



Billion SG600 R2

3G Wireless-N Smart Energy ZigBee Gateway

The Billion SG600 R2, 3G Wireless-N Smart Energy ZigBee Gateway, is a TCP/IP based 3G/ZigBee/Wi-Fi appliance designed for users to enjoy real-time power management. Integrated with ZigBee wireless technology, the SG600 R2 can communicate wirelessly with Billion ZigBee-enabled smart device, like SG3015 series meter, SG110-A Temperature / Humidity sensor, SG200 lighting controller etc.

The Billion SG600 R2 not only provides a wireless AP feature for connecting with local smart phone or notebook but also acts as a wireless client for connecting to existing Wi-Fi network for Internet service. This feature can extend the wireless coverage and reduce the wiring cost.

SG600 R2 is new generation product for Home Automation and Energy Management Ecosystem which consists of various sensors such as smart meter, power plug, smart switch, lighting controller and thermostat. The Billion SG600 R2 provides flexible and easy development platform via a well-defined bidirectional API (Application Program Interface) for system integrator and software partner to integrate their back-end solution and application software, and further to come out their own cloud service and Apps.

This 3G Wireless-N Smart Energy ZigBee Gateway pushes all the recorded data to the back-end / cloud system which were built by SI and software companies so users can remotely monitor energy consumption and manage their appliances. This solution is ideal for SI of energy management, utility projects and service providers.

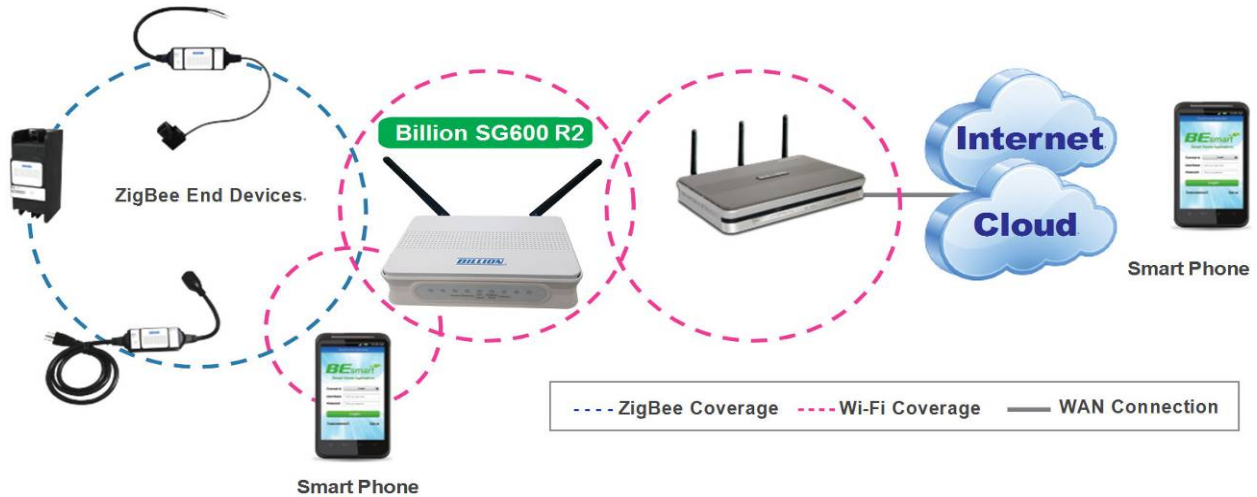
Ideal for

Residential & SOHO
I&C Users
Utility Companies

- Fully IEEE 802.15.4 and ZigBee PRO compliant
- Dual WAN – broadband and 3G connections
- 802.11n wireless AP, up to 150Mbps data rate
- Supports wireless AP mode and client mode
- Support Real Time Clock (RTC)
- WPS (Wi-Fi Protected Setup) for easy setup
- Wireless security with WPA-PSK /WPA2-PSK
- WDS repeater function
- Wireless bridge for connecting to existing wireless gateway
- Provides bidirectional API for vendors to develop their App and cloud service
- Works as part of ZigBee-based energy management solution for business partners:
 - Power utilities: solar power, wind power, etc.
 - ZigBee network system integrator and planners
 - House builders
 - Suppliers of smart energy devices in IHD, load control, and PCT
 - Sub-metering service provider

Application Diagram

The Billion SG600 R2 can be used as a wireless AP and wireless client at the same time. It can be able to collect data from ZigBee end devices via ZigBee wireless network for energy management. Meanwhile, it's able to be a wireless bridge in order to connect with existing wireless gateway.



Features & Specifications

Availability and Resilience^{*1}

- Support USB 3G Internet Access
- Dual-WAN ports (3G & Ethernet WAN)
- Auto fail-over/fail-back

Wireless Connectivity

- Compliant with IEEE 802.11n, 802.11g and 802.11b standards
- Support Wireless in AP mode for wireless enabled device access
- Support Wireless client mode on WAN side for connect to next wireless node for expand the wireless coverage
- WPS (Wi-Fi Protected Setup) for easy setup
- Wireless Security with WPA-PSK / WPA2-PSK support
- WDS repeater function support

Network Protocols and Features

- NAT, static routing and RIP-1 / 2
- Supports DHCP server & client
- Virtual server and DMZ
- SNTP, DNS relay and DDNS^{*1}

Firewall Management

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Remote access control for web base access
- Packet and URL filtering

* Notes:

1. Future release feature.
 2. Specifications on this datasheet are subject to change without prior notice.
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Hardware Specifications

Physical Interface

- 802.11n WLAN: External antenna x 1
- ZigBee: External antenna x 1
- Ethernet LAN: 10/100Mbps RJ-45 Ethernet port x 1
- Ethernet WAN: 10/100Mbps RJ-45 Ethernet port x 1
- USB port: USB 2.0 Host x 1
- Reset button
- WPS/ZigBee push button
- Power jack
- Support Real Time Clock (RTC)

Physical Specifications

- Dimensions: 5.53" x 3.56" x 1.37" (140.5mm x 90.5mm x 35mm)

Power Requirements

- Input: 12V DC, 1A

ZigBee RF Specifications

- Fully IEEE 802.15.4 / ZigBee PRO compliant
- Operating Band: 2.400 - 2.483 GHz
- 16 channels in the 2.4GHz ISM band
- AES-128 hardware supported encryption

Operating Environment

- Operating temperature: 0°C ~ 40°C
- Storage temperature: -20°C ~ 70°C
- Humidity: 20% ~ 95% non-condensing