

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern, layered effect. The shapes are concentrated on the left and right sides of the frame, leaving a large white central area.

LED

電腦USB線 插這裡

ICE Bridge
Nu-Link

CAN/LIN

UART
5V DC
Power

USB
Device

WAU8822
Codec

Line out

Line in

SW int

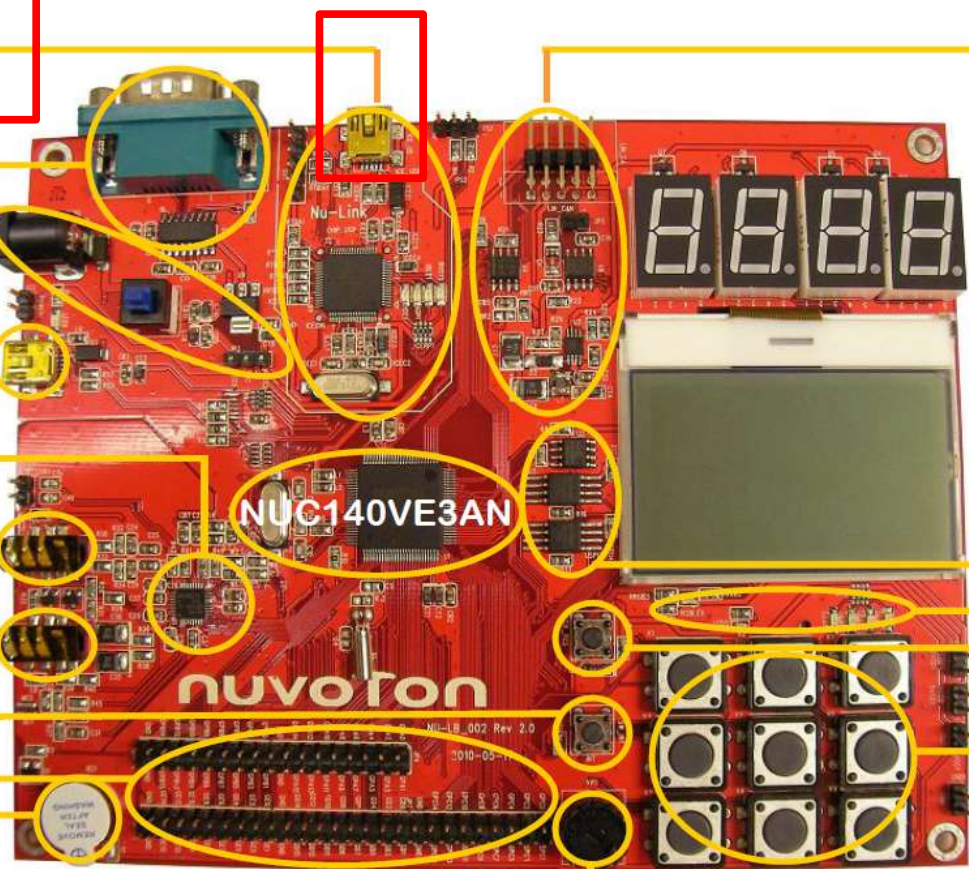
GPIO
Buzzer

Variable
Resistance

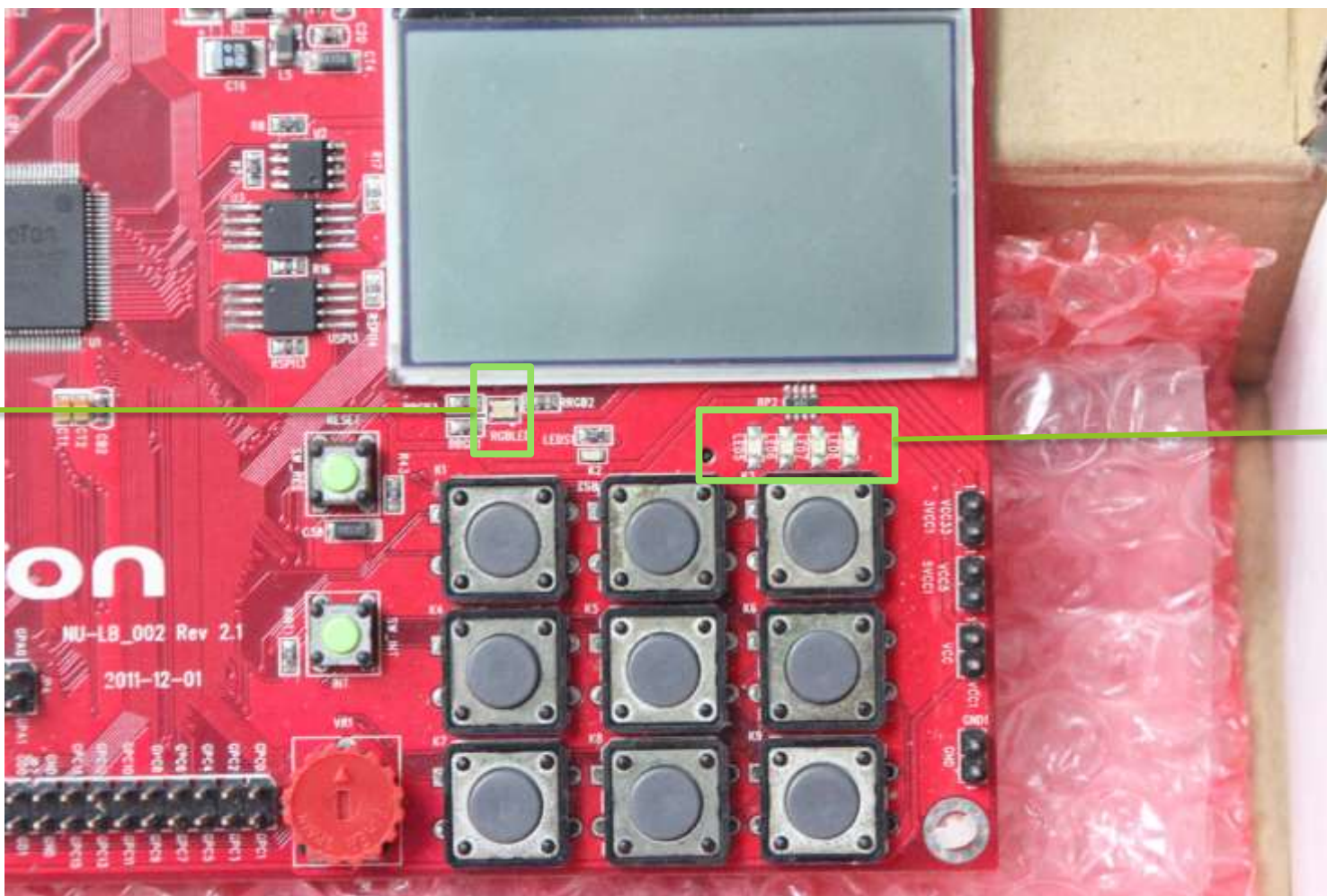
NUC140VE3AN

EEPROM
SPI Flash
LED
Reset

3x3 Key Matrix



RGB LED



單色 LED

LED

接腳類型及編號

	軟體參數名稱
RGB LED	E_GPA12 (Blue)
	E_GPA13 (Green)
	E_GPA14 (Red)
單色 LED	E_GPC12-15 (左到右)

1 是暗，0是亮

舉例：單色 LED 只有最右邊燈是亮的

暫存器

Bit	15	14	13	12	1	0
	0	1	1	1	0	0

0x7000

控制

▶ 暫存器

- ▶ E_GPA , E_GPC

▶ 暫存器之存取

- ▶ 指定某一暫存器

- ▶ `tGPIO_A = (GPIO_T *)((uint32_t)GPIOA + (0*0x40));`

- ▶ `tGPIO_C = (GPIO_T *)((uint32_t)GPIOA + (2*0x40));`

- ▶ 於該暫存器中存取資料

- ▶ `tGPIO_A->DOUT = 0x7000;`

舉例

※除了單色LED 只有最右邊燈是亮的，其他燈都暗的。

```
int32_t main (void)
{
    GPIO_T * tGPIO_C;
    tGPIO_C = (GPIO_T *)((uint32_t)GPIOA + (2*0x40));

    while(1)
    {
        tGPIO_C->DOUT = 0x7000;
    }
}
```

作業

- ▶ 讓RGB LED燈依序顯示藍色綠色紅色
及四個單色LED燈由左至右依序循環發光