

L800/802 Introduction

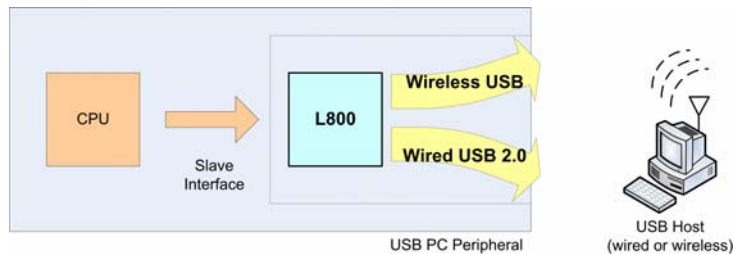


335 Pioneer Way, Mountain View, CA 94041
Tel: 650-968-6800.
www.lucidport.com
sales@lucidport.com



Doc#800-007-0135

L800 USB Peripheral Controller

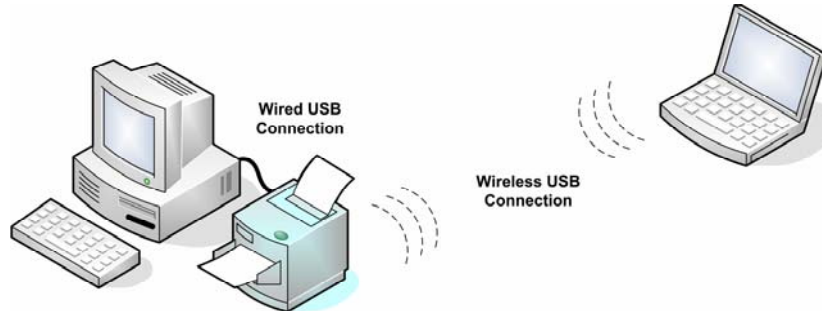


- Supports both wired and wireless USB connections
- 8/16 bit memory interface with DMA slave support
- Highly Configurable - up to 30 endpoints, any transfer size, packet size, buffer size, burst size, and data rate
- Requires external CPU and WiMedia UWB PHY

2



Ideal for PC Peripherals



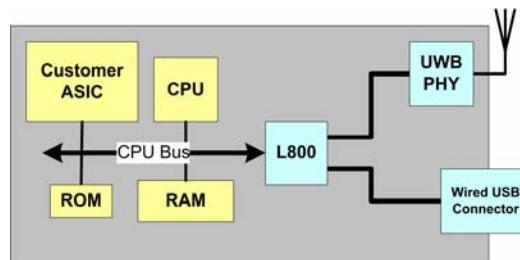
- The L800 is design for integration into peripherals with both wired and wireless USB connections
- Connect a peripheral to two PCs simultaneously
- Or automatically switch between wired and wireless connections
- Support cable association without modifying legacy USB firmware

3

LucidPORT

L800 Usage

The same driver controls both the Hi-Speed wired USB and the wireless USB connections. The wired USB port is used for both data transfer and cable association.

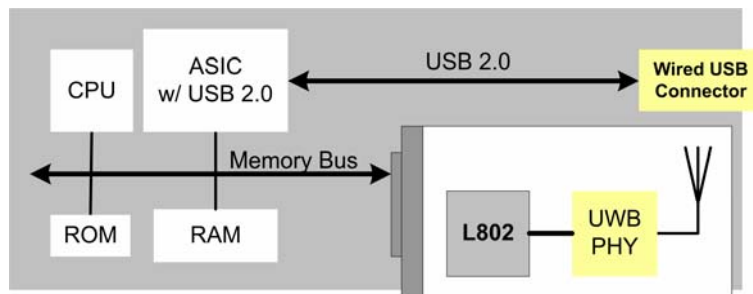


4

LucidPORT

L802

- All the functionality of the L800 but without a wired USB port
- The L802 is geared for applications which want wireless USB but don't need wired USB or already have wired USB integrated elsewhere in the design



