3Egreen technology Inc.

BGW01 Series

Product Brief

Tiny BLE4.1 to Ethernet Gateway

Product Description

BGW01 **BLE to Ethernet Gateway** is a low cost, small form factor that provides reliable wireless data communication with Ethernet to over BLE4.1 networks.
It enables robust BLE central controls up to **10** simultaneous connections with BLE slave devices like sensors to be built with very low total BOM costs' solutions for smart-home or Beacons' management application .

Feature :

- One Micro USB 5V Power input
- One RJ45 Ethernet Connector
- Bluetooth 4.1 compliant Support of Up to 10 Simultaneous Connections
- Independent Buffering for BLE Gateway Allows Large Numbers of Multiple Connections
- *Bluetooth* RF Performance : Class 1.5 TX Power Up to +10dBm
- –93 dBm Typical RX Sensitivity Improved Adaptive Frequency Hopping (AFH) Algorithm with Minimum Adaptation Time
- Provides Longer Range , including 2x Range Over Other BLE-Only Solutions
- Direct interface via TCP/IP ,fully software upgradeable via TCP/IP.
- AES128 encryption for RF communication IP Configuration and server address can be changed via TCP/IP or via UDP for the first seconds after boot up
- 10/100M Ethernet MAC with 3 LEDs to indicate Speed/Link/ACT status Ethernet PHY with IEEE 1588 PTP hardware support
- Box Dimension : 82mm x 65mm x 20mm (L x W x H)

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- FCC (Z64-2564N)/IC (451I-2564N) Grant with External Chip Antenna
- CE Certified as Summarized in the Declaration of conformity
- 10BASE-T/100BASE-TX IEEE-802.3 compliant
- Supports full-duplex and half-duplex (CSMA/CD) operation
- MDI/MDI-X cross-over support
- Automatic polarity correction and 10BASE-T signal reception

Applications

- Beacon Central Management System
- Smart Lighting BLE Control Systems
- Wireless Sensor Network Energy Management
- Smart-Home Application

Electrical Characteristics

Absolute Maximum Ratings

Parameters	Min	Max	Unit
Storage temperature	-40	+120	°C
Supply voltage VDD input to the ground	4.5	5.5	V

Recommended Operating Conditions

Test conditions: Power = 5V

Parameters	Min	Typ	Max	Unit
Ambient Operating Temperature	-20	+40	+70	°C
Supply Voltage for Power Input	4.5	5	5.5	V

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RF Characteristics

Conditions: TA = 25°C

Parameters	Condition	Min	Typ	Max	Unit
RF frequency	BLE 2.4G	2045	2400	2480	Mhz
RF frequency spacing	At antenna input, 250 Kbps		2		Mhz
RF sensitivity (high gain)	At antenna input, 250 Kbps		-93		dBm
Maximum RF input		-10			dBm
Adjacent channel rejection	@+/-1 MHz, 250 Kbps		-5		dBm
Alternate channel rejection	@+/-2 MHz, 250 Kbps		50		dBm
RSSI range	High gain mode, 250 Kbps Standard mode	-90 -87		-45 -35	dB
Maximum RF output power	At 10 dBm output power setting		10		dBm
RF output power control range		-23		10	dBm
TX gain control resolution		1			dB
TX EVM			15		%

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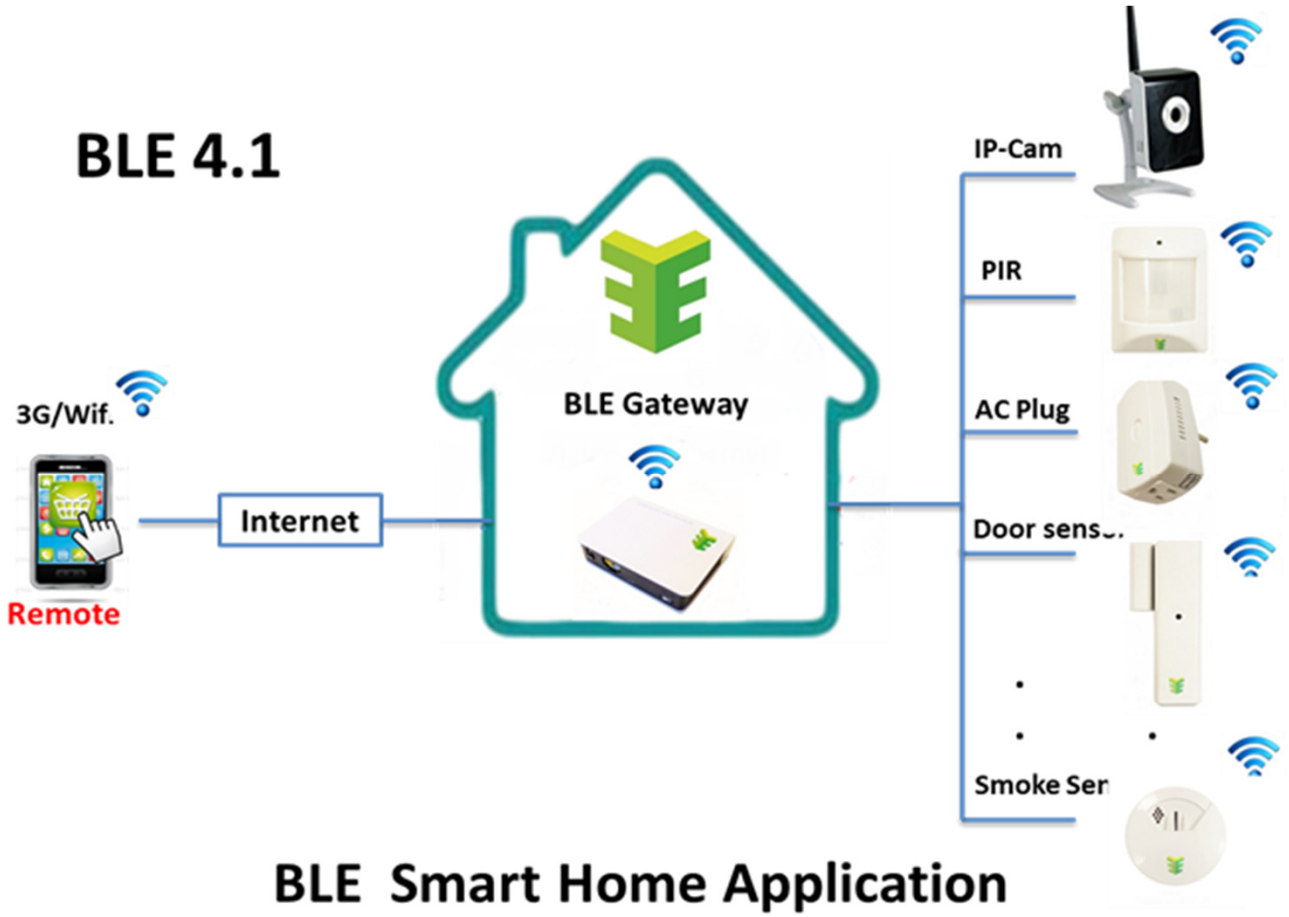
Application 1



