE Series is short range and long range ZigBee OEM SMD/DIP modules with integrated ZigBee core and radio/antenna circuits together with high level software library. So OEM manufacturers can easily and cost effectively integrates ZigBee functionality into target products in timely manner. They are designed to meet specific requirements of low cost and low power wireless applications such as Home Automation, Smart Energy, Health care, Building Automation and Telecom Services by adopting the ZigBee technology.

- Supports ZigBee 2007/ ZigBee Pro stack
- Integrated 2.4GHz, IEEE 802.15.4-compliant coprocessor
- Supports UART signals
- Supports Firmware upgrade and modem AT command set
- Easy to use windows configuration tool available
- ZE10 is long range ZigBee OEM DIP Module and ZE20S is short range SMD/DIP module
- ZE10 module has 4 Analog Inputs, 13 Digital Inputs/Outputs and ZE20S has 6 Analog Inputs, 17 Digital Inputs/Outputs
- Compact Size
 - ZE10 DIP Type: 51.7 mm x 23.0 mm x 11.15 mm
 - ZE20S SMD Type: 31.6 x 18.6
 - ZE20S DIP Type: 32.8 x 21.0
- Working distance (In an open field)
 - ProBee-ZE10: Class1, Norm. 700m, up to 1.6km using 5 Dipole antenna
 - ProBee-ZE20S: Class2, Norm. 150m, up to 300m using 5 Dipole antenna



ProBee-ZE20S



ProBee-ZE10

ZigBee Serial Adapter

The ProBee-ZS10 is an ZigBee RS232 Serial Adapter with integrated ZigBee core and radio/antenna circuits. It is designed to meet specific requirements of low cost and low power wireless applications such as Home Automation, Smart Energy, Health care, Building Automation and Telecom Services by adopting the ZigBee technology certified by ZigBee alliance based on ZigBee 2007 and ZigBee Pro standard. The ZS10 provides high performance and robust data transfer capability for wide range of applications.

- Supports ZigBee 2007/ ZigBee Pro stack
- Integrated 2.4GHz, IEEE 802.15.4-compliant coprocessor
- Supports RS232 serial communication with up to 115 kbps baud rate
- Supports Firmware upgrade and modem AT command set
- Easy to use windows configuration tool available
- Size
 - 73.9 x 31 x 16(mm) / 2.9 x 1.2 x 0.6(in) (No battery pack)
 - 73.9 x 31 x 19.5(mm) / 2.9 x 1.2 x 0.8(in) (with standard battery pack)
 - 73.9 x 31 x 31.4(mm) / 2.9 x 1.2 x 1.2(in) (with extended battery pack)
- Working distance (In an open field)
 - ProBee-ZS10: Class1, Norm. 700m, up to 1.6km using 5 Dipole antenna



ProBee-ZS10

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ZigBee USB Adapter





The ProBee-ZU10 is an ZigBee USB adapter with integrated ZigBee core and radio/antenna circuits together with high level software library. It is designed to meet specific requirements of low cost and low power wireless applications such as home automation and smart energy by adopting the ZigBee technology certified by ZigBee alliance based on ZigBee 2007 and ZigBee Pro standard. The ZU10 provides high performance and robust data transfer capability for wide range of applications.

- Supports ZigBee 2007/ ZigBee Pro stack
- Integrated 2.4GHz, IEEE 802.15.4-compliant coprocessor
- USB 2.0 interface
- Supports Firmware upgrade and modem AT command set
- Easy to use windows configuration tool available
- Supports Windows XP/Vista/7 (32/64bit)
- Size: 70.9 x 22 x 10(mm)
- Working distance (In an open field)
ProBee-ZU10: Class1, Norm. 700m, up to 1.6km using 5 Dipole antenna



ProBee-ZU10

SENA ProBee Products Comparison

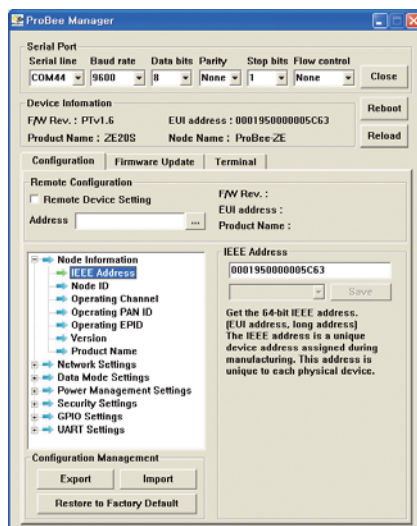
Feature	ProBee-ZE10 	ProBee-ZE20S 	ProBee-ZS10 	ProBee-ZU10 
Interface type	UART	UART	RS232	USB
DIP Switch	NO	NO	YES	NO
GPIO	4 Analog Inputs, 13 Digital input/outputs	6 Analog Inputs, 17 Digital input/outputs	NO	NO
Max Communication Distance	1.6 km	300 m	1.6 km	1.6 km
ProBee Manager	YES	YES	YES	YES
Remote Configuration	YES	YES	YES	YES
Remote Firmware upgrade	YES	YES	YES	YES
Number of End devices per Coordinator	10	20	10	10
Number of End devices per Router	10	20	10	10
Number of Router per Coordinator	Unlimited	Unlimited	Unlimited	Unlimited

Accessories & Software Support

Accessories

Accessories	Description		Applicable Models
Cable Adapters	SENA offers various antennas the extend wireless communication range	 SAT-G01R  DAT-G01R  DAT5-G01R	ProBee-ZE10 ProBee-ZS10 ProBee-ZU10 ProBee-ZE20S
		SAT-G01R: 1dBi Stub Antenna, RP-SMA Plug, Right-hand Thread DAT-G01R: 3dBi Dipole Antenna, RP-SMA Plug, Right-hand Thread DAT5-G01R: 5dBi Dipole Antenna, RP-SMA Plug, Right-hand Thread	
Antenna Extension Cables	The antenna extension cables can be used to extend the length between a device and antenna.	 SEC-G01R  UEC-G01R	ProBee-ZE10 ProBee-ZS10 ProBee-ZU10 ProBee-ZE20S
		SEC-G01R: 15cm RPSMA Antenna Extension Cable, Right-hand Thread UEC-G01R: RP-SMA to U.FL cable (12cm)	ProBee-ZE10 ProBee-ZE20S
Power supplies and others	SENA offers various power supply options to meet the needs at different power circumstances	 DPA-G01  UPA-G01  OPA-G01  BPC-G02  BPC-G03  FM9GD-G01	ProBee-ZS10
		DPA-GA01: DC Power supply UPA-G01: USB Power supply OPA-G01: External Power Adaptor - Includes one of four (EU, America, UK, Australia) BPC-G02: Standard Battery pack BPC-G03: Extended Battery Pack FM9GD-G01: DB9 Female to Male Gender Changer	

ProBee Manager



ProBee Manager is used to set or get configurations of the ProBee ZE10, ZE20S, ZS10 and ZU10 products. This PC utility helps that a user can configure several setting values of local node and remote node easily without a terminal program. It is possible to export current configuration and import it to other nodes. It is also possible to restore to factory default configuration. It provides users with functions to upgrade firmware of not only local node but also remote node and clone the firmware of local node to remote node.

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