

**Outlet Rating (Maximum)**EU Outlet
(16A Max.)UK Outlet
(13A Max.)US Outlet
(12A Max.)FR Outlet
(16A Max.)AU Outlet
(10A Max.)**BiPAC 2095**

Broadband PLC Ethernet Adapter with Remote Power On / Off Control

Conscious of the need to reduce our carbon footprint, efficient energy management is a critical trend nowadays. Start to conserve our planet by efficiently using your in-home electrical appliances. The SG2095 embedded with the latest Marvell (DS2-based) powerline technology, is an ideal home networking solution delivering efficient energy management. It deploys Powerline technology that utilizes in-home power line loops for network communications. No need to drill into the wall or for any extra wires! This unique device with Powerline technology, providing 200Mbps peak PHY rate, effectively supports HDTV applications. A special feature of the built-in noise-filtering power socket is the ability to switch on and off in-home electrical appliances that are plugged in via Internet access.

Remote switch control for in-home appliances

With built-in Smart AC Power Switching Control, the Billion SG2095 features remote power on / off that enables you to remotely control on your electrical home appliances by using a computer that is connected for the Internet access when you're away from home. The Billion SG2095 provides users remote on/off control of appliances such as your washing machine. Even when you are on the way home, you can also remotely switch on the air conditioner to cool your entire house via handset or mobile phone that is capable of Internet access.

Extra noise-free power socket

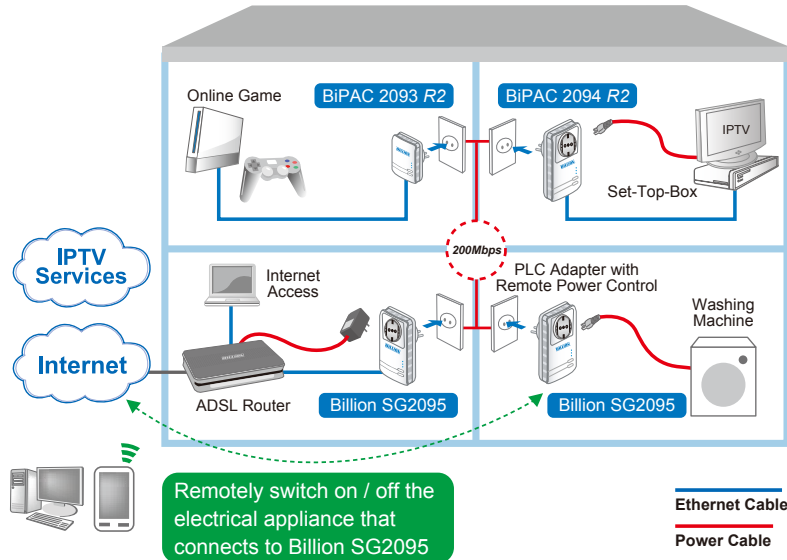
When there is a limited number of available wall outlets, appliances that also use power lines as a communications medium develop some operational noise. The Billion SG2095 features a built-in electrical power socket with a noise filtering function - AC Pass-through power socket. With noise filtering, this device enhances power-line communications coverage within the home when the AC Pass-through power socket is used by the appliance.

Premium Transmission Quality and Performance

With Quality of Service (QoS) Control and video optimization, the Billion SG2095 will automatically optimize transmission quality and recognize the bandwidth needs of voice and video applications making your network a pleasure to use. Furthermore, the built-in Smart Route technology helps to consistently maintain the best transmission path and the best transmission quality. Smart Repeater technology extends the connection coverage and enhances connection performance.

**Ideal for
Residential
and
SOHO users**

- Enables high-speed data transfer rate up to 200Mbps via in-house electrical wiring
- Includes one AC Pass-through power socket with noise-filtering function
- Built-in Smart AC power switch to remotely control home appliances such as laundry machine and air conditioner
- Smart Route delivering the best transmission path
- Smart Repeater for increased connection coverage
- Utilizes Quality of Service control
- Supports Triple Play applications such as HDTV, VoIP and high-speed Internet access
- 1 x 10 / 100 Base-T Ethernet port
- Slim and light weight design
- Ideal for residential and SOHO users



▲ The connected home using the Billion SG2095

Features & Specifications

Protocols

- TDMA

Standards

- Ethernet specifications: IEEE 802.3, IEEE 802.3x, IEEE 802.3u, Auto MDI / MDIX
- UPA DHS and OPERA compatible

Transmission Speed

- 200Mbps max.

Modulation

- Supports OFDM
- 1536 carriers, 1024 / 256 / 64 / 16 / 8 QAM, QPSK, and BPSK

Frequency Range

- 2MHz ~ 30MHz

Security

- 128-bit / 256-bit AES Link Encryption with key management for secure power line communications
- Rotating NEK (Network Encryption Key)

Quality of Service Control

- Enhancements: contention-free access, seven-level priority based contention access, and multi segment bursting
- Port Number Packet Classifiers
- Supports IGMP managed multicast sessions
- QoS classification for quasi-error-free delivery
 - VLAN priority field, IP Field, TCP port Field, UDP port Field
- Enhanced IPv4 / IGMPv1-3 snooping support
- Supports IPv6 and MLDv1-2 snooping

Supported Operating Systems

- Windows 2000 / XP / Vista / 7
- Other 10 / 100 Base-T Ethernet devices

Power Supply Specifications

- Input: 100 ~ 240V AC, 50 ~ 60Hz
- Protection: OCP, OVP, SCP

Smart Transmission

- Smart Route for the best transmission path
- Smart Repeater for increased connection

Hardware Specifications

Physical Interface

- AC power plug
- RJ-45 compatible
- Sync button
- Reset button
- AC outlet
- LED display:
 - STATUS
 - PLC
 - ETH

Physical Specifications

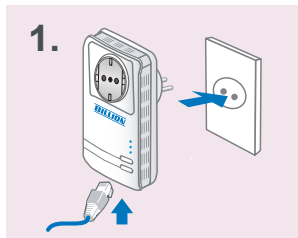
- Dimensions (W, H, D): 2.44" x 6.09" x 1.76" (62mm x 154.8mm x 44.6mm)

Operating Environment

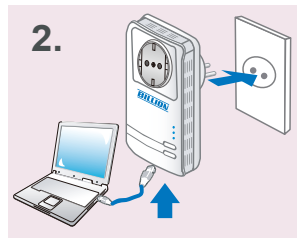
- Operating temperature: 0°C ~ 40°C
- Storage temperature: -20°C ~ 70°C
- Humidity: 20% ~ 95% non-condensing

Connecting the Billion SG2095

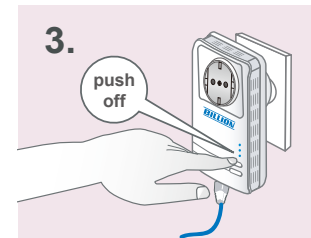
Connect a network cable to the adapter and then plug the Billion SG2095 into a power socket.



Then connect the Billion SG2095 to a laptop, modem, router or a set-top-box.



Create a secure network by a simple push off the "Sync" button.



*Note: Plug / socket, power cable and input voltage / frequency may vary from country to country.

* Notes:

1. IPTV application may require subscribing to IPTV services from a Telco/ISP.
2. Specifications in this datasheet are subject to change without prior notice