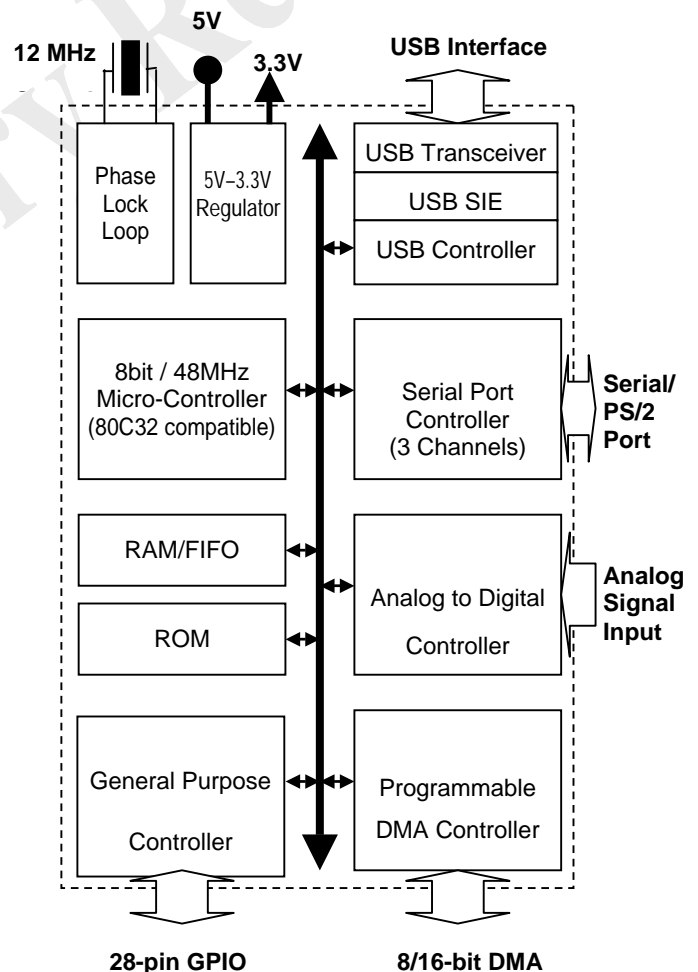# PL-2351
USB Device Controller

Overview

PL-2351 is a single chip full-speed USB device controller, including an enhanced 8032 core, an intelligent USB core, 4-channel 8bit/12bit ADC and a variety of smart I/O ports via programmable DMA interface.   With diversity of IO ports, PL-2351 offers an optimal solution for a list of extensive peripherals such as printers, keyboards, mice, modems, hard disks, CMOS sensors, microphones, etc.   Flexible endpoint configuration including its buffer partition lets users easily establish control, isochronous-in/out, bulk-in/out or interrupt-In/out pipes to communicate with USB host.   In addition, with the capability of supporting up to five USB addresses, it is possible to configure the chip as a composite or a compound device.   Designed to be flexible, high performance, and easy-to-use, PL-2351 can help customers easily implement their products.

Features

- USB 1.1 Specification compliant
- 4-phase 80C32-compatible controller running up to 48 MHz
- Capable of supporting USB HID class, Mass-storage class and Printer class
- Embedded 5V~ 3.3V 100mA regulator for USB interface and internal circuit
- Default control endpoint and 15 programmable endpoints
- Support up to five USB addresses for compound or composite device
- 4K SRAM and Memory Access Unit (MAU) to configure each endpoint's buffer partition
- Programmable-DMA (PDMA) controller supports generic parallel interface such as CMOS Sensor, EPP/ECP, ATAPI, 8237 DMA, etc.
- Three configurable serial ports. Each serial port can be configured as a generic serial port up to 1.25Mbps or a PS2 host.
- Four 8bit/12bit ADC with sampling rate up to 24 KHz
- 16 extra GPIO pins. 8 of them can be configured as level or edge sensitive triggered interrupt sources.
- Advanced interrupt mechanism to ease the handshake overhead
- Advanced power management mechanism
- 32K * 8 embedded ROM
- 2 16-bit programmable timer
- Watch dog timer (WDT)
- Capable of supporting 2-wire EEPROM

Block Diagram

Prolific Technology Inc.