PY32F403(100pin)-Start Kit

User Guide

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Contents

1. Introduction

The development board uses the PY32F403 as the main controller. The board provides a simple hardware development environment for the Puya chip with 32 bits ARM® Cortex®-M0+ CPU core. The board uses the TYPE C interface for power supply. Peripheral resources such as SWD, Reset, Boot, User button key, Reset key, LED, etc. are provided, including expansion pins. This document provides detailed hardware schematics and guidelines for using the associated applications.
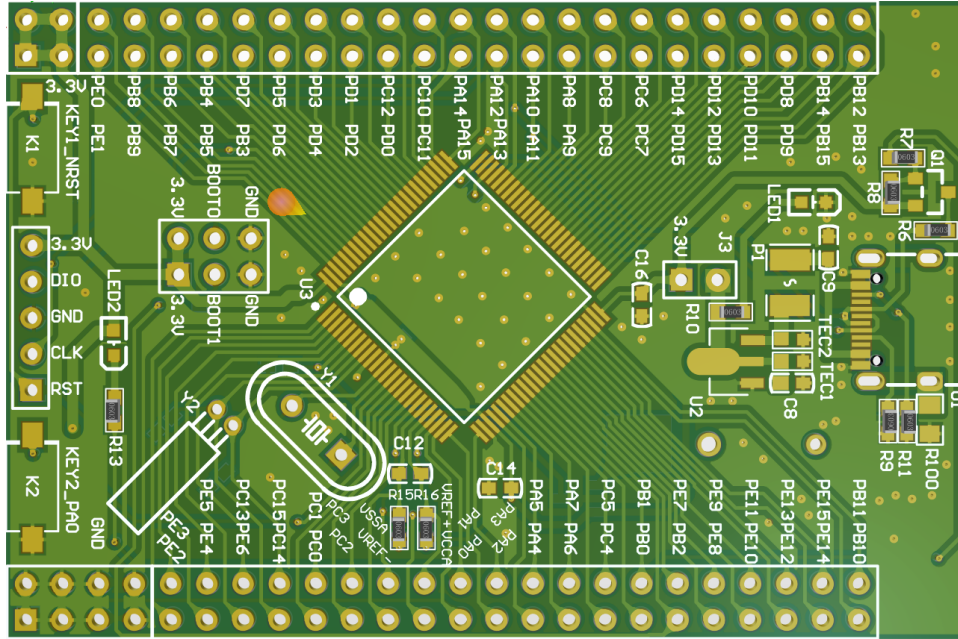
Figure 1-1 PY32F403 Start Kit

2. Functional pin assignment

Table 2-1 Pin Assignment

Function	Pin	Description	Note
LED	\	LED1	Power LED
	PA1	LED2	LED
KEY	PA0	KEY1	User Key
	NRST	K1	Reset Key

3. Getting Started Guide

The development board uses a TYPE C to LDO to provide 3.3V power. In order to download the program to the development board, a TYPE C cable is required. We need to select the correct boot mode and connect the USB cable, if LED1 is lit, the power supply is connected in the correct way. The routines are provided for the Keil version only.
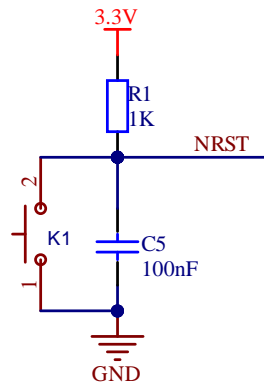
4. Overview of Hardware Design

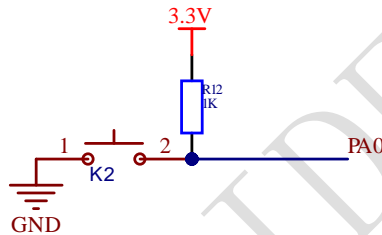## 4.1 Power supply

Figure 4-1 Power supply schematic

4.2 Boot Mode Selection

Figure 4-2 Boot mode selection schematic

With the BOOT0 pin and the boot configuration bit nBOOT1 (stored in the Option bytes), three different boot modes can be selected, as shown in the following table.

Table 4-1 Boot mode configuration

nBOOT1 bit	BOOT0 pin	Boot Mode
X	0	Select Main flash as the boot area
1	1	Select System memory as the boot area
0	1	Select SRAM memory as the boot area

4.3 LED indicator light

Figure 4-3 LED Functional schematic

4.4 Keys

Figure 4-4 Reset key function schematic

Figure 4-5 User Key function schematic

5. Guide to Using the Example

5.1 GPIO Toggle

5.1.1 Purpose of the Example

This sample program includes the following functions of the MCU:
- Learn to control LEDs using GPIOs
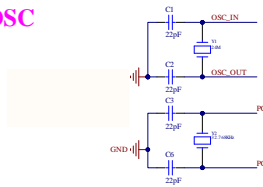- Learn to use SysTick to generate time delays

There is one LED on the development board, the LED is controlled by GPIO. This sample program will tell how to light up the LED.
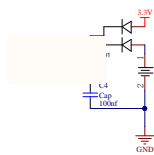
5.1.2 Execution Results

Download the program <GPIO_Toggle> to the development board and you will see the LED blinking.
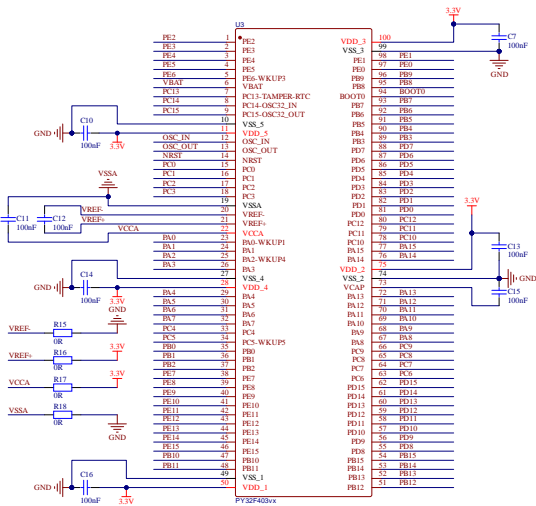
6. Schematic
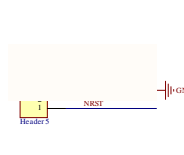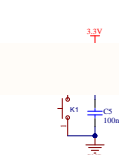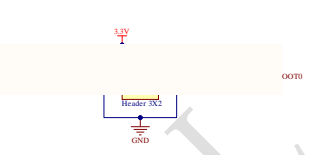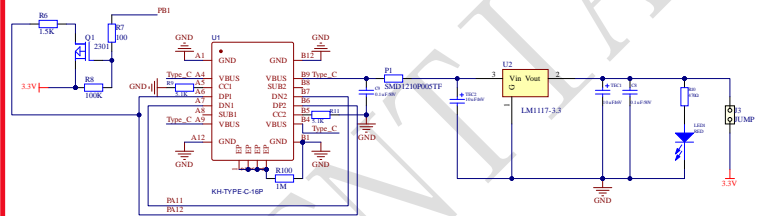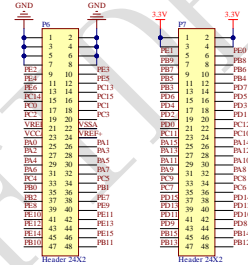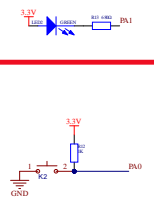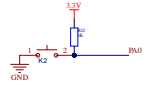
7. Updated History

Version	Content	Date
V1.0	Initial version	2022/10/08
V1.1	Updated the picture	2024/05/16

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