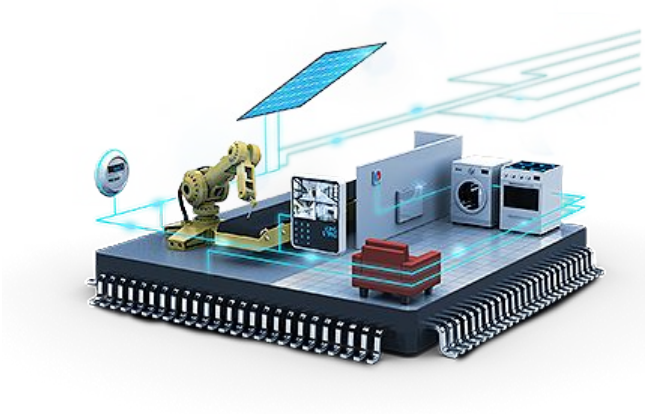
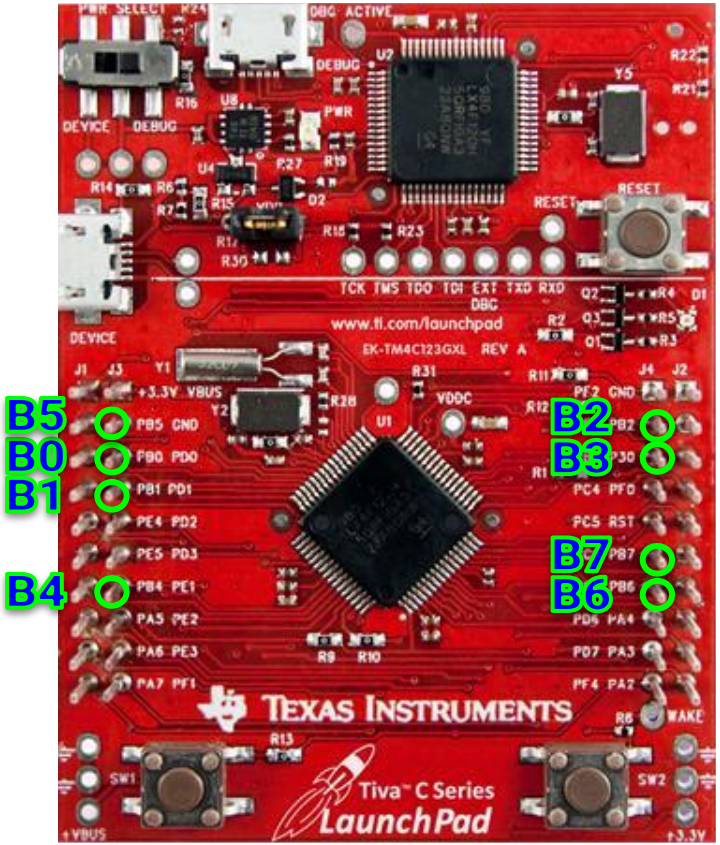
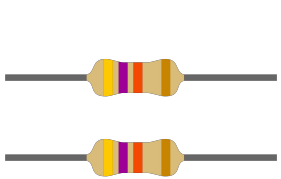
7 Parçalı Gösterge

