

The SL11P2USB is low-cost, high-speed peripheral chip that transforms Parallel/EPP (1284) port to an USB port. SL11P2USB along with ScanLogic generic mini-port driver and system USB software API, provides USB connectivity to many parallel port based peripherals. No need to change firmware in the peripheral. USB device configuration can be automatically programmed into a serial Flash EEPROM. SL11P2USB could be used as an integrated solution, where it is placed inside the peripheral, or it can be used as an external Parallel port to USB bridge. On-chip 3Kx8 memory buffer enables bi-directional data packets transfers between USB host PC and an EPP port at maximum USB throughput rate, 12 Mbits/sec. All USB modes, Isochronous (1024 bytes/packet), Interrupt, and Bulk are supported. The chip requires only 3.3V, 12 MHz external clock or crystal, and it supports suspend, resume, and low power modes. ScanLogic's comprehensive DVK, along with a variety of class drivers, such as printer or scanner, enables these and other products to seamlessly work with an USB Host PC. User can have a working USB peripheral in less than 5 weeks. Following applicable products can be supported by SL11P2USB:

PC Peripherals

- Scanners
- Digital Cameras (video & still)
- Printers
- External Storage Devices
- CD-ROM
- DVD player

Communications

- Computer Telephony (CTI)
- Video Conferencing
- Cable modems
- DBS/DSS Satellite

Other

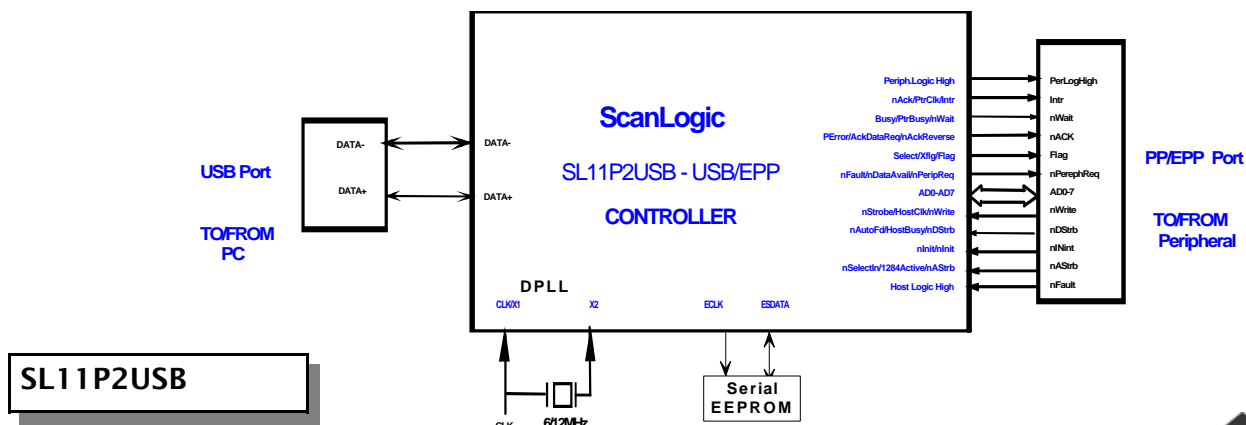
- Embedded Systems
- Data Acquisition
- Note Pads
- Game Pads

The Unique Capabilities of the SL11P2USB

- **EPP(1284) Emulation** - Emulates standard Parallel and EPP interfaces, in support of bi-directional peripherals .
- **High Speed USB Interface** - Allows sustain data transfers to/from, peripherals up to the maximum USB rate of 12 Mbits/sec.
- **Internal RAM/BIOS ROM** - Built in 3Kx8 memory buffer enables data to be Sent/Received to/from an USB port at max. rate. SL11P2USB support double buffer memory for bulk, Interrupt and Isochronous (1024 Bytes/packet) modes.
- **Interface to Serial EEPROM port** - USB peripheral configuration (Mfg. ID # product ID) can be automatically programmed into a serial EEPROM. New configuration can be uploaded via an USB PC.
- **No Microcontroller is required** - The SL11P2USB can interface to standard parallel port / EPP peripheral internally or externally.
- **No Firmware changes are required in the Peripheral** - 1284 interface registers emulation are built into an internal controller.

Peripheral Commands and data transfer are controlled by System SW application. ScanLogic provides an USB Mini-Port Driver.

- **Miniport Driver** - ScanLogic provides generic USB mini-port driver for Windows 95/ 98 WDM - Memphis/Detroit.



SL11P2USB - Controller

Features:

- **No need to develop or change firmware at the peripheral side.** SL11P2USB can interface to embedded or non-embedded Parallel or EPP peripheral, either internally or externally
- User application can interface directly to ScanLogic USB Plug&Play Mini-Port Driver for WIN95/98
- 1284 Parallel interface supports bi-directional communication and supports PC parallel port register operations
- 3Kx8 on-chip dual buffer memory array supports Bulk and 1024 bytes/packet size for Isochronous mode
- USB/EPP throughput up to 1.5 MB/sec (bulk or Isochronous modes). On-chip USB transceivers
- Built in DPLL allows 12MHz external Crystal or clock source
- 3.3V CMOS technology. Low power, Resume and Suspend modes are supported. Power can be used from an USB port
- 100 pin PQFP package

ScanLogic Corporation

ScanLogic Corporation was established in 1995 as a semiconductor company to develop, manufacture and license innovative, cost-effective chip based interface solutions for manufacturers of high performance peripherals including, scanners, digital video and still cameras, MFU devices, printers, facsimiles, CTI devices, cable modems, external storage devices, and embedded systems. ScanLogic products combine Universal Serial Bus (USB) controllers, video compressors, signal processors, CCD/CMOS imager interfaces, memory controllers and software drivers to provide cost-effective, highly integrated single chip solutions for peripheral manufacturers.



Developers Kit

For all of its products, ScanLogic offers development kits, training and assistance to reduce the time and cost of integration. **Using the development kit, ScanLogic customers can have a working USB product within 5 weeks.** These development kits include:

- Windows 95/98 WDM generic USB device miniport driver source code is available
- System demo source code examples
- Application notes
- SL11P2USB reference design
- EPP to USB SW translator is available
- Sample Chips



4 Preston Court
Bedford, MA 01730
Tel. 781. 271.1750
Fax. 781. 271.1760
Sales@scanlogic.com
www.scanlogic.com