



Wireless Modules Networking Things



## ZigBit™ Ethernet Gateway

Bridging Wireless Sensor Networks and Ethernet

The ZigBit Ethernet Gateway serves as a bridge between the ZigBee-based Wireless Sensor Networks (WSNs) and the IP-based enterprise networks. The ZigBit Ethernet Gateway becomes an essential component of a data acquisition system by providing connectivity with industrial LANs and Internet. The ultimate value of WSN is in the data collected from sensors; the gateway helps transfer it over the IP network and makes it readily available to a large number of users. The gateway can also be used to connect disparate ZigBee networks via a wired line, thus extending the overall coverage.

### Benefits

- Wide range of industrial and commercial applications
- Worldwide license-free operation
- Long range
- Easy-to-integrate
- Weatherproof case
- Compact, light weight
- Low cost
- Self-healing mesh networking



### Key Features

- IEEE802.15.4/ZigBee Compliant
- Based on latest Atmel chipset
- High RF sensitivity (104 dBm)
- Easy commissioning tools
- Powerful network management tools
- AT-command set
- IP65-rated case
- LED indicators



Actual Size

### Application Areas



Building automation & monitoring



Automated meter reading (AMR)



HVAC monitoring & control



Industrial monitoring



Predictive maintenance



Asset tracking

### ZigBee 2006 Certified Platform

At the heart of the Ethernet Gateway is the ZigBit 802.15.4/ZigBee module, based on the latest Atmel chipset that consist of the popular ATmega 1281 MCU and the new Atmel AT86RF230 RF transceiver. The AT86RF230 boasts -101dBm of Rx sensitivity and up to +3dBm of Tx power. This combination, called the "link budget," is related to its range of operation. The difference in link budget – just 9 dBm – nearly triples its range. Thanks to the outperforming link budget, the range of AT86RF230 is almost 3 times that of its competitors. The ZigBit module packs these impressive characteristics into less than a half square inch of space.

### Software / Commissioning Tools

As a provider of both hardware and software, MeshNetics bundles comprehensive commissioning tools with the ZigBit Ethernet Gateway. The users can easily set up the gateway, and start managing the WSN via Ethernet. The WSN and IP network management is done using the set of AT-Commands. Each Ethernet Gateway includes accessories, software and documentation. The Ethernet Gateway provides the following key functionality:

- Includes powerful WSN commissioning tool, featuring easy-to-use AT-Commands
- Configures and re-configures the network
- Doubles as WSN coordinator or router
- Allows efficient network monitoring