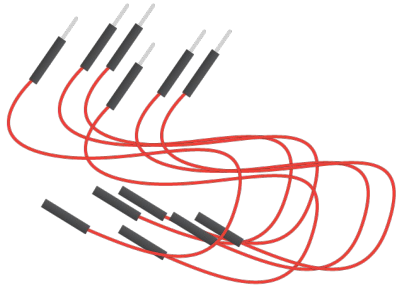


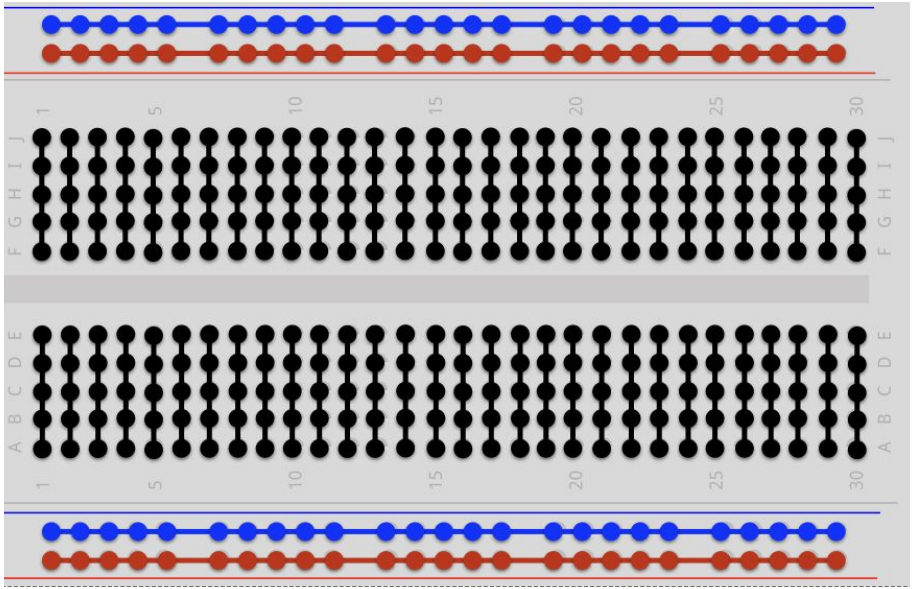
Suhap SAHIN

7 Parçalı Gösterge

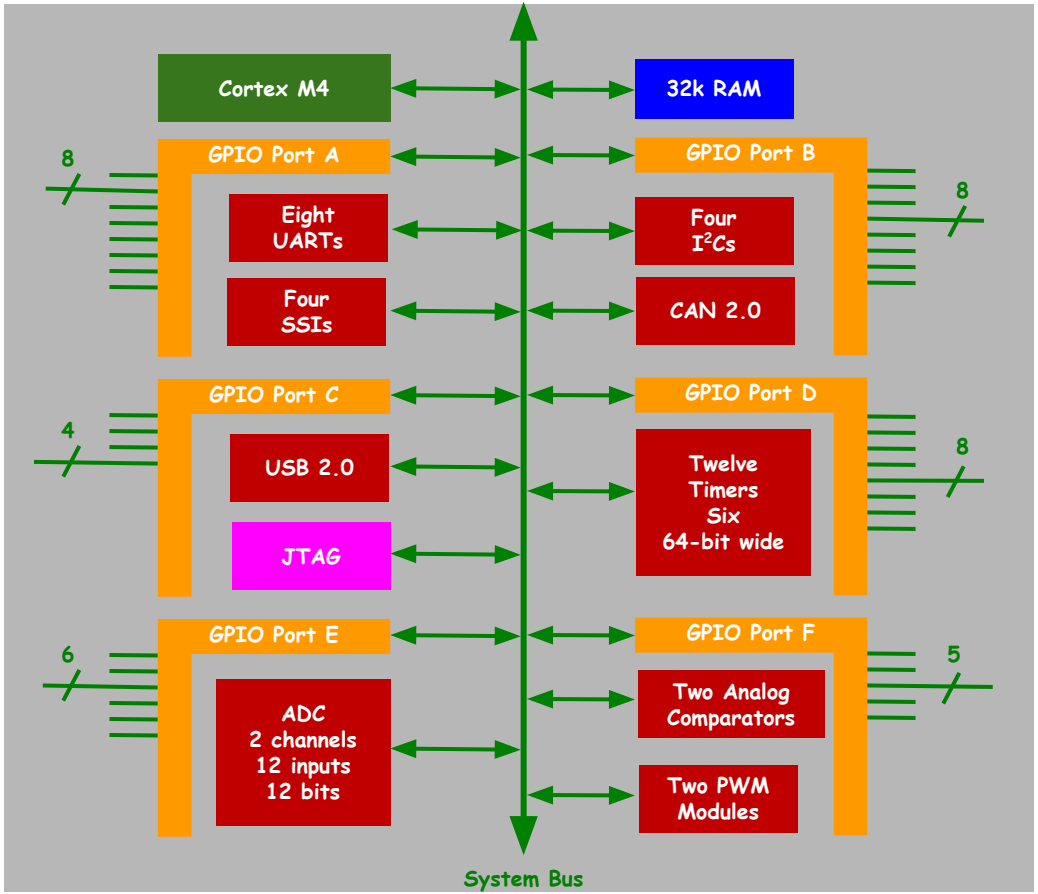




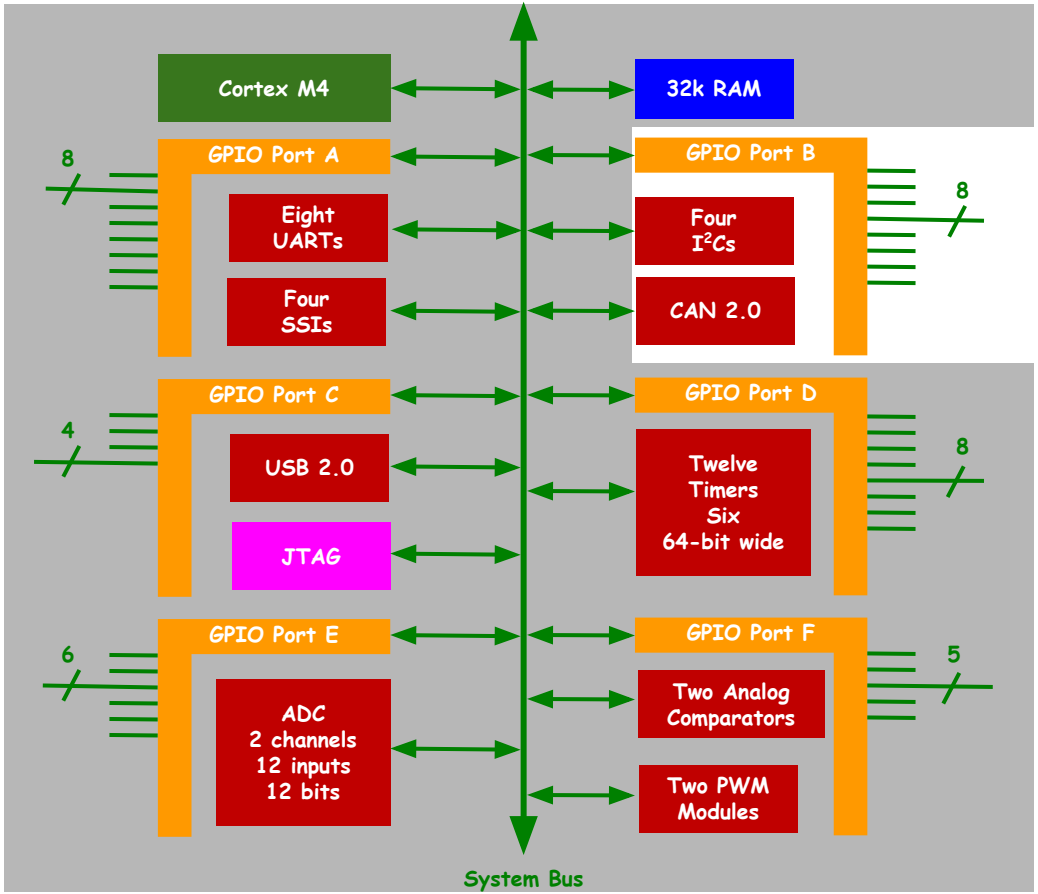




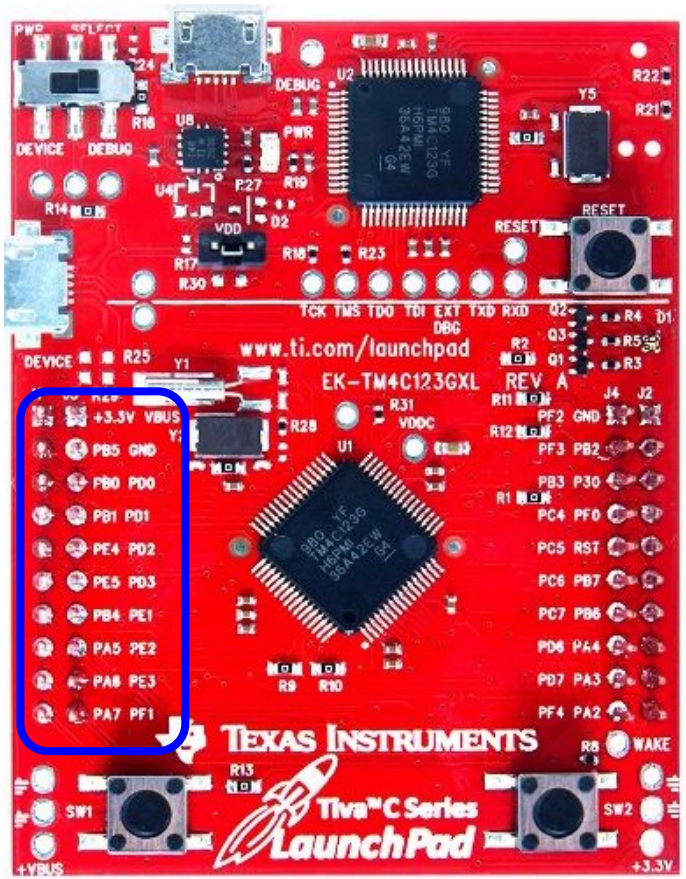
7 Parçalı Gösterge

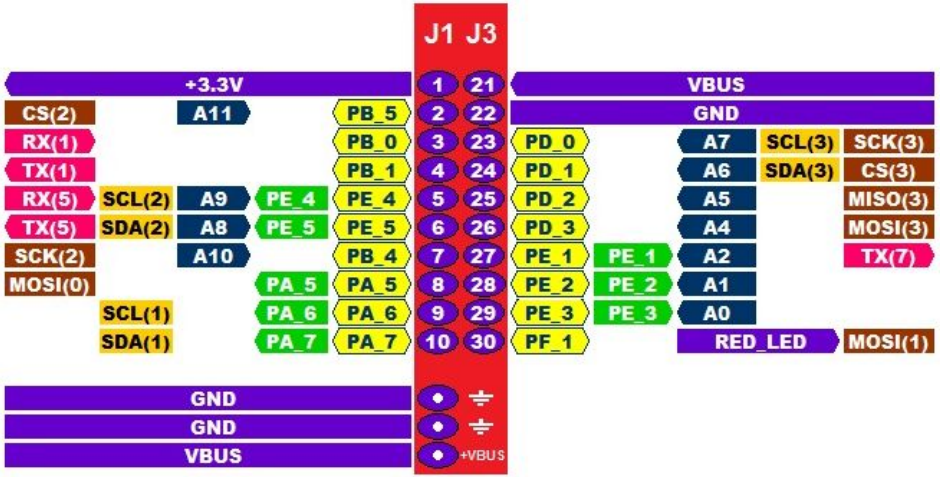


7 Parçalı Gösterge



Tiva & Stellaris Port Baglantıları





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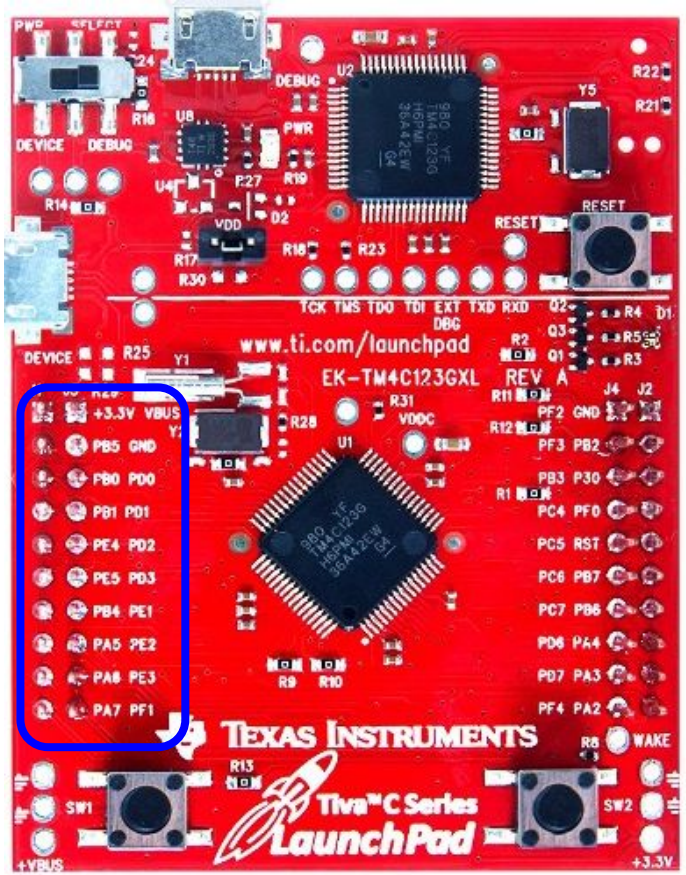

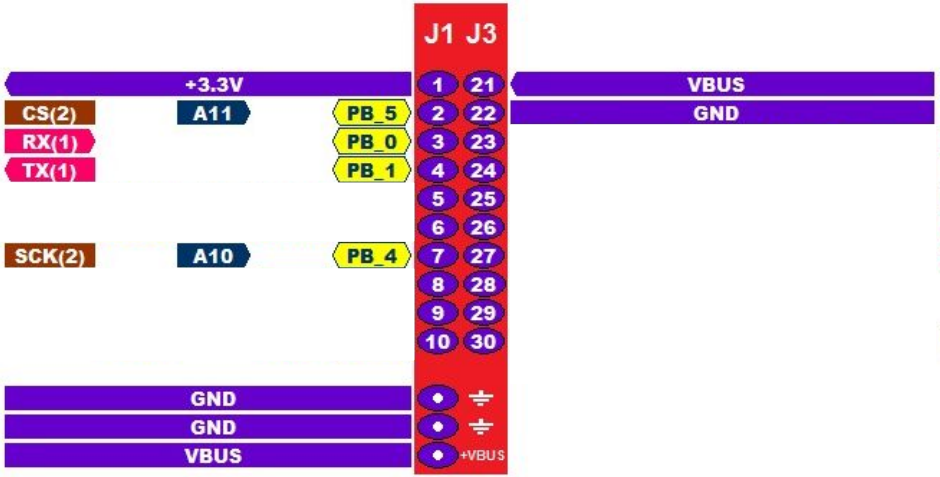

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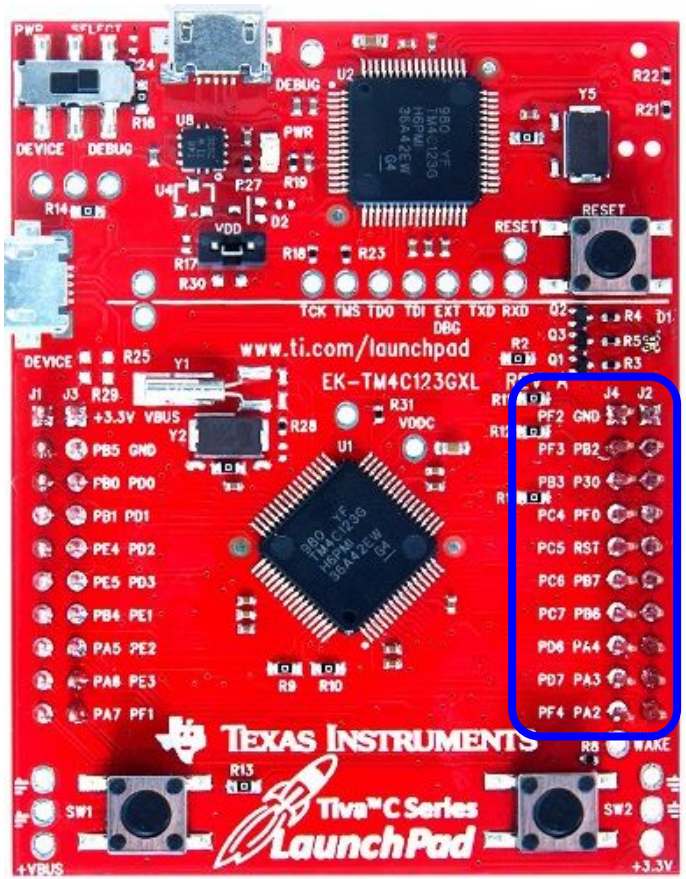
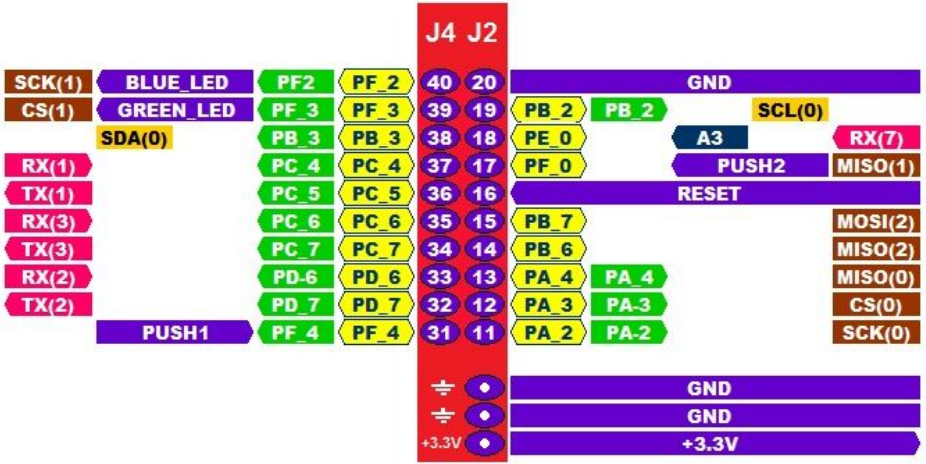
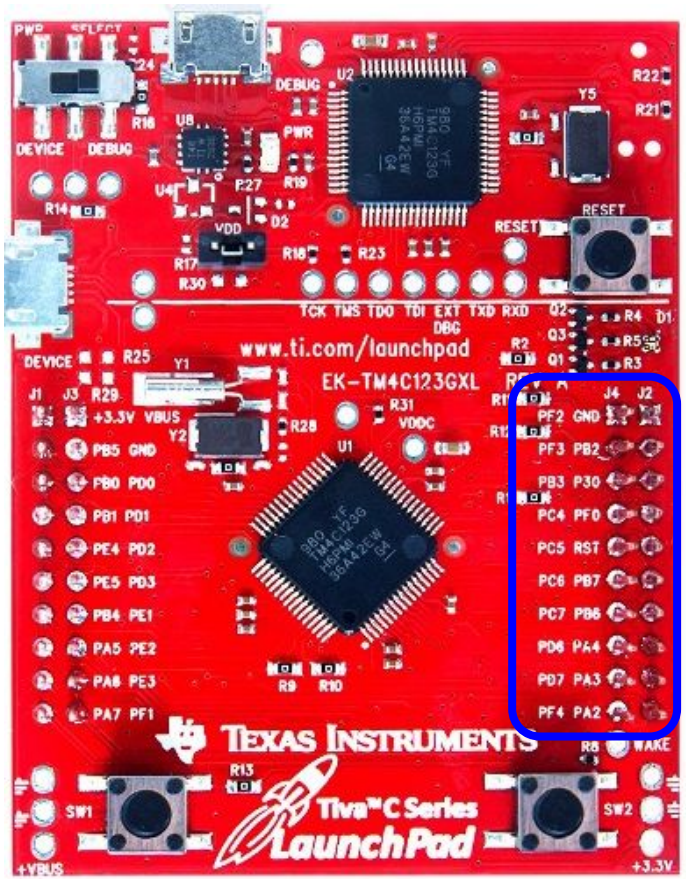
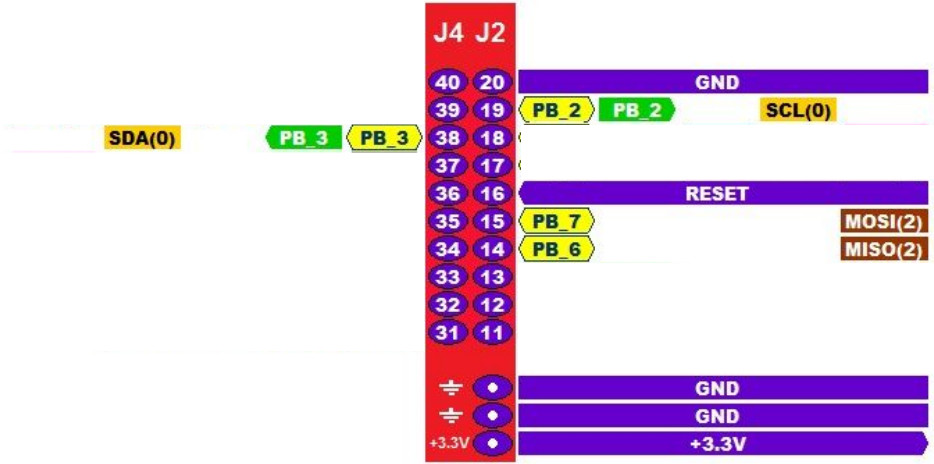


Hardware
digitalRead() and digitalWrite() PORTS
analogRead()
analogWrite()
I²C (TWI)
SPI
Hardware Serial

