Agenda

- Introduction to home networking
- Wireless home networking
- Consortium - HomeRF Working Group
- HomeRF technology - SWAP
- Xilinx Spartan-II FPGAs in HomeRF-Based Products
- Summary

Summary

- The digital consumer revolution & the Internet are forcing broadband to the home
  - HomeRF provides a viable home networking technology
    - Mobility with voice and data connectivity at low prices
    - Sharing of broadband access and wireless communications between multiple consumer devices
- Technical summary
  - Use DECT for low cost, voice communications
  - Uses TCP/IP and IEEE 802.11 for data communications

Summary

- Various HomeRF products are being developed
  - Residential gateways using HomeRF for home networking
    - Broadband access choices - DSL, cable, satellite, ISDN
  - Technology bridges (several choices)
    - HomeRF-to-HomePNA, IEEE802.11-to- HomeRF, HiperLAN2-to- HomeRF, HomeRF-to-Ethernet, etc.
  - HomeRF enabled information appliances
    - Internet screen phones, PCs, printers, scanners, web pads, etc.

Summary

- Xilinx solutions enable HomeRF-based products
  - Spartan-II + IP provides a better solution than competing ASSPs
    - Higher performance & cost effective
    - Greater flexibility is provided through reprogrammability
      - The market is rapidly growing & competition from Bluetooth & wireless LANs is causing the need for products to be rolled out: time-to-market
      - IRL provides time-in-market as specs for emerging technologies evolve
    - Features within the Spartan-II provide system integration
      - DLLs, SelectIO, BlockRAM
    - Embedded solutions
      - FPGA logic not used from IP can be programmed with other IP cores
    - Proprietary encryption algorithms can be programmed in the FPGA depending on the application and geography
  - Spartan-II FPGAs, CoolRunner & 9500 CPLDs provide system interconnectivity in HomeRF based products