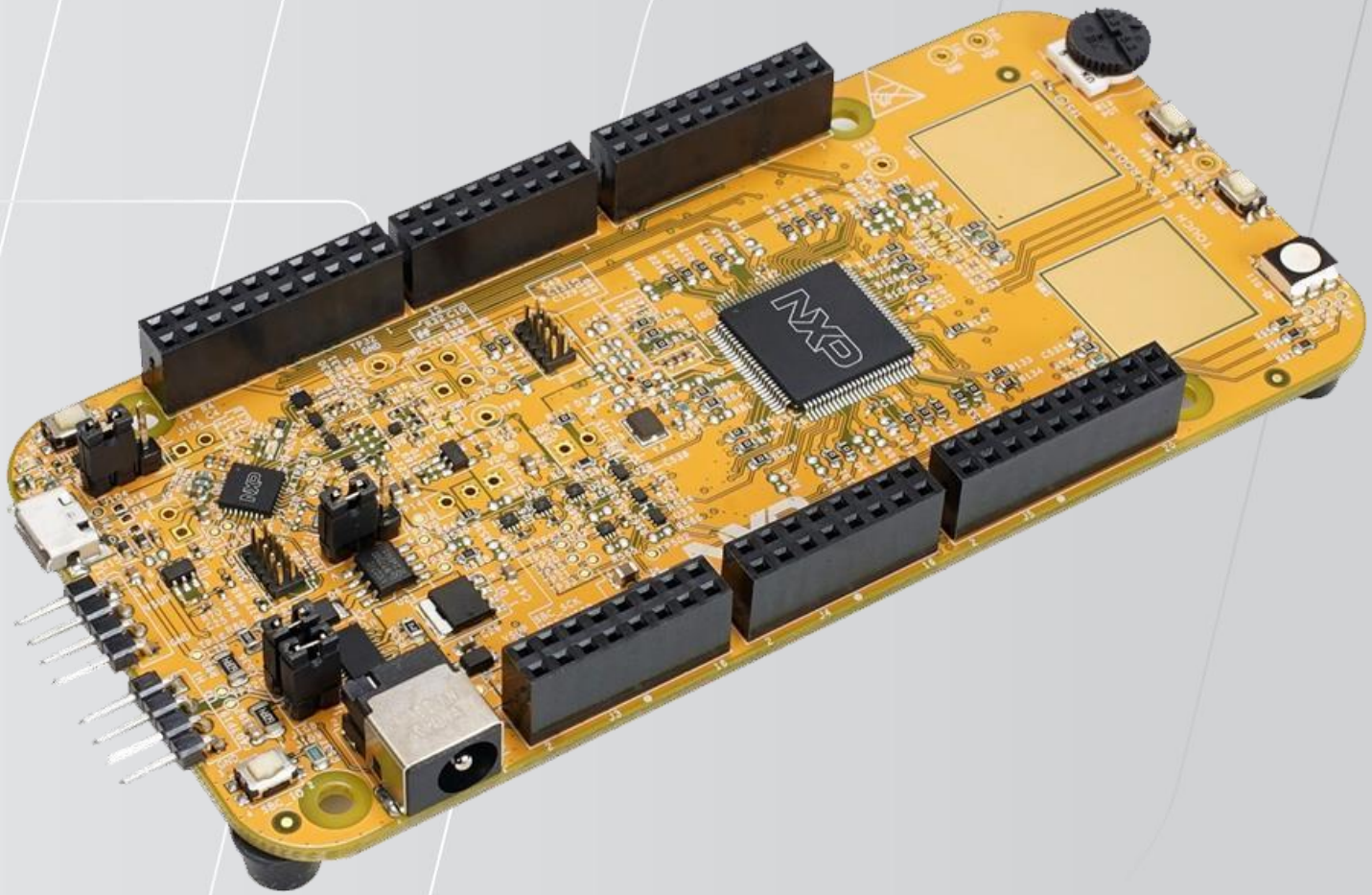
Mock Project



01 Dec 2023

OUTLINE

1. Input
2. Requirement
3. Output
4. Evaluation criteria
5. Deadline

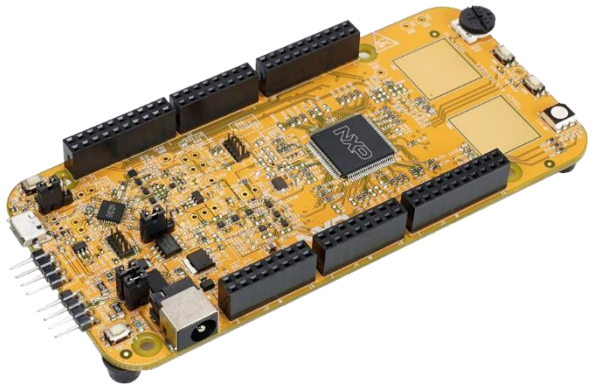
1. Input

Hardware:

+ 2 buttons (SW2 and SW3 onboard) + 1 LED + 1 USB UART CP2102

+ 8-digit seven-segment LED display

USB UART CP2102



S32K144EVB

8-digit seven-segment LED display

Requirement

Write program: The Digital Clock

SRS 1: Clock core 72MHz from clock source crystal 8MHz

SRS 2: Setting for LPUART1. Pin PTC6, Pin PTC7

SRS 2-1: Baud rate: 38400, 8-bits data, even parity, 1-bit stop.

SRS 2-2: UART clock is SPLL Div2

SRS 3: Setting for SPI using Pin E0, Pin E1, Pin E2, Pin E6

SRS 4: After power on, display the time: 18-00-00 (date: 01.01.1991), the LED Green status is OFF

SRS 5: Setting date, time, alarm by UART1 serial communication.

SRS 6: Select mode display via the button

Press Button 1

SRS 6-1: Display the date

SRS 6-2: Display the time

SRS 6-3: Display the alarm

Press Button 2

Decrease bright of LED 7 SEG which 5 level from maximum to off the Led

SRS 7: When alarm occurred, the LED Green blink with period 0.5 (s) in alarm time 10 (s). In alarm time, if pressed any button, the LED Green is OFF immediately.

2. Output

1. Keil C project(.zip)
2. PowerPoint report
3. Evaluation criteria

No.	Criteria
1	PowerPoint Report
2	Presentation
3	Demo
4	Clean code
5	Logic code
6	Audit

4. Deadline


Thank you