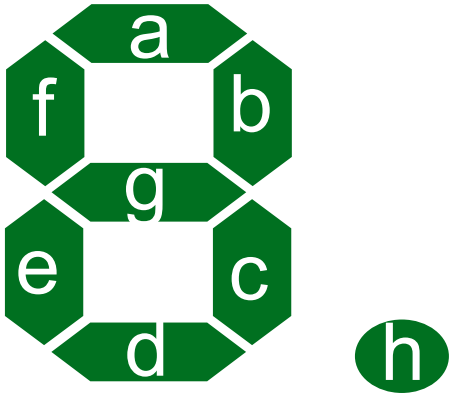


Tiva & Stellaris Port Baglantıları

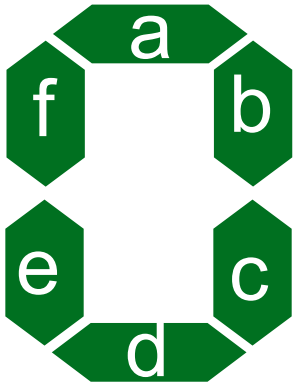




7 Parçalı Gösterge



7 Parçalı Gösterge



SIFIR

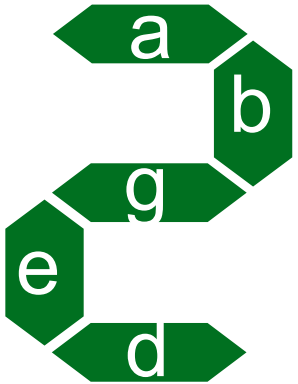
h	g	f	e	d	c	b	a
0	0	1	1	1	1	1	1

7 Parçalı Gösterge

h	g	f	e	d	c	b	a
0	0	0	0	0	1	1	0

BİR

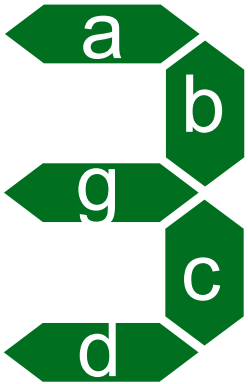
7 Parçalı Gösterge



iKi

h	g	f	e	d	c	b	a
0	1	0	1	1	0	1	1

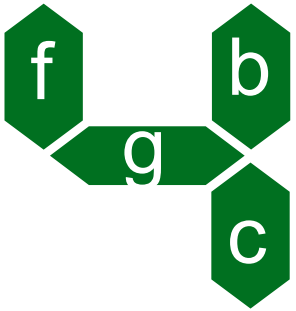
7 Parçalı Gösterge



üç

h	g	f	e	d	c	b	a
0	1	0	0	1	1	1	1

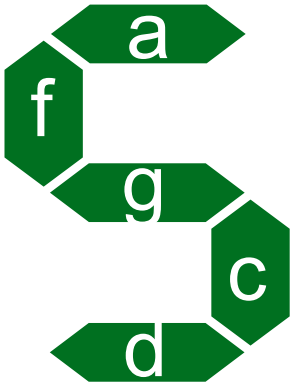
7 Parçalı Gösterge



h	g	f	e	d	c	b	a
0	1	1	0	0	1	1	0

DÖRT

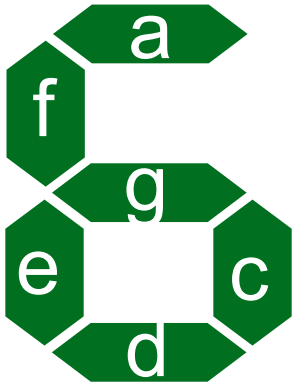
7 Parçalı Gösterge



BEŞ

h	g	f	e	d	c	b	a
0	1	1	0	1	1	0	1

7 Parçalı Gösterge



ALTI

h	g	f	e	d	c	b	a
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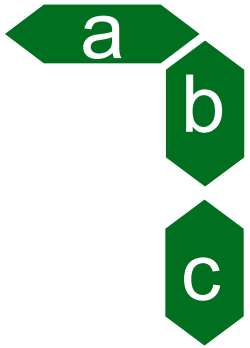
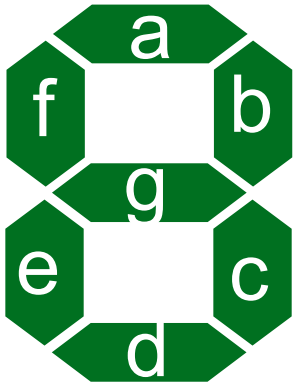
7 Parçalı Gösterge



h	g	f	e	d	c	b	a
0	0	0	0	0	1	1	1

YEDİ

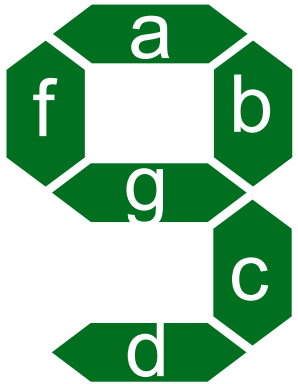
7 Parçalı Gösterge



SEKİZ

h	g	f	e	d	c	b	a
0	1	1	1	1	1	1	1

7 Parçalı Gösterge



h	g	f	e	d	c	b	a
0	1	1	0	1	1	1	1

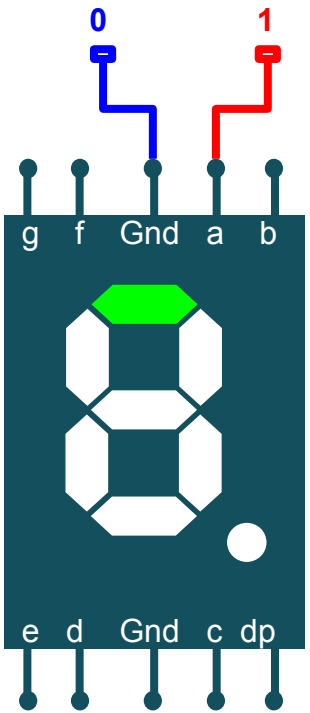
DOKUZ

7 Parçalı Gösterge

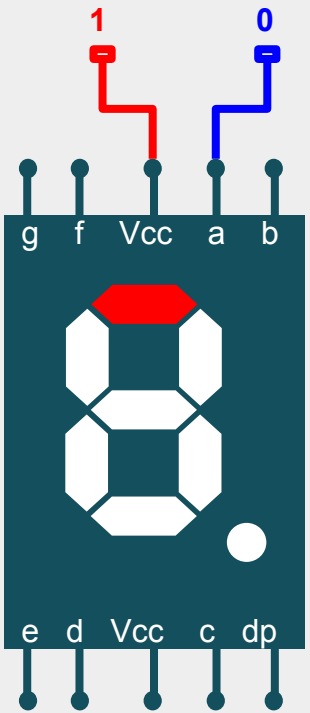
0	0b0111111
1	0b0000110
2	0b1011011
3	0b1001111
4	0b1100110
5	0b1101101
6	0b1111101
7	0b0000111
8	0b1111111
9	0b1101111

7 Parçalı Gösterge

Ortak Katot



Ortak Anod



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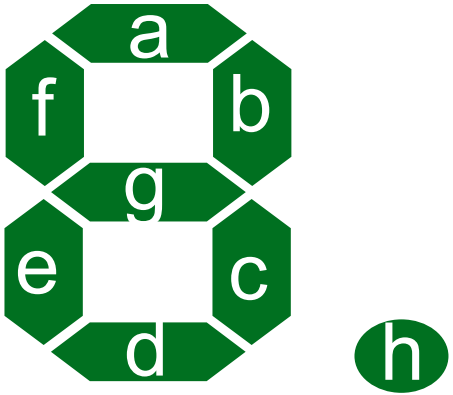

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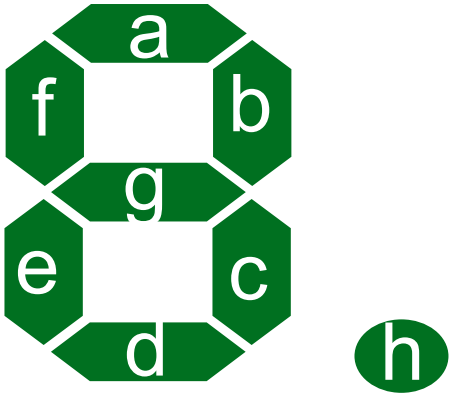

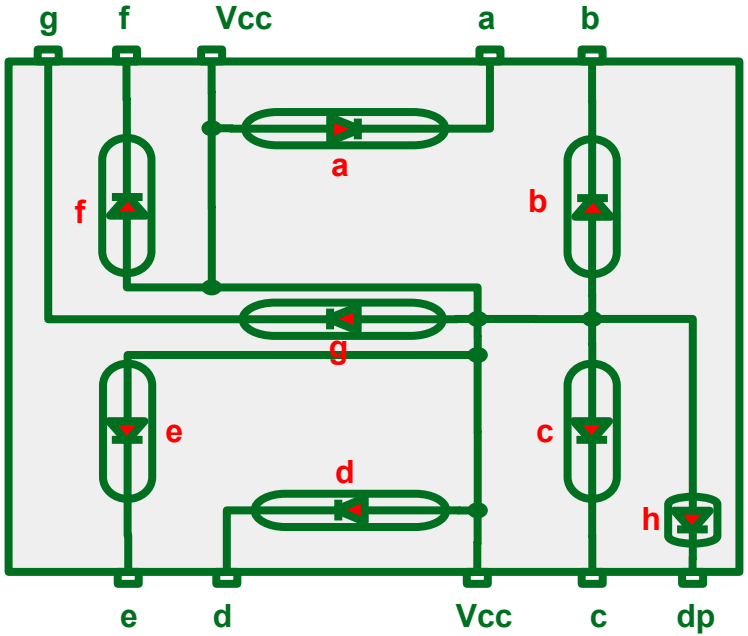

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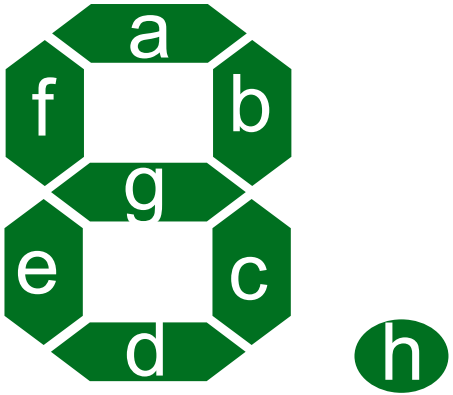

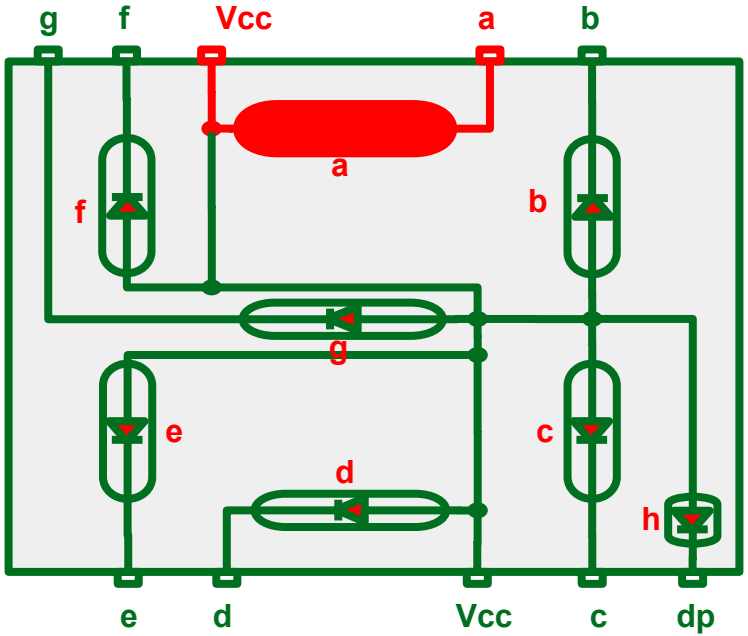

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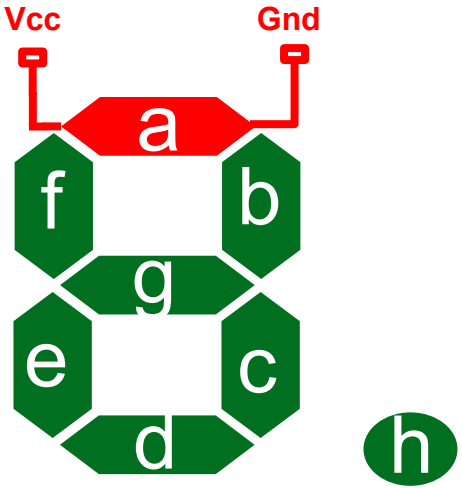