5

LucidPORT

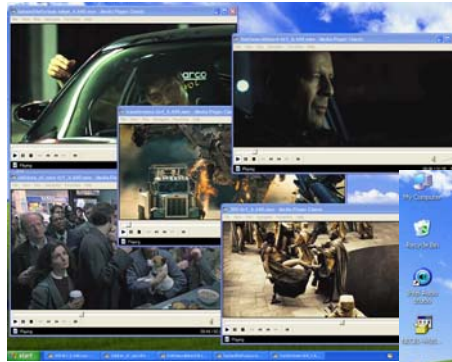
Sustained Actual Performance

- The L800, in conjunction with USB-IF's wireless USB host, sustains over 13 Mbytes/sec transfer speeds when using the USB mass storage protocol.
- This is about 4 times faster than HWA / DWA combinations
- When running more efficient protocols, like USB video class, the L800 can sustain transfers speeds exceeding 18 Mbytes/sec (150Mbps)
- Some benchmarks:
 - USB 2.0 Flash Disk ~ 10 Mbytes/sec
 - 6 MegaPixel JPEG image ~ 3Mbytes
 - 802.11g (WiFi) ~ 2 Mbytes/sec
 - 1x DVD drive = 1.3 Mbytes/sec
 - 4 bit SDIO v1.2 ~ 8 Mbytes/sec
 - Uncompressed Video (640x480x16x15fps) = 9.2 Mbytes/sec

6

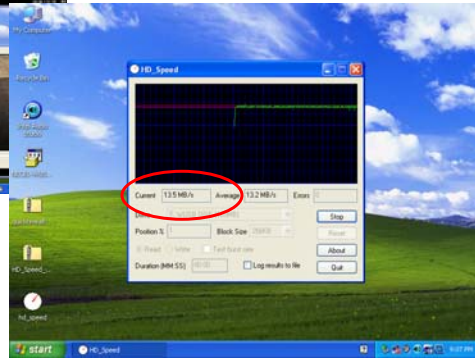
LucidPORT

L800 Performance Screen Captures



5x DVD quality movies running simultaneously over Wireless USB

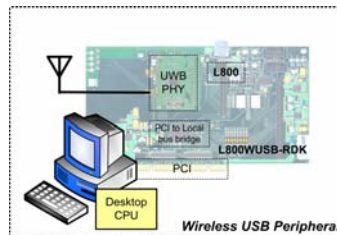
HD_Speed disk benchmarking tool showing 13.5 Mbytes/sec Wireless USB transfers



7

LucidPORT

RDK Development Kit



- LucidPort's L800 Wireless USB Development Kits are available now
 - Certified by both the USB-IF and the WiMedia Alliance.
 - Can emulate different USB peripherals - mass storage, printer, video, scanner, or custom peripherals.
 - The RDK supports all PHY data rates (including 480 Mbps) and has actual performance over 150 Mbps.
 - The RDK is packaged with Wireless USB demos (including source code) that you can have up and running within an hour.

8

LucidPORT

A Complete Development System

- The L800 RDK includes all the hardware needed for a Wireless USB Peripheral, including PHY and Antenna
- Included Software
 - LucidPort USB APIs
 - Loopback firmware with source code
 - USB Mass storage, Printer, Video, and Scanner class firmware with source code
 - Sample host side driver
- Included Documentation
 - L800WUSB-RDK User's Guide
 - Firmware porting guide
 - Schematics, Layout Information, Bill of Materials
- Develop firmware on a PC with known good hardware and LucidPort supplied drivers
 - Code the firmware before final hardware is ready.
 - Supports Windows XP, Vista, CE, and Linux

9

 LucidPORT

Summary

- Certified Wireless USB is here
 - Wireless USB adapters from different vendors available now
 - Both Lenovo and Dell have notebooks with wireless USB now
- Add wireless USB functionality with the L800 or L802
 - Connects directly to a CPU or microcontroller's memory bus
 - Supports all compliant transfer sizes, burst sizes, packet sizes, and with any number of endpoints.
 - Manages all required functions of WiMedia and Wireless USB including encryption, beaconing, and association
 - Native solution provides the best price and performance
- The L800 is certified by both the USB-IF and the WiMedia Alliance
- The L800, L802, and the RDK are all available now

10

 LucidPORT