BiPAC 2093 *R2*

Pocket-sized HD200 Powerline Wall Plug Ethernet Adapter

Extend an Entertainment network via in-home power line

Adopting with the latest DS2 based 200Mbps technology, the BiPAC 2093 *R2* is an ideal home networking solution via in-home power line loop to connect different kind of devices such as modems, routers, PCs, set-top-boxes, IP Cameras, and game consoles for high-definition video streaming, online gaming, and other high bandwidth-hungry applications. No need to drill on the wall or extra wires! Just plug in the BiPAC 2093 *R2* into power socket and one touch of the "Sync" button on the device to install the bridge utility, then your high-speed network is ready. Smart Transmission technology is featured to enable the data running on the best path and extended connection coverage.

Low power consumption

With the Smart Power Saving technology, the BiPAC 2093 *R2* can automatically detect its Ethernet connection and fall into sleep mode when an Ethernet-based device is powered down or disconnected, that reduces power consumption significantly and saves bills. Make a "Green" home with the BiPAC 2093 *R2* and become more energy efficient!
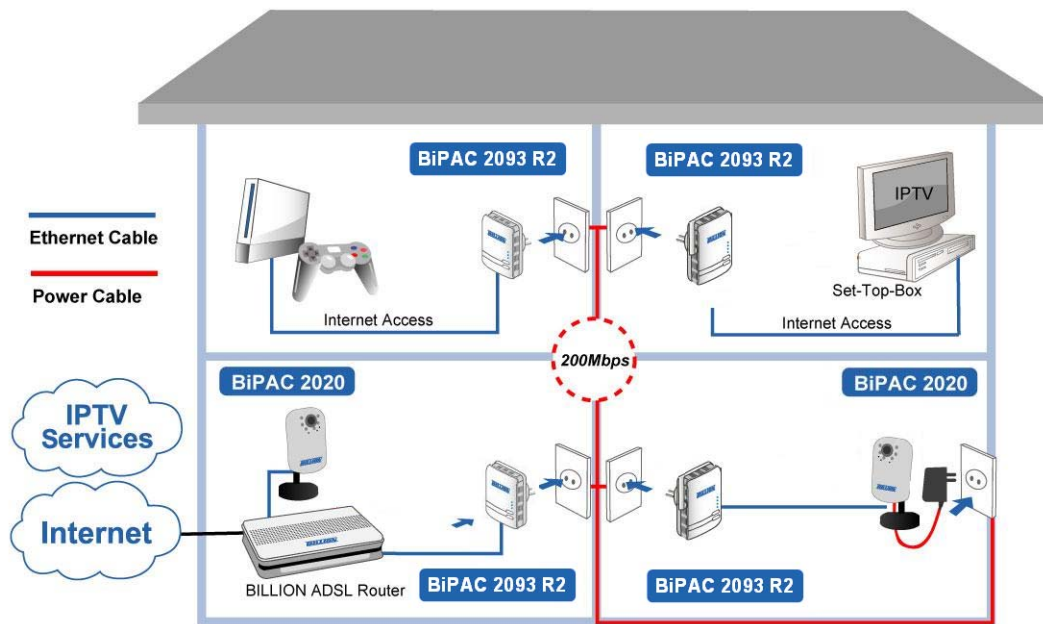
Noise-immune data transmission

Unlike other power line devices, the BiPAC 2093 *R2* supports superior and noise-immune data transmission over in-home electrical power lines. Even when your family turns on an electronic device or turns off a light, you won't experience any interruption to latency-sensitive applications such as multimedia or video being shared with your family in another room.

Smooth traffic and prioritization

Quality of Service (QoS) Control and Video Optimization guarantees the transmission quality by automatically prioritizing data. The BiPAC 2093 *R2* will automatically recognize the bandwidth needs of voice and video applications. QoS prioritizes the data in order to smoothen the traffic and optimize transmission quality. TV and video images are received and displayed with absolute smoothness. QoS also guarantees clear and instant voice transmission, even when other applications are running on the same network at the same time. QoS makes your network a pleasure to use.

- Interoperable with G.hn standard
- High-speed data transfer rate up to 200Mbps via electrical wiring
- Smart Power Saving technology for improved power efficiency
- Smart Route for the best transmission path
- Smart Repeater for increased connection coverage
- Utilizes Quality of Service control
- Supports Triple Play applications such as IPTV, VoIP and high-speed Internet access
- 1x 10 / 100 Base-T Ethernet port
- Utmost slim and light design
- Ideal for residential users

Powering communications with **Security**

Features & Specifications

Protocols
- TDMA

Standards
- Ethernet specifications: IEEE 802.3, IEEE 802.3x, IEEE 802.3u, Auto MDI / MDIX

Transmission Speed
- 200Mbps max.

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

Frequency Range
- 2MHz ~ 30MHz

Security
- Programmable 128-bit AES, 256-bit AES and 3DES hardware encryption

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

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 Power Saving (* depends on input power voltage)
- Up to 80% power reduction in standby mode

Hardware Specifications
Physical Interface
- DS2 PLC processor
- AC power plug
- RJ-45 compatible
- Sync button
- Reset button
- LED display:
  - STATUS
  - PLC
  - ETH

Physical Specifications
- Dimensions (W, D, H): 3.66" x 2.44" x 1.53" (93mm x 62mm x 38.8mm)
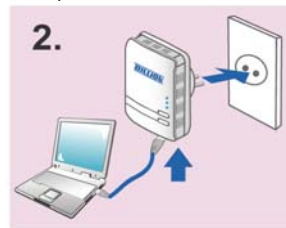
Operating Environment
- Operating temperature: 0 ~ 40 °C
- Storage temperature: -20 ~ 70 °C
- Humidity: 20 ~ 95% non-condensing

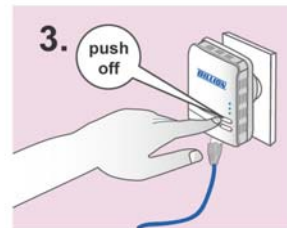
Connecting the BiPAC 2093 *R2*

Connect a network cable to the adapter and then plug the BiPAC 2093 *R2* into a power socket.

Then connect the BiPAC 2093 *R2* to a laptop, modem, router or a set-top-box.

Create a secure network by a simply 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. Future release
3. Specifications in this datasheet are subject to change without prior notice