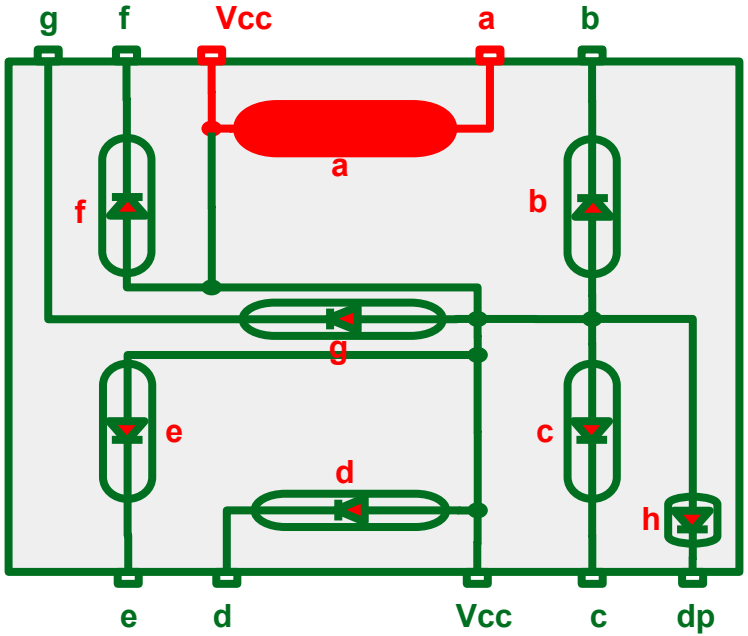

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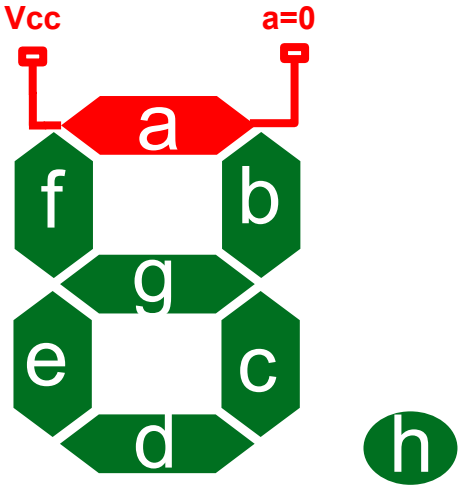
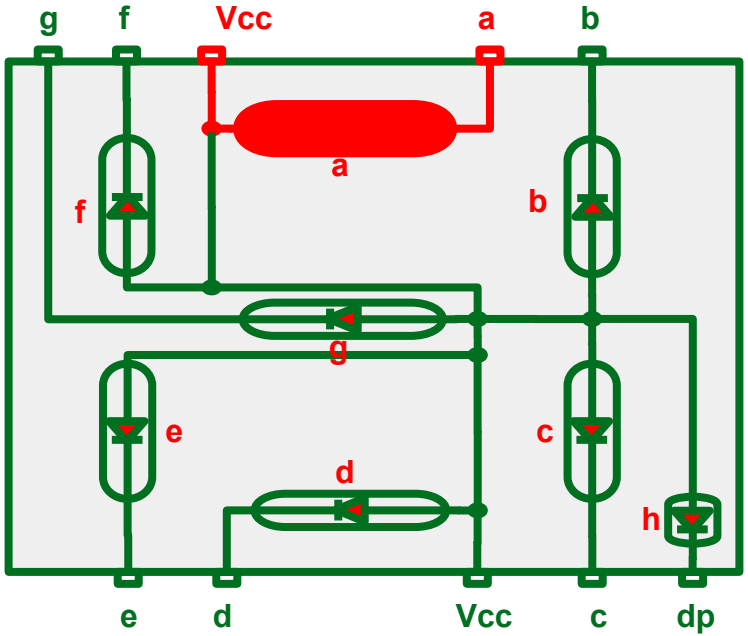
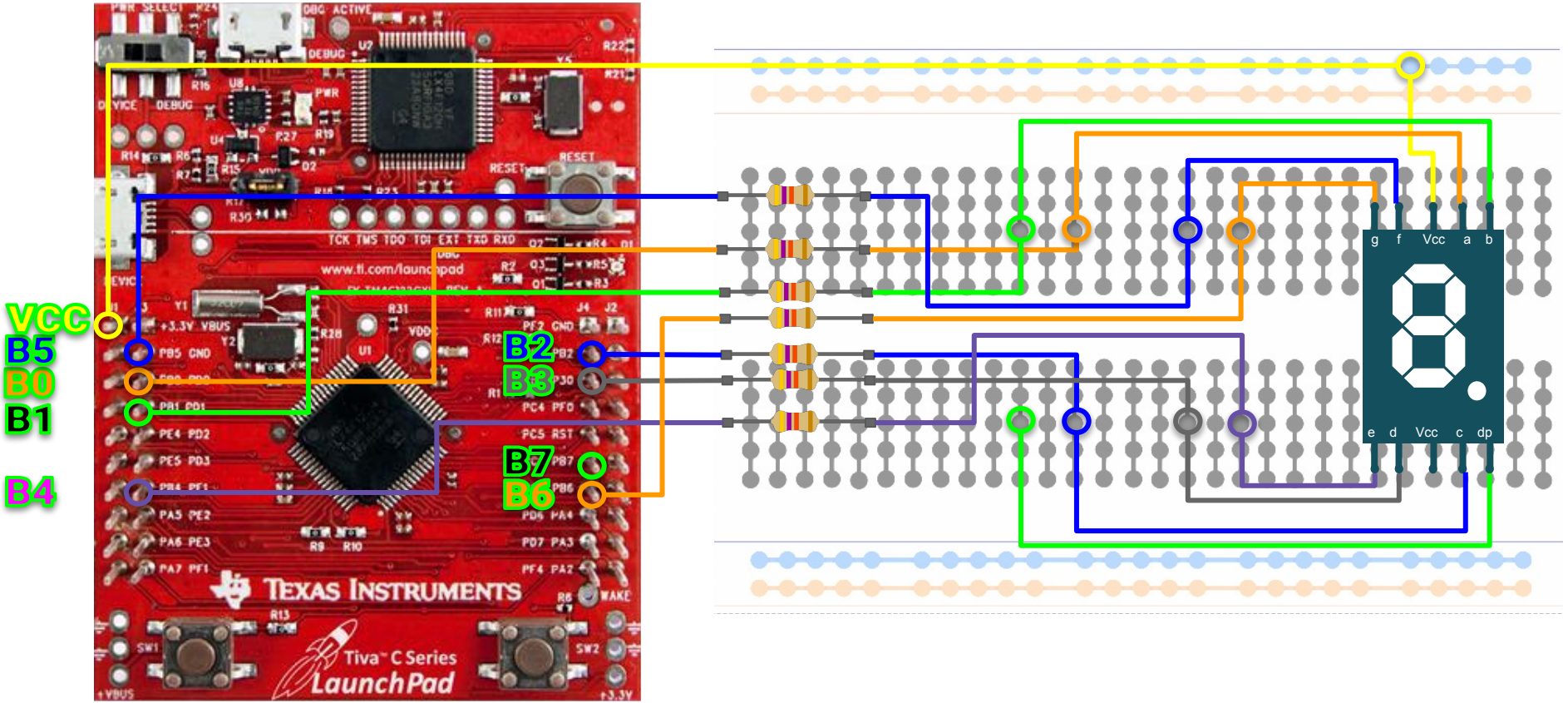
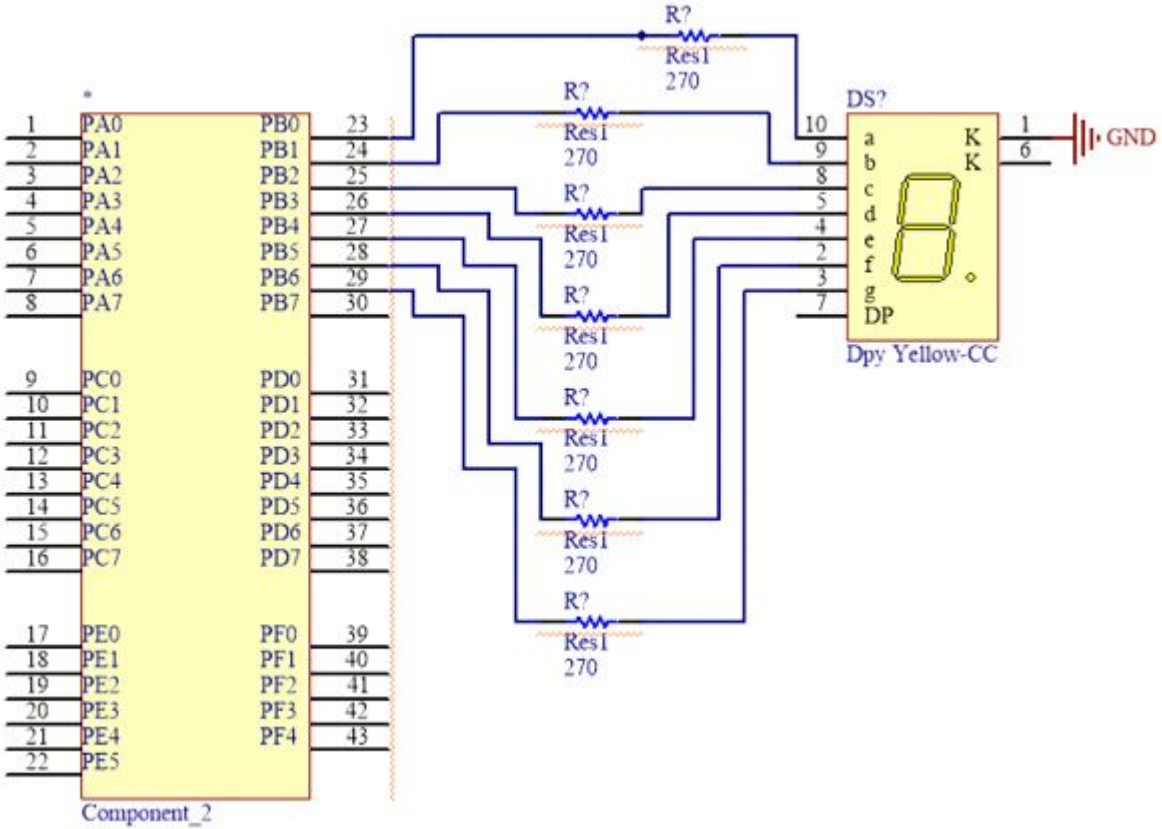




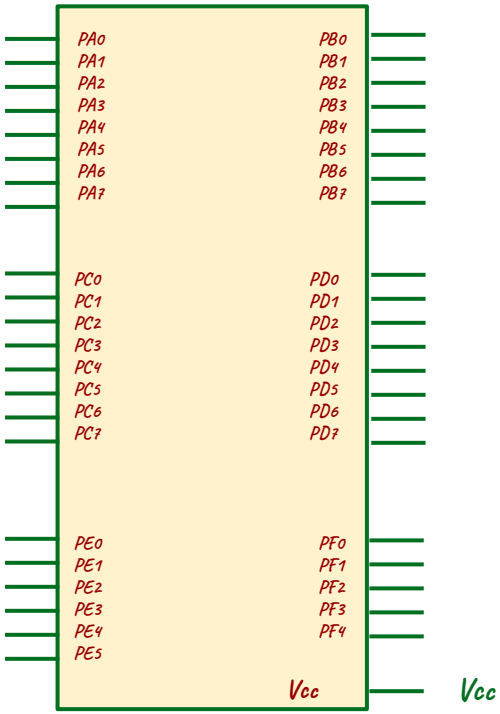
Elektronik Devre Kurulumu

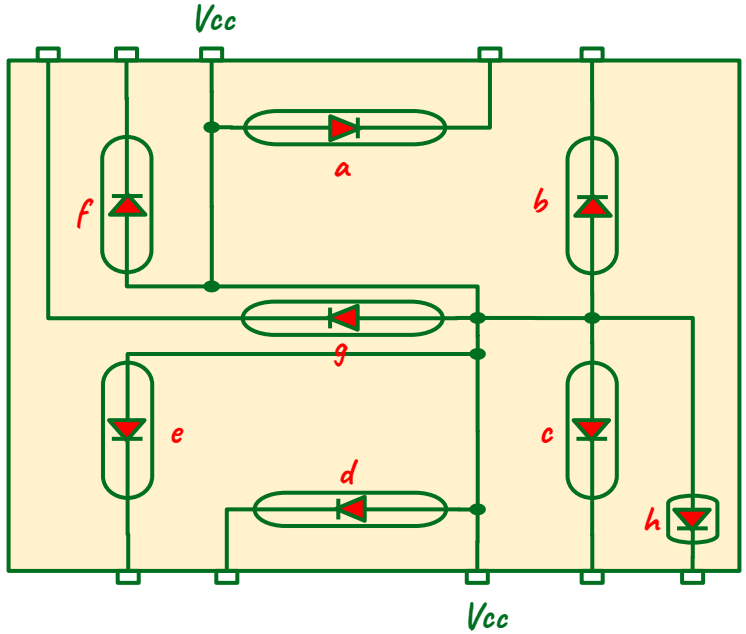


Elektronik Devre Kurulumu



Elektronik Devre Kurulumu





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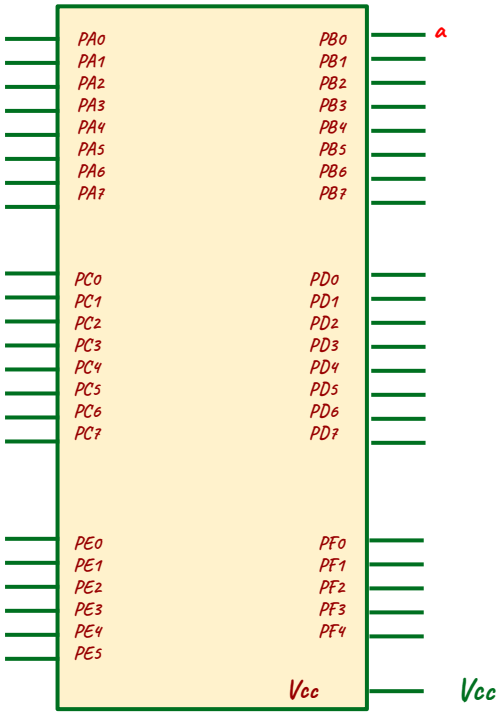

