PowerNet

Questions & Answers regarding HomePNA3 (HPNA3)

1. **What is so special regarding the HPNA3 technology?**

   The HPNA3 technology allows you to establish a fast, reliable and very efficient plug & play network tuned for multimedia signals.

2. **Why the common wireless technology 802.11g/b is not suitable for video communication?**

   The wireless 802.11g/b has been developed many years ago; therefore it does not support today multimedia network requirements. Key missing features are:

   - Lack of mechanism to maintain steady throughput over the network.
   - Protocol that drop easily data rate due to any interference occasions.
   - Delays that are not supporting sufficiently audio and telephony requirements.

   A new wireless standard is under development (the 802.11n), which is tuned to deal with multimedia applications (with some limitations). Currently the technology is forecast to be in the market by mid/end 2008 at a very high price tag relatively to current technologies.

3. **Can HPNA3 keep my privacy better than wireless and powerline technologies?**

   The HPNA3 technology is a wired technology and does not leak to any neighbors facilities (different telephone and coax cable). Please be aware that wireless and powerline are two technologies that are sharing the same infrastructure with your neighbors.

4. **Can I add HPNA3 link in an existing ADSL2+ network?**

   Defiantly, it is an easy task since no drivers are required.

5. **I have a working wireless network, but the reception in one of my rooms is weak. Can the HPNA3 technology solve the problem?**

   You can solve the network performance issue in that room by using HPNA3 technology. The only barrier is that you should have a telephone or cable coax jack in that room and that you are not using cable modems (Docsis).

6. **I am living in a multi-store house and unable to enjoy wireless mobility everywhere. Can HPNA3 assist me?**

   The best solution for you will be to place PowerNet's HPNA3 ADSL2+ modem router in one floor and than to put another wireless access-point at another floor via an HPNA3 adapter.

7. **I am using cable modem (Docsis standard) for my Internet and VoIP services. Can I use HPNA3?**

   Adding HPNA3 products over the same telephone wire as the cable modem will interfere your modem performance. Therefore, you can not use the HPNA3 over your coax cables. Please refer to the article "HPNA3 over coax cable" at the SOLUTION section.

8. **I have a personal/home telephone switchboard. Can I use the HPNA3 solution?**

   The HPNA3 signals can not pass true a switchboard system. The possibilities are:

   - Connect unused pairs externally to the switchboard
   - Use switchboard command/control pairs (the same pair for all branches) – does not exist on every switchboard model)
   - Add high-pass filter between each switchboard extensions.
   - Place new direct wires

9. **What is so special about the PAR-720G and why I should consider using it?**

   The PAR-720G (or CAR-730G) is a unique ADSL2+ modem router using three communication means simultaneously: Ethernet, Wireless and HPNA3. The device is highly reliable; provide QoS

service, support fire-wall, VPNs channels, remote management and more. Using the PAR-720G saves the need for external ADSL/HPNA3 filter unit.

10. Why to invest in HPNA3 and not to wait for 802.11n products?

The new wireless standard is still not in production. It is scheduled for mid next year. It is extremely expensive (much more than HPNA3) and will suffer from all common wireless drawbacks. The 802.11n is not a real alternative to HPNA3.

11. Why not to use HomePlugAV for multimedia networking?

HomePlug standard provides a solution for one phase electric network, but still reflect some problems for multi-phase networks usages. The actual throughput is much smaller than the 200Mbps data rate and the system bandwidth starts to be a problem when using multi HDTV channels. Privacy is another issue that should be consider when using HomePlugAV products.

12. Where the HPNA3 technology is heading too?

Currently HPNA3.0 is 128Mbps and soon 160Mbps will be presented. Recently a modified standard HPNA3.1 has been approved by the regulation bodies, which will provide 320Mbps. All major electronic and communication companies are supporting this initiative and products are scheduled to be out in the market by 2008.

13. Do I need any drivers for HPNA3 adapters?

The HPNA3 adapters are a true plug & play bridge devices and don't need any drivers at all.