BLE Smart Home Application

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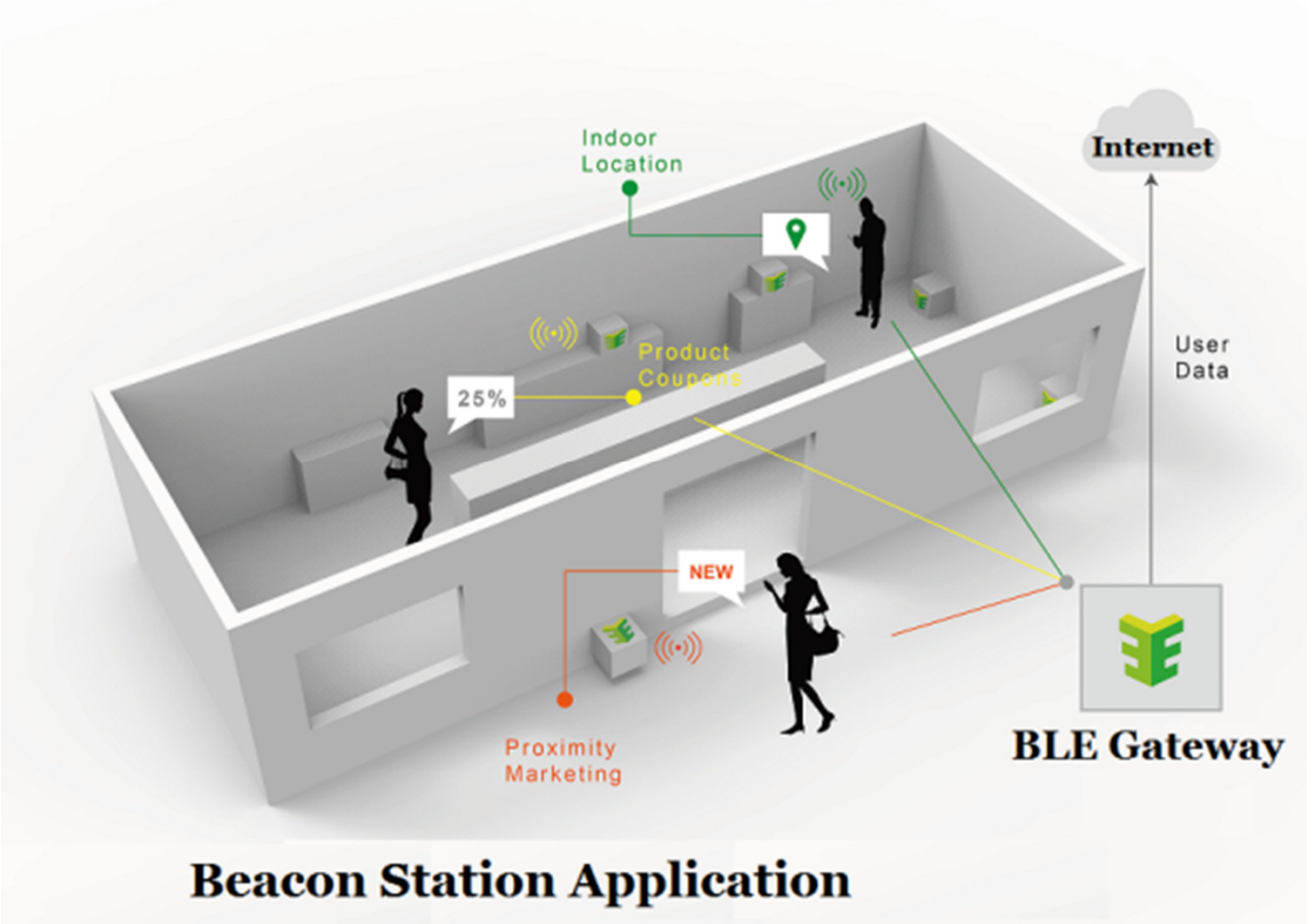
Application 2



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