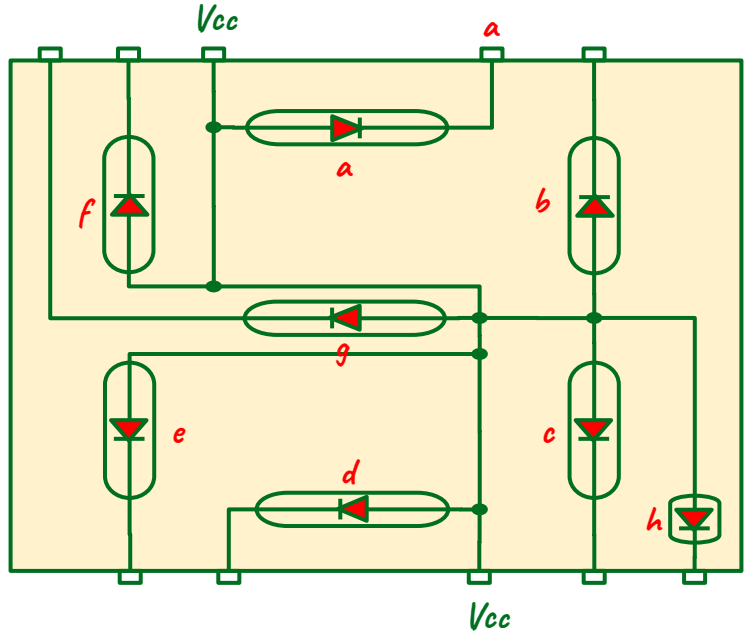

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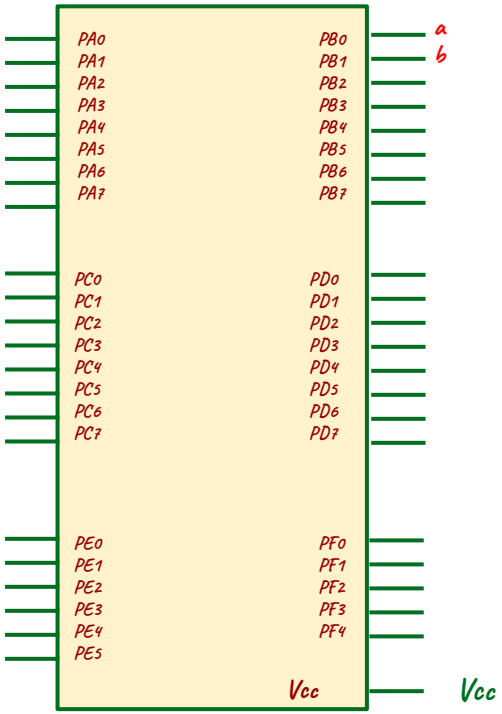
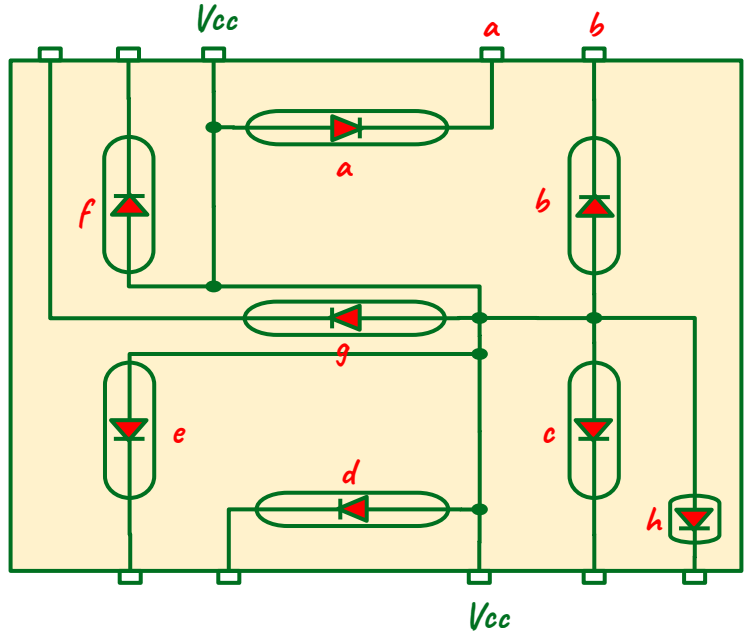
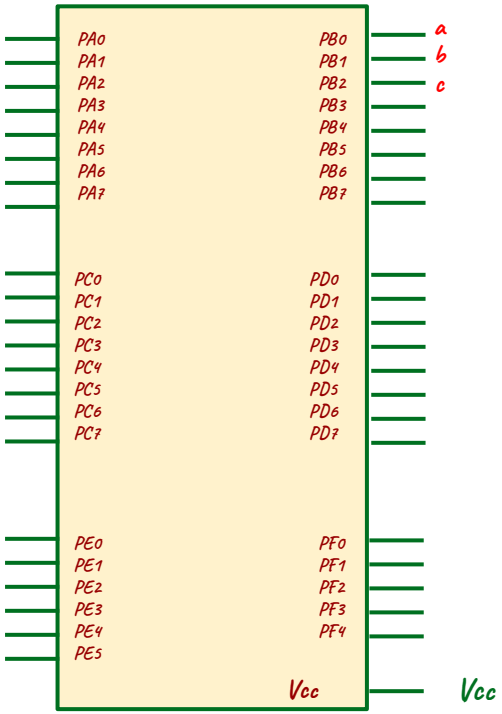
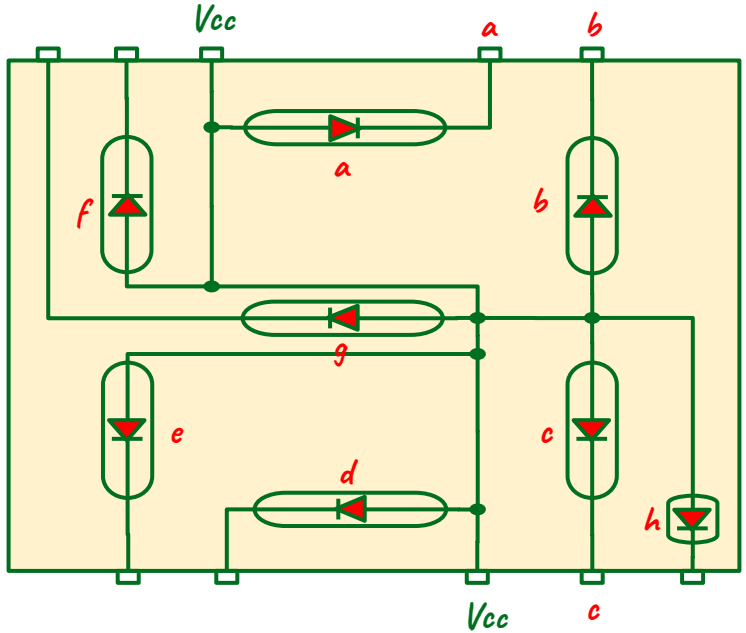




Elektronik Devre Kurulumu





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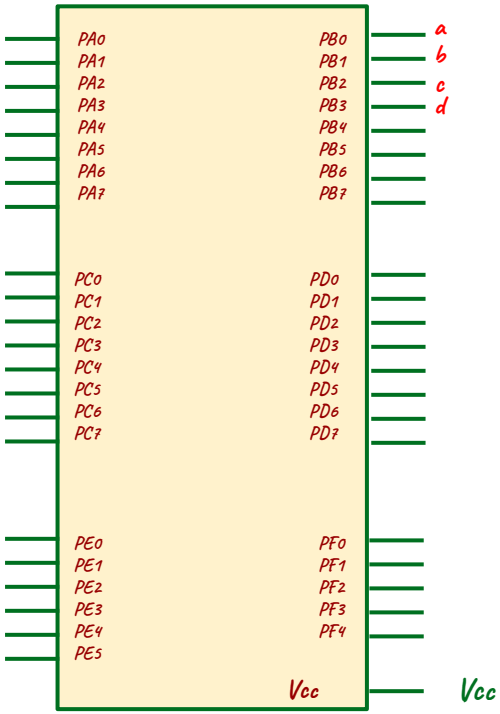
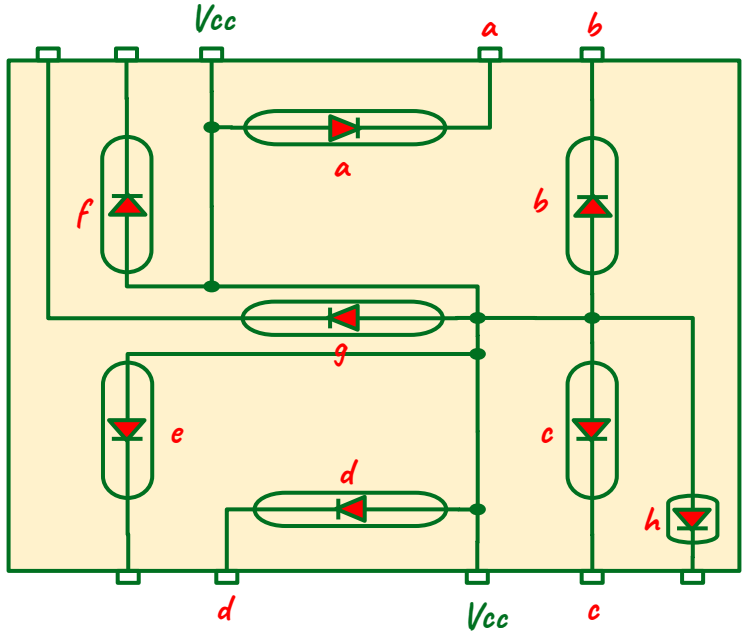
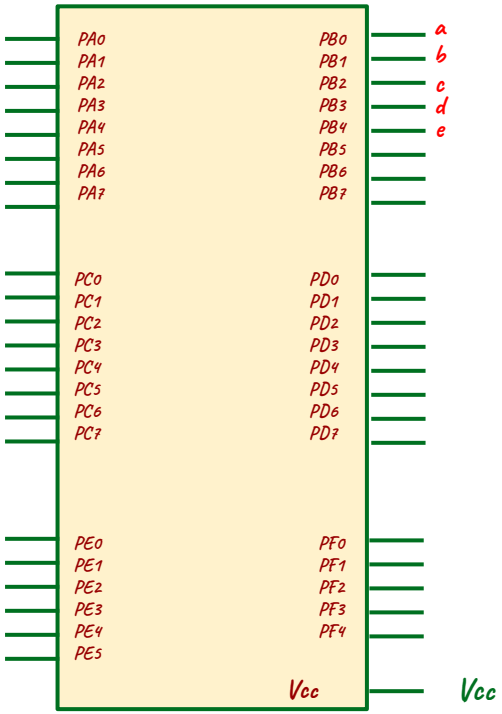
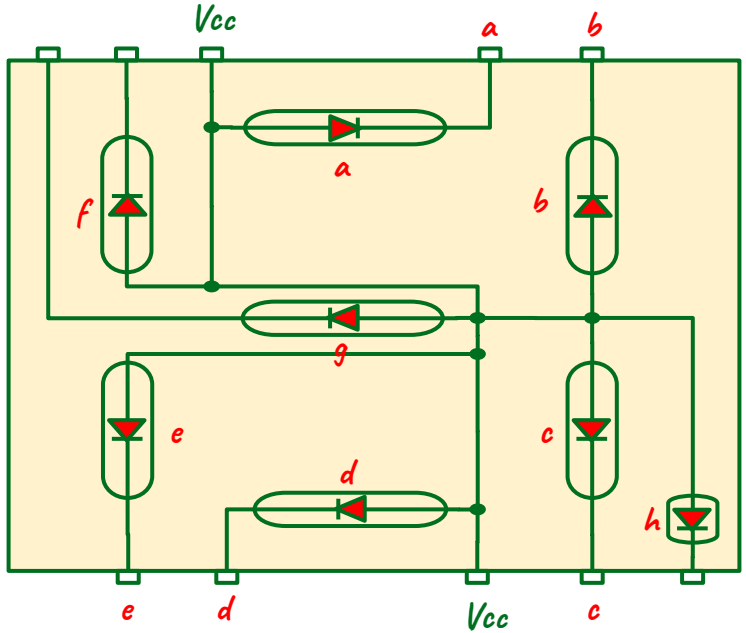




