BiPAC 2100

Broadband PLC End-Point Modem

BiPAC 2100 is a broadband PLC communication end-point, which connects and transfers data over the electric grid from the backbone to the customer's endpoints. The BiPAC 2100 PLC end-point can serve as a back haul channel responsible for collecting and transmitting all data signals to and from BiPAC 2300 R2 Head End located in the Data center directly or BiPAC 2200 repeater located in middle of power grid. Billion BiPAC 2100 enables multiple broadband power line applications such as Smart Grid, power outage notification, dynamic routing and intelligent repetition, SCADA extension, and surveillance over the power grid, as well as additional future services including Internet, telephony, security alarm, intelligent home control, and video services.

Advantages of Billion BPL Solutions

Significant cost saving Implementation

High bandwidth and scalable functionalities of BPL add significant cost savings to the maintenance of BPL network and implementation of future smart grid applications. BPL also provides a cost-effective alternative solution for last mile broadband access to home and office buildings.

Supports wide range of deployment and future extension

Bi-directional broadband bandwidth offered by BPL supports wide range applications such as real time monitoring, video surveillance, SCADA, tele-protection and other consumer services, which all aim at improving customer satisfaction.

Ease of central control and remote management

The system supports standard–based SNMP network management protocol which reduces maintenance cost tremendously.

Secure transmission

Like all IP based networks, there are many potential threats and vulnerabilities within an BPLC network. BPL provides enhanced security by leveraging standard based DES/3DES encryption to ensure the protection of consumer data and BPLC network infrastructure.

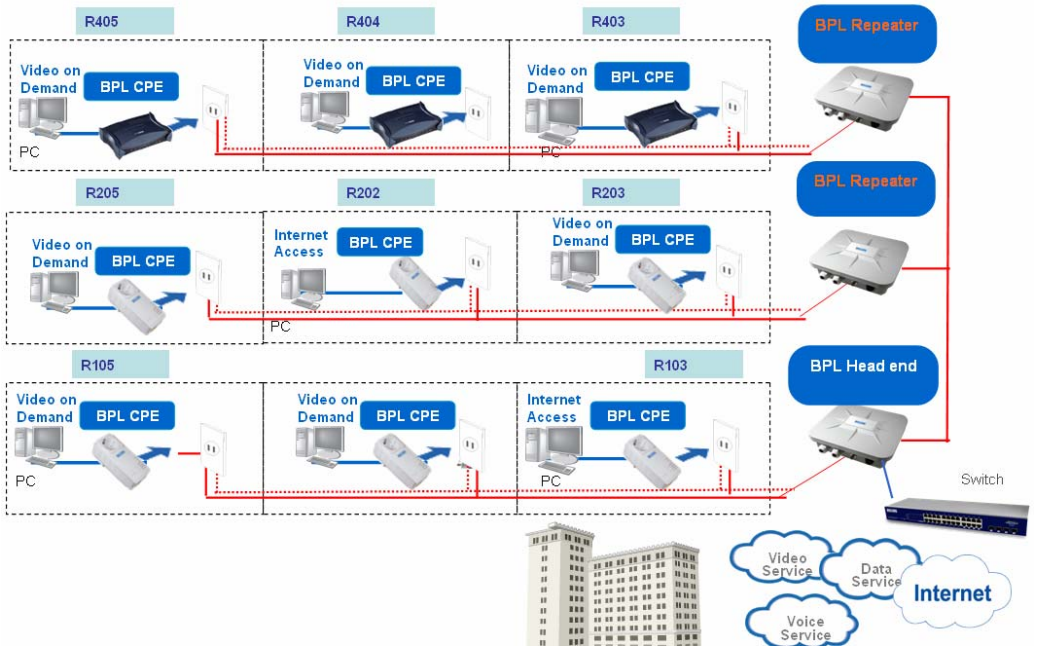
Economical and flexible solutions for low density rural areas

In most rural areas, cellular signal are not easily accessible as wireless coverage is much lower. BPL system provides an economical solution and easily installation could provide the most efficiency real-time communication. Infrastructures built with BPL technology can solve many of the issues described above and provide economical and flexible solutions for data collecting for low density rural communities.

- 200Mbps physical connection bandwidth
- 10/100 Ethernet x1
- RS485/RS232 interface (optional)
- AC power: 90-250VAC, 50/60Hz
- Traffic control and isolation: VLAN/OVLAN
- 802.1D bridging protocol
- DES and 3DES encryption
- QoS with 8 level priority queues
- 802.1P traffic priority classification
- Power mask management
- SNMP and web GUI network management protocol
- Configurable spectral location from 2 to 34 MHz
- Up to 1536 carriers for better noise immunity

Powering communications with Security

Application Scenarios



Features & Specifications

Transmission Speed
- 200Mbps max.

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

Frequency Range
- 2MHz ~ 34MHz

Security
- 128-bit/256-bit AES Link Encryption with key management for secure power line communications

Network Management
- SNMP

Quality of Service Control
- Enhancements: contention-free access, eight-level priority based contention access,
- VLAN priority field, IP Field, TCP port Field, UDP port Field Supported

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

Powerline Encryption
- DES and 3DES encryption

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

Interface
- 10/100 Ethernet x1
- Power line port

Hardware Specifications
- AC power plug
- RJ-45 compatible

Physical Specifications
- Dimensions (W,D, H):

180mm x 120mm x 40mm

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

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