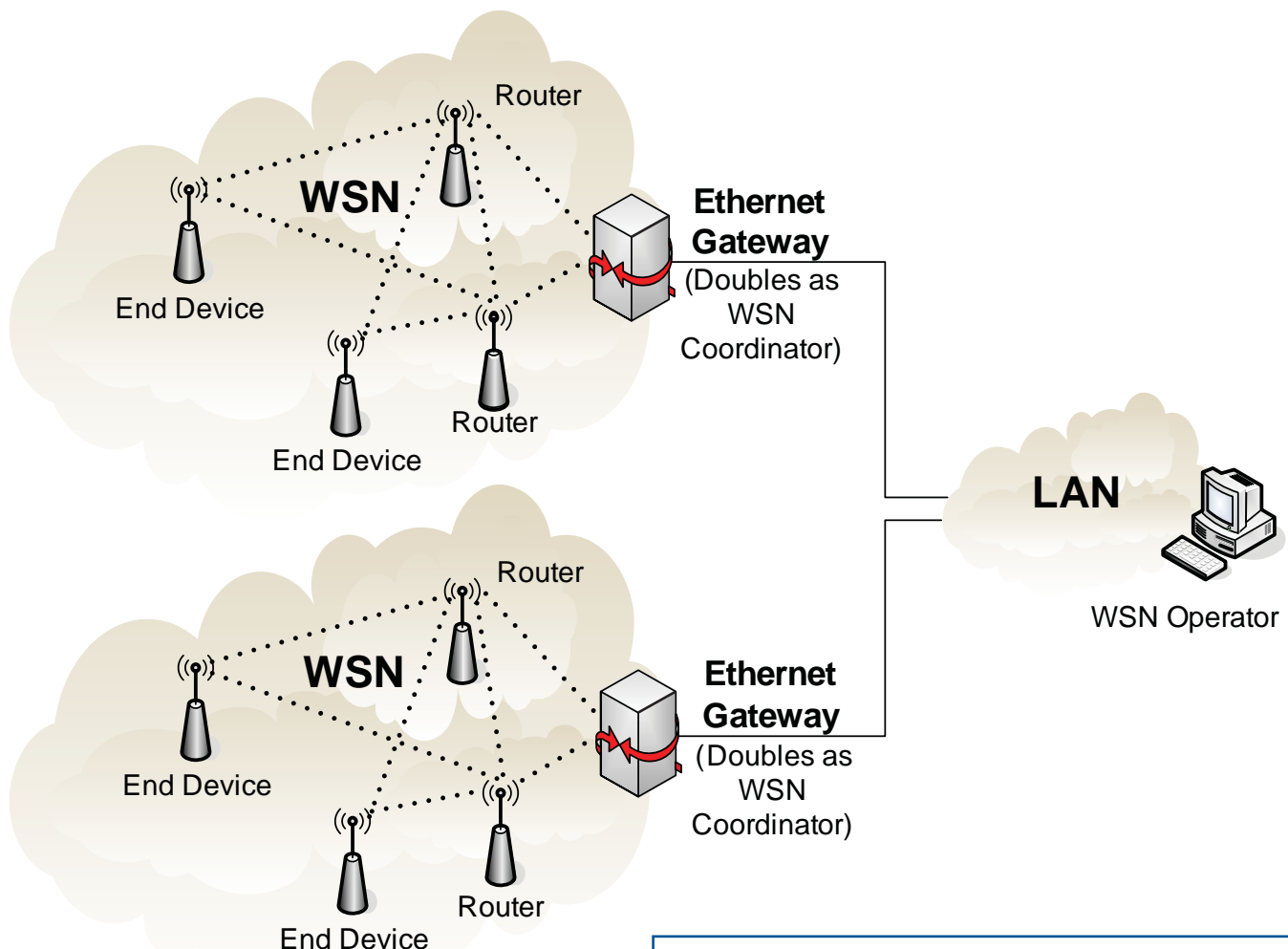
### Competent Support

Over the years, MeshNetics has accumulated a unique range of experience in hardware, firmware and software design and development. This one-of-a-kind combination of experience-based knowledge enables Meshnetics to provide efficient support for both hardware and software-related questions. We also extend our support by offering professional customization services to make our products best fit clients' special application needs. As an IP owner, MeshNetics offers superior technical support on all its software products.

### Preliminary Specifications

Parameter	Value
Operating Band	2.400 - 2.483 MHz
Power Supply	85-264V, 50/60 Hz AC
Antenna	2.4 GHz external antenna
Ethernet	10/100 Mbps
Link Budget	104 dB
RF Current Consumption, RX	19 mA
RF Current Consumption, TX	18 mA
Operating Temperature	-40°C to +70°C
Dimensions	122 x 37 x 120 mm

### Functional Diagram



### Ordering Information

Part Number: EGW-A1281  
Description: 2.4GHz ZigBee™/Ethernet Gateway

Distributed by:

### MeshNetics

Russia:  
9 Dmitrovskoye shosse  
Moscow 127434 Russia  
Tel.: +7 (495) 725-8125  
Fax: +7 (495) 725-8116  
E-mail: info@meshnetics.com

United States:  
1800 112th Ave. NE, Ste. 270-E,  
Bellevue, WA 98004-2961 USA  
Tel.: +1 (909) 512-MESH, (425) 452-1001  
Fax: +1 (563) 405-2168  
E-mail: info@meshnetics.com