Elektronik Devre Kurulumu





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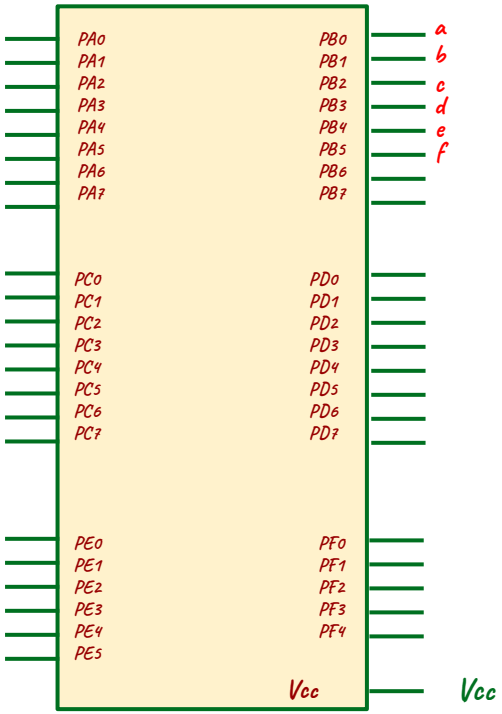
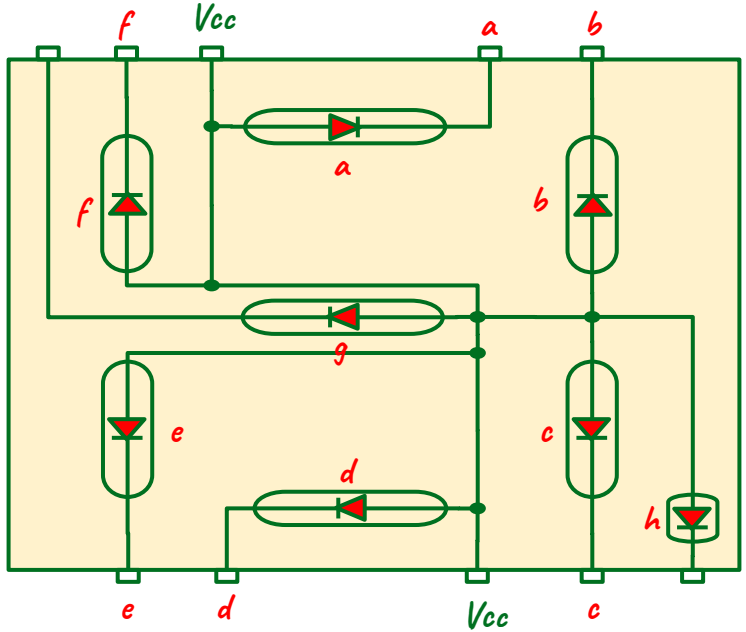
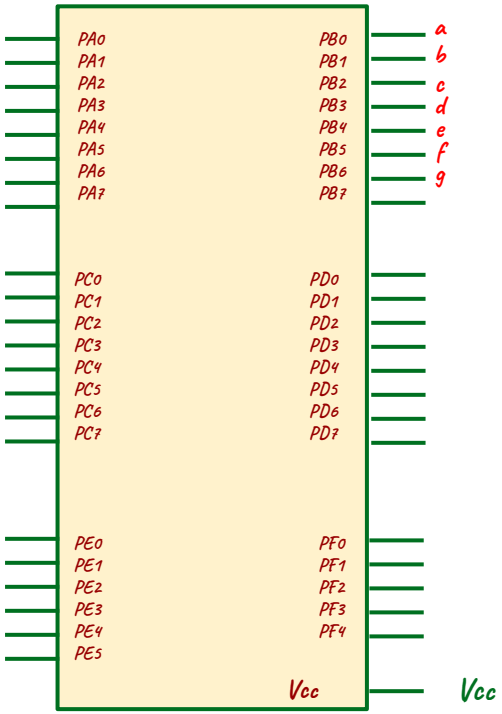
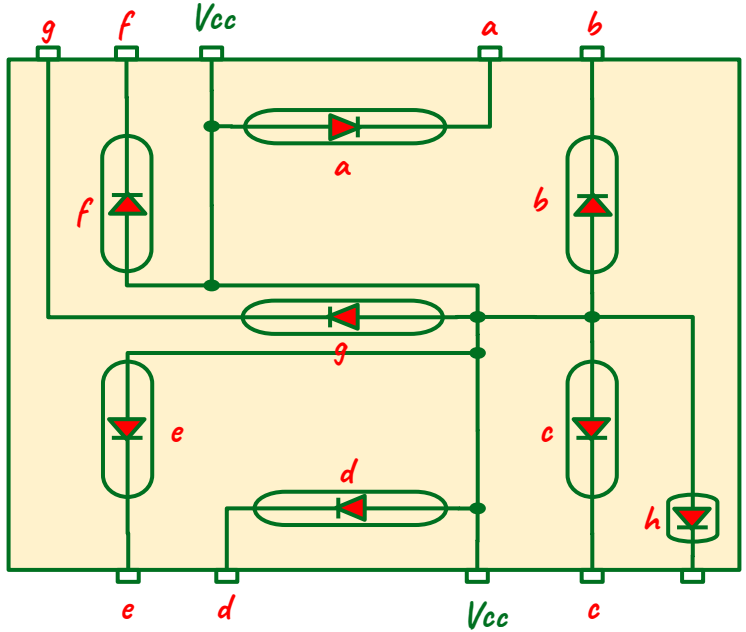


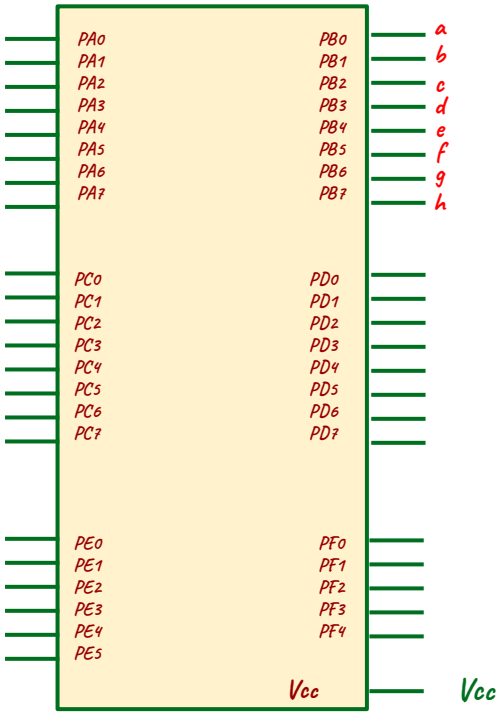


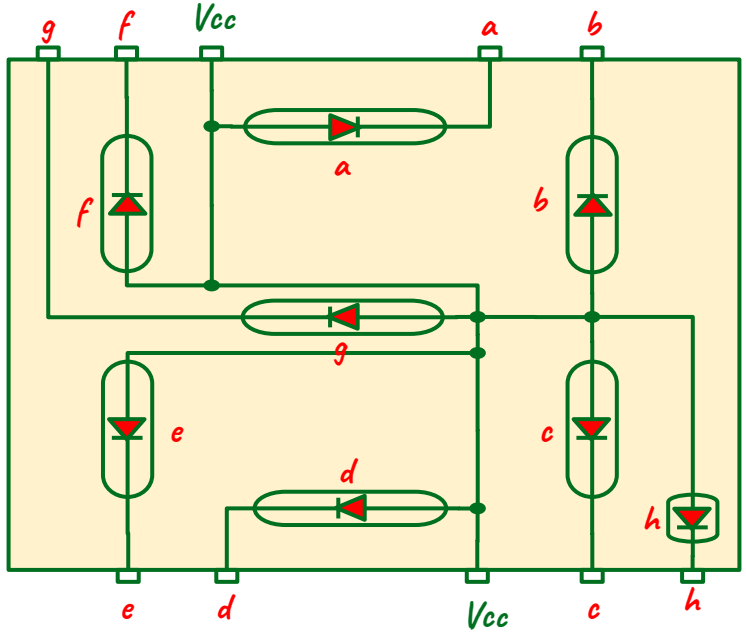
Elektronik Devre Kurulumu





Elektronik Devre Kurulumu





Elektronik Devre Kurulumu

```
#include <stdint.h>
#include "inc/tm4c123gh6pm.h"
void init_port_B() {
        volatile unsigned long delay;
        SYSCTL_RCGC2_R |= SYSCTL_RCGC2_GPIOB;          // Port B'nin saati aktifleştir
        delay = SYSCTL_RCGC2_R;                        // Gecikme



}
```

Elektronik Devre Kurulumu

```
#include <stdint.h>
#include "inc/tm4c123gh6pm.h"
void init_port_B() {
        volatile unsigned long delay;
        SYSCTL_RCGC2_R |= SYSCTL_RCGC2_GPIOB;          // Port B'nin saati aktifleştir
        delay = SYSCTL_RCGC2_R;                        // Gecikme
        GPIO_PORTB_DIR_R |= 0xFF;                      // Port B'nin tüm bitleri cikis olarak ayarla


}
```

Elektronik Devre Kurulumu

```
#include <stdint.h>
#include "inc/tm4c123gh6pm.h"
void init_port_B() {
        volatile unsigned long delay;
        SYSCTL_RCGC2_R |= SYSCTL_RCGC2_GPIOB;          // Port B'nin saati aktifleştir
        delay = SYSCTL_RCGC2_R;                        // Gecikme
        GPIO_PORTB_DIR_R |= 0xFF;                      // Port B'nin tüm bitleri cikis olarak ayarla
        GPIO_PORTB_AFSEL_R &= ~0xFF;                   // Alternatif fonksiyonlar kapat

}
```

Elektronik Devre Kurulumu

```
#include <stdint.h>
#include "inc/tm4c123gh6pm.h"
void init_port_B() {
        volatile unsigned long delay;
        SYSCTL_RCGC2_R |= SYSCTL_RCGC2_GPIOB;          // Port B'nin saati aktifleştir
        delay = SYSCTL_RCGC2_R;                        // Gecikme
        GPIO_PORTB_DIR_R |= 0xFF;                      // Port B'nin tüm bitleri cikis olarak ayarla
        GPIO_PORTB_AFSEL_R &= ~0xFF;                   // Alternatif fonksiyonlar kapat
        GPIO_PORTB_DEN_R |= 0xFF;                      // Tüm Port B için Digital çalışmayı aktifleştir
}
```

Seven Segment Tablosu

0	0b0111111
1	0b0000110
2	0b1011011
3	0b1001111
4	0b1100110
5	0b1101101
6	0b1111101
7	0b0000111
8	0b1111111
9	0b1101111

Seven Segment Tablosu

```
uint8_t kodlar[10] = {
    ~0b0111111,
    ~0b0000110,
    ~0b1011011,
    ~0b1001111,
    ~0b1100110,
    ~0b1101101,
    ~0b1111101,
    ~0b0000111,
    ~0b1111111,
    ~0b1101111
};
```


```
0b0111111
0b0000110
0b1011011
0b1001111
0b1100110
0b1101101
0b1111101
0b0000111
0b1111111
0b1101111
```

Seven Segment Tablosu

```
int main() {
        volatile unsigned long delay;









}
```

Seven Segment Tablosu

```
int main() {
        volatile unsigned long delay;
        uint8_t kodlar[10] = {
           ~0b0111111,
           ~0b0000110,
           ~0b1011011,
           ~0b1001111,
           ~0b1100110,
           ~0b1101101,
           ~0b1111101,
           ~0b0000111,
           ~0b1111111,
           ~0b1101111
        };









}
```

Seven Segment Tablosu

```
int main() {
        volatile unsigned long delay;
        uint8_t kodlar[10] = {
           ~0b0111111,
           ~0b0000110,
           ~0b1011011,
           ~0b1001111,
           ~0b1100110,
           ~0b1101101,
           ~0b1111101,
           ~0b0000111,
           ~0b1111111,
           ~0b1101111
        };
        init_port_B();
        int sayi = 0;




}
```

Seven Segment Tablosu

```
int main() {
        volatile unsigned long delay;
        uint8_t kodlar[10] = {
           ~0b0111111,
           ~0b0000110,
           ~0b1011011,
           ~0b1001111,
           ~0b1100110,
           ~0b1101101,
           ~0b1111101,
           ~0b0000111,
           ~0b1111111,
           ~0b1101111
        };
        init_port_B();
        int sayi = 0;
        while (1) {



        }
}
```

Seven Segment Tablosu

```
int main() {
        volatile unsigned long delay;
        uint8_t kodlar[10] = {
           ~0b0111111,
           ~0b0000110,
           ~0b1011011,
           ~0b1001111,
           ~0b1100110,
           ~0b1101101,
           ~0b1111101,
           ~0b0000111,
           ~0b1111111,
           ~0b1101111
        };
        init_port_B();
        int sayi = 0;
        while (1) {
           GPIO_PORTB_DATA_R = kodlar[sayi];


        }
}
```

