LEDs and buttons on STM32 MPU boards

Contents

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1 Introduction

STM32 MPU Evaluation boards and Discovery kits share the same usage for LEDs and buttons. The following paragraphs describe the functional mapping of the LEDs and buttons, so that you can refer to the respective board-hardware descriptions to determine to which GPIO each function is mapped:

- STM32MP157C-EV1 - hardware description for the Evaluation boards
- STM32MP157X-DKX - hardware description for the Discovery kits.

2 Description

LED color	Button label	Purpose
-	WAKEUP	This **button** allows the platform to be woken from any low-power mode[1]
Green (*)	USER1 (*)	This can be used at boot time as a **button**, by U-Boot, to enter USB programming mode with STM32CubeProgrammer. This avoids manipulation of the boot pins when a valid U-Boot image is already present in the board. It can be used at runtime as: • a **LED** or a **button** for Linux examples • a **button** for STM32Cube examples
Red (*)	USER2 (*)	This can be used at boot time as a **button**, by U-Boot, to enter Android Fastboot mode. It is also used as a **LED** to show Cortex-A boot information[2], then it can be used, at runtime, as a **button** for Linux examples. It is not used by STM32Cube.
Blue	-	Linux heartbeat **LED**, which blinks as long as the Linux[3] is alive[2] on the Cortex-A
Ora		

LED color	Button label	Purpose
n g e	-	STM32Cube[4] examples verdict **LED**.

(*) Both a LED and a button are connected to the same GPIO, with inverted logic for the LED control (so the LED is switched on when the GPIO output is set low).

3 References

- Power overview
- 2.02.1 How to diagnose a boot failure
- STM32MP15 Linux kernel overview
- STM32CubeMP1 architecture

Microprocessor Unit

General-Purpose Input/Output (A realization of open ended transmission between devices on an embedded level. These pins available on a processor can be programmed to be used to either accept input or provide output to external devices depending on user desires and applications requirements.)

Light-emitting diode

uniprocessor

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

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