14. What should be the PC network proprietary when PET or CET devices are in use?

The answer depends on your network configuration (point to point or network with a router functions). In case of point to point you should define the PC TCP/IP parameters. In case of a router, allow the router to define the TCP/IP parameters by using "obtain an IP address automatically" and "obtain DNS server address automatically".

15. Why there are two Ethernet interfaces at PET/CET adapters?

Each adapter has an internal switch to support more than one computer or other networking devices, such as: network printer, network camera/scanner, access device, etc.

16. I have a phone jack in one room and cable coax jack in another room. Can I use the HPNA3 to create a network link?

You need 3 modules in order to establish the link: one PET, one CET and a phone/coax filter. The filter should be installed in any location where you have an adjacent phone and coax cable jack. One you will install the filter you can expand your network over the telephone network or (simultaneously) over your cable coax network.

17. How I am connecting (physically) PAR-720G to the Internet/network?

Connecting the PAR-720G to the Internet or to the network is identical to most modem/routers procedures. Please refer to the device manual for detailed description.

- Connect the modem to the ADSL micro-filter (supplied by your ISP/telephone Company), by using the supplied PAR-720G RJ11 telephone wire. Plug the micro-filter to your home wall phone socket.

- Connect the power-adapter to the unit and plug it to the power socket.

- The device 4 Ethernet ports allow you to connect any standard networking device such as: PCs, network printer/scanner, network camera, etc. You can use Cat-5 cables in order to extend the range between the PAR and the device.

- The build-in wireless access-point interface provides a tool to support your mobile devices (depends on wireless performances).

- The integrated HPNA3 interface allows you to add in any other telephone jakes a HPNA3 adapter and to enjoy the HPNA3 superior performances.

PowerNet

18. How to configure the PAR-720G for PPPoE connection

Once you have your user name and password from you ISP, you can in few steps to configure the PAR-720G:

- Connect a PC to one of the PAR-720G Ethernet ports.

- Turn on the modem and wait about 90 seconds.

- Open you internet browser (such as Microsoft explorer) and type the address: http://10.0.0.138 (in some countries/models it might be http://192.168.1.254). Press "Enter".

- A new window asking for user name and password will pop-up. Type Admin for each field (in some countries/models it might be admin). Press OK.

- In the left main manual choose –"Quick Start".

- Type the user-name and password (that the ISP gave you earlier) at the required PPP fields (by mid-bottom page).

- Press "Apply" and after confirmation on "Save Configuration" on the page bottom.

- On the "Status" page you should see the connection status. More than that the PAR-720G from panels indicators will lit on the ADSL & Internet indications.

- Press "LogOut" in order to get back to your Internet browser. Surf the net.

Note: in case you are not sure which connection your ISP is providing you, than the PAR-720G can easily support you: Once you are at the "Quick Start" page, press the "Auto Scan" button in top of the page (under connection). Let the modem scan for you the ISP connection and after few seconds you will get the results automatically. Select, approve or reject the connection type.

19. How I can open ports on the PAR-720G for "emule" or nay other similar program

Firstly, you should know your PC IP address, where you would like to use the emule program (in case that you have several PCs on the net) – Start, Settings, Network Connections, right click on "Local Area Connection" icon, select "Status" from the menu, choose Support" field. The IP is the first row (this description is true for Windows XP SP2 OS).

Please be aware the emule program will support you with 2 different port addresses: TCP & UDP, for TCP and UDP protocols.

- Enter the PAR-720G control panel as described in the previous issue.

- Choose "Configuration" at the main menu (left side).

- Choose "Virtual Server". Press "Add Virtual Server". A new window will show-up.

- Add different names for each protocol field, such as emuleTCP and emuleUDP. Insert the specific address as you get it from the emule program. Please pay attention to fill in the same address in all sub-fields.

- If you have several PCs, select the proper IP address (as you checked before).

- Confirm and save (Save Config). Exit and start to use the emule program.

Please don't hesitate to contact us for any further questions
support@powernetsys.com.