Seven Segment Tablosu

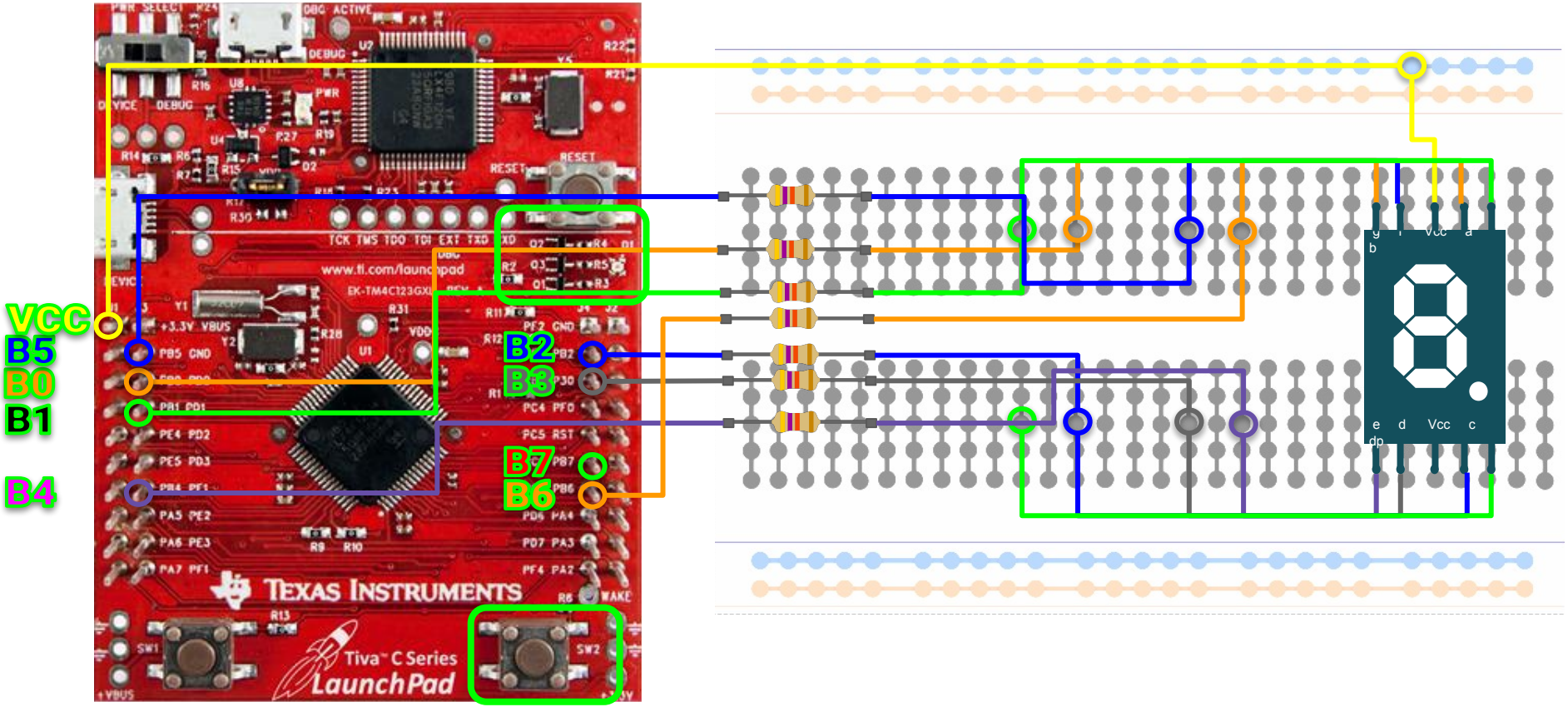
```
int main() {
        volatile unsigned long delay;
        uint8_t kodlar[10] = {
           ~0b0111111,
           ~0b0000110,
           ~0b1011011,
           ~0b1001111,
           ~0b1100110,
           ~0b1101101,
           ~0b1111101,
           ~0b0000111,
           ~0b1111111,
           ~0b1101111
        };
        init_port_B();
        int sayi = 0;
        while (1) {
           GPIO_PORTB_DATA_R = kodlar[sayi];
           for (delay = 0 ; delay < 1000000 ; delay++);

        }
}
```

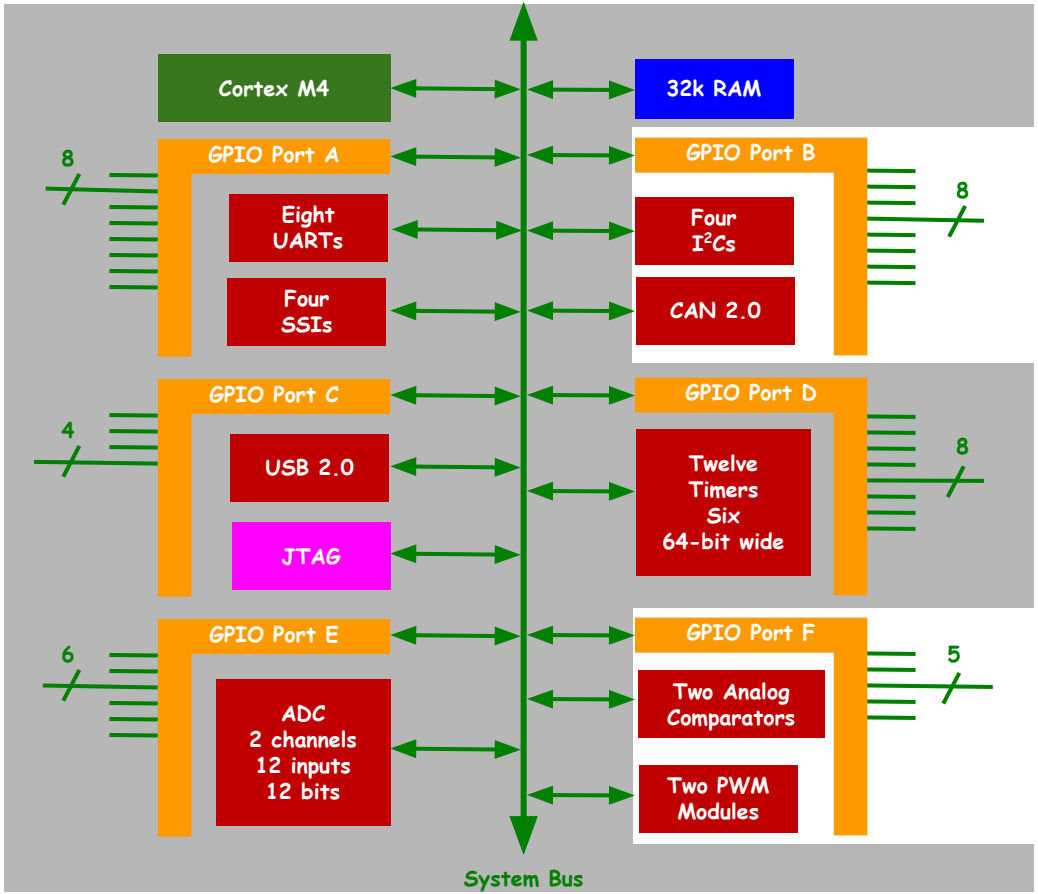
Seven Segment Tablosu

```
int main() {
        volatile unsigned long delay;
        uint8_t kodlar[10] = {
           ~0b0111111,
           ~0b0000110,
           ~0b1011011,
           ~0b1001111,
           ~0b1100110,
           ~0b1101101,
           ~0b1111101,
           ~0b0000111,
           ~0b1111111,
           ~0b1101111
        };
        init_port_B();
        int sayi = 0;
        while (1) {
           GPIO_PORTB_DATA_R = kodlar[sayi];
           for (delay = 0 ; delay < 1000000 ; delay++);
           sayi = (sayi + 1) % 10;
        }
}
```

