BlueBoard LPC1768-H

User Manual

Table of Contents

Introduction

The BlueBoard LPC1768-H is header board with LPC1768 from NXP. The LPC1768 is an ARM Cortex-M3 based microcontroller for embedded applications .

Features

The BlueBoard LPC1768-H has most of the pins brought out to the male header.

Hardware

Power

- 7.5V/1A DC female jack / USB mini connector
- Slide switch ON / OFF

Interface

- USB mini
- 20 pin JTAG header
- Reset and ISP button switch

General

- Two layer PCB (FR-4 material)
- 32 MHz crystal for RTC
- 12 MHz crystal for controller
- 256 Kb on board EEPROM chip with I2C interface

Software

Firmware

- Pre-loaded USB boot-loader for programming through USB
- Pre-loader LED and EEPROM test program

Source

- LED Blink example source code

Getting Started

Before starting you would need the following.

Requirement

The requirement is put in two sections.

Hardware

- USB cable with type B connector
- 7.5V/1A DC power supply
- NGX USB or Parallel JTAG

Software

- H-JTAG
- C Cross compiler (gcc / Keil / Rowley Crossworks for ARM)
- PC / Laptop with Linux / Windows

Validating the BlueBoard LPC1768-H

Once you have all the accessories connect the USB cable and power jack. Switch on the board.

The power LED D5 should glow. The Reset LED D4 should switch OFF when the RESET button is pressed. The test LED D8 should blink 4 times after power up or RESET. If it remains ON after blinking it confirms that EEPROM test was successful.

When the USB is connected the D7 LED glows. In the Device manager it would be shown as a USB Input Device as shown below.
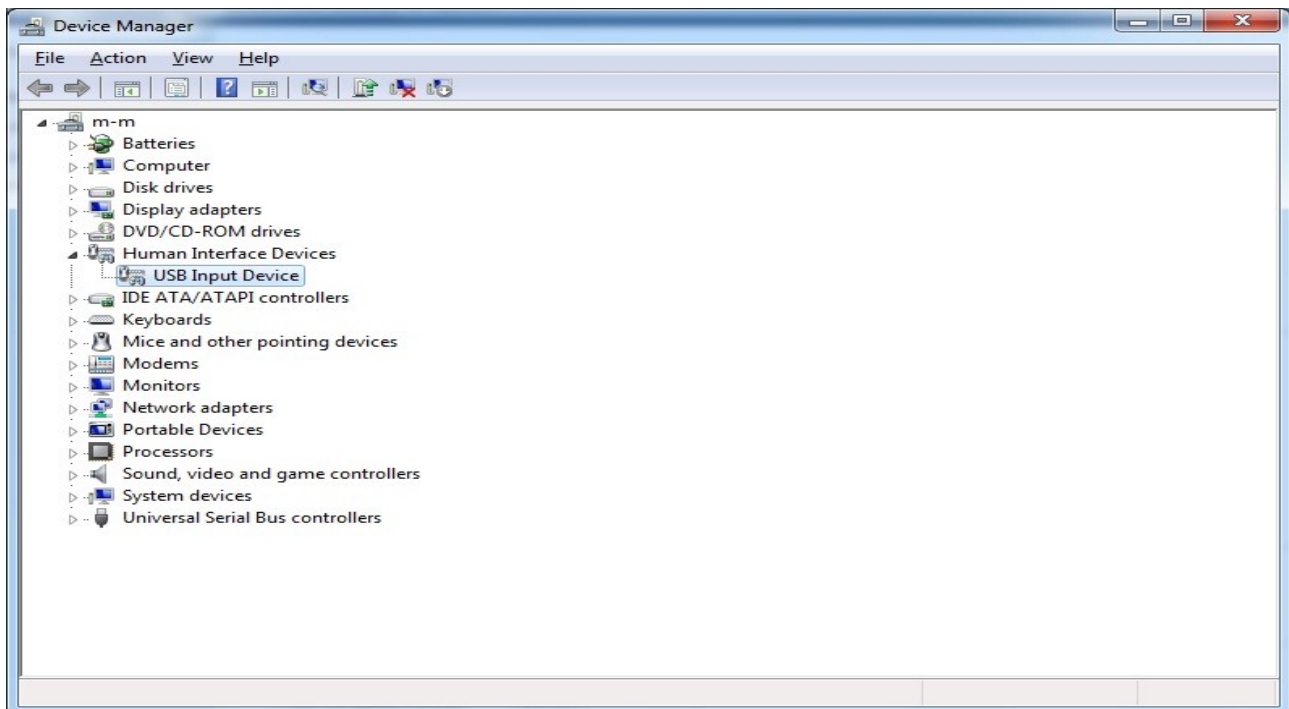
Using JTAG with BlueBoard

The BlueBoard LPC 1768-H has a 20 pin male box connector. Using the NGX ARM USB JTAG connect with the ribbon cable. Connect to the PC with USB cable.

- ➢ OpenOCD
- ➢ Keil (*refer **here***)
- ➢ Rowley Crossworks 1.7 (*refer **here***)
- ➢ Rowley Crossworks 2.0 settings for NGX ARM USB JTAG is already present

Information

Revision History

*version: v*1.0 *author:* Milind Kakati

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