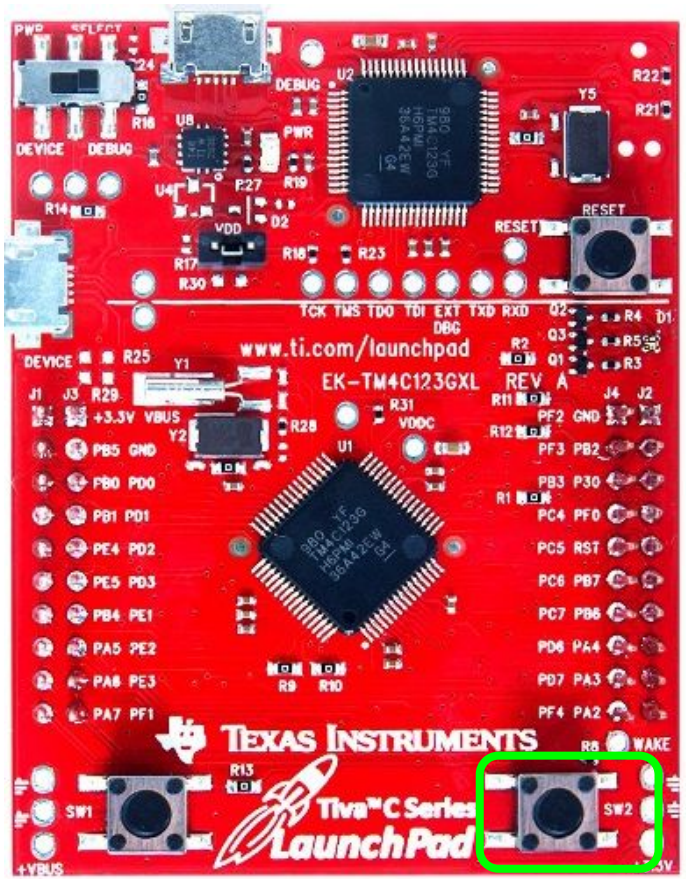
Seven Segment Buton Led



Seven Segment Buton Led

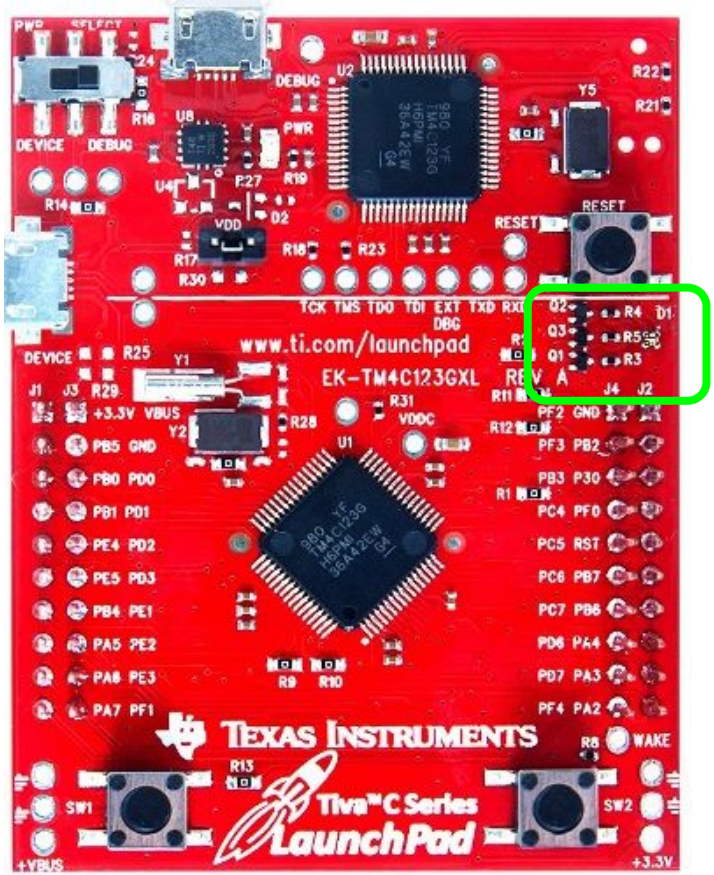


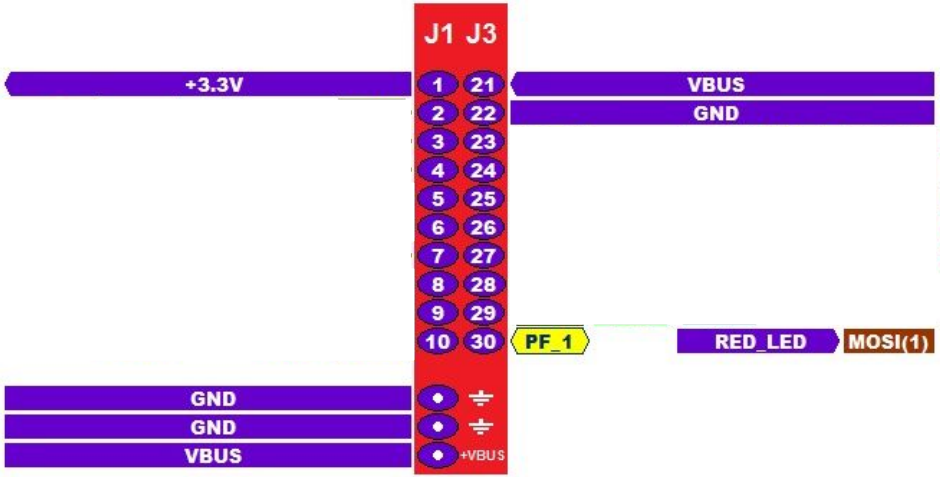
Tiva & Stellaris Port Baglantıları



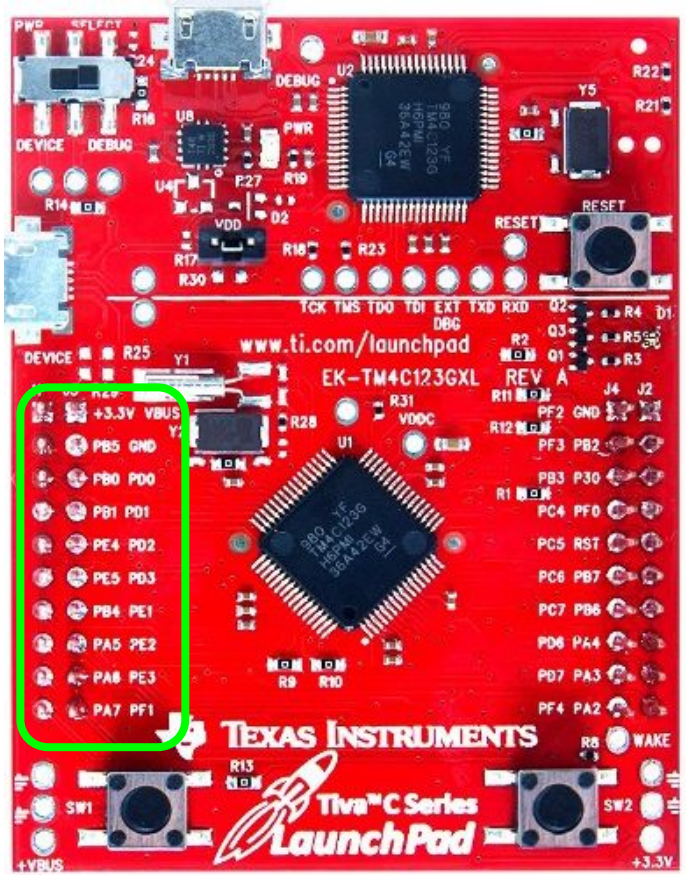
Hardware
digitalRead() and digitalWrite() PORTS
analogRead()
analogWrite()
I²C (TWI)
SPI
Hardware Serial

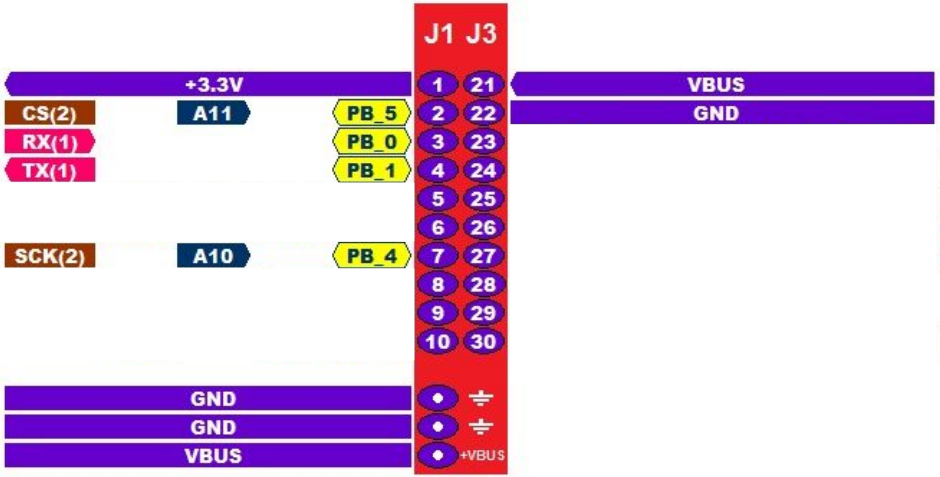
Tiva & Stellaris Port Baglantıları



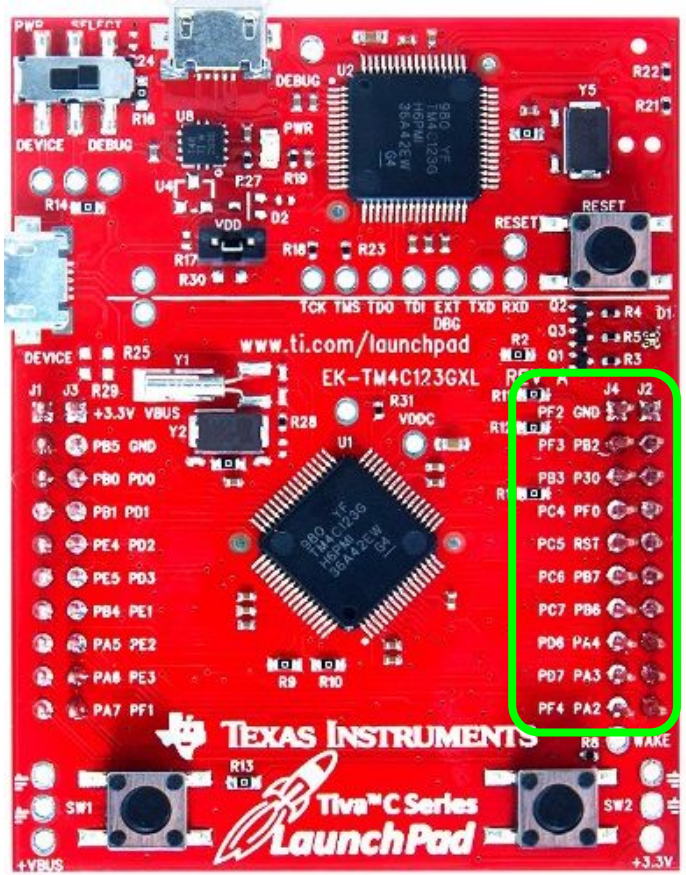


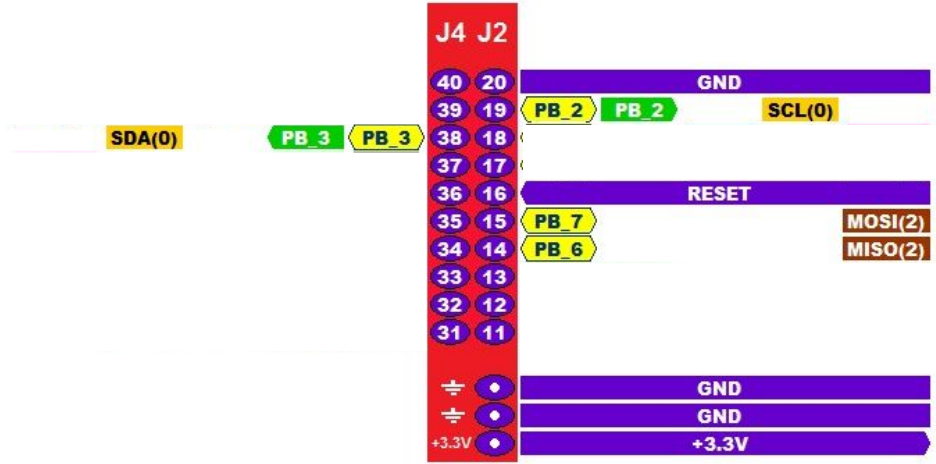
Tiva & Stellaris Port Baglantıları



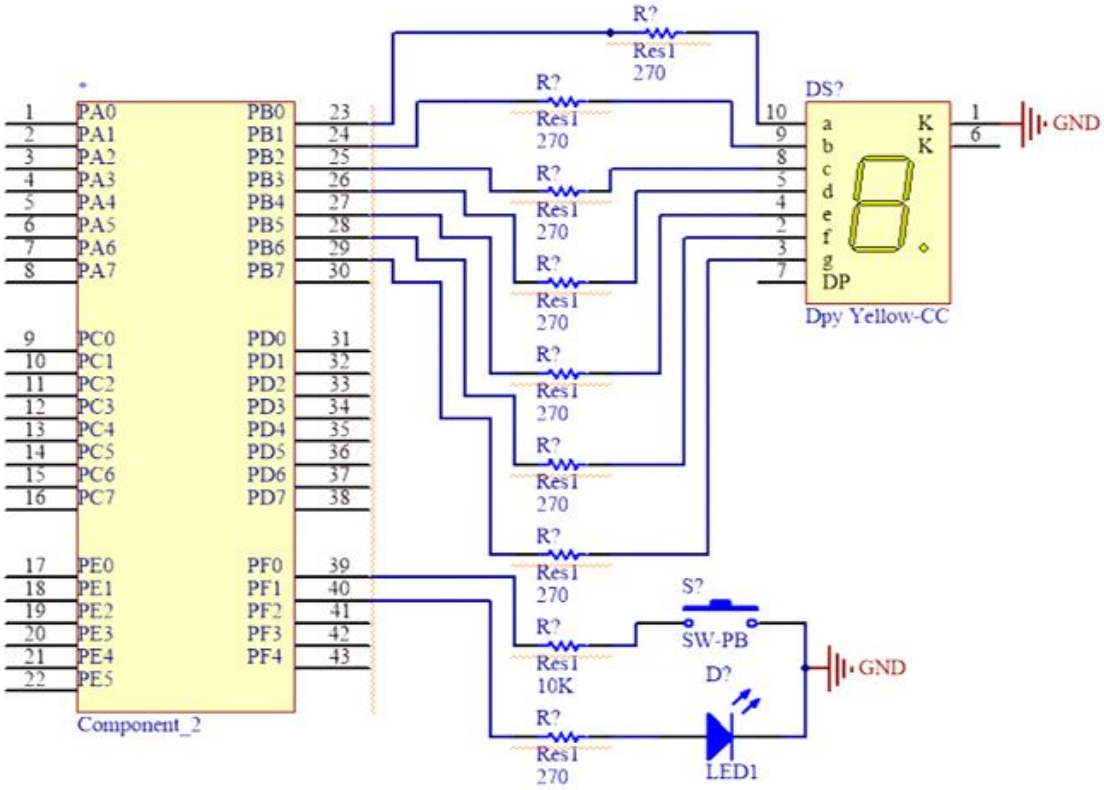


Tiva & Stellaris Port Baglantıları





Tiva & Stellaris Port Baglantıları



Es Zamanlı islem yapma

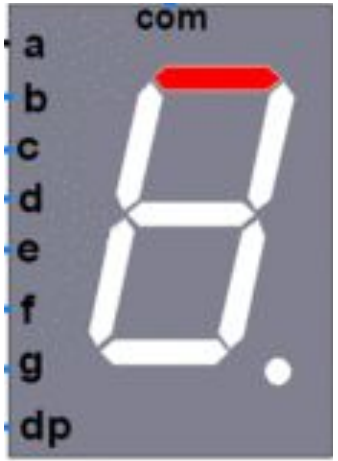
Es Zamanlı islem yapma

islem_2

islem_1

Es Zamanlı islem yapma

islem_1



islem_2

Mesgul Bekleme

```
void init_port_F() {
        volatile unsigned long tmp;
        SYSCTL_RCGCGPIO_R |= 0x00000020;          // Port F'nin saatini aktifleştir
        tmp = SYSCTL_RCGCGPIO_R;                  // Saatin başlaması için gecikme
        GPIO_PORTF_LOCK_R = 0x4C4F434B;           // Port F GPIO kilidini aç
        GPIO_PORTF_CR_R = 0x1F;                   // PF4-0 kilidini aç
        GPIO_PORTF_AMSEL_R = 0x00;              // PF anlog I/O kapat
        GPIO_PORTF_PCTL_R = 0x00000000;         // PF4-0 GPIO olarak ayarla
        GPIO_PORTF_DIR_R = 0x0E;                  // PF4,PF0 giriş, PF3-1 çıkış
        GPIO_PORTF_AFSEL_R = 0x00;                // PF7-0 Alternatif fonksiyonları kapat
        GPIO_PORTF_PUR_R = 0x11;                  // PF0 ve PF4 üzerindeki pull-up direncini aktifleştir
        GPIO_PORTF_DEN_R = 0x1F;                  // PF4-0 digital I/O aktifleştir
}
```

Mesgul Bekleme

```
void init_port_B() {
        volatile unsigned long delay;
        SYSCTL_RCGC2_R |= SYSCTL_RCGC2_GPIOB;          // Port B'nin saati aktifleştir
        delay = SYSCTL_RCGC2_R;                        // Gecikme
        GPIO_PORTB_DIR_R |= 0xFF;                      // Port B'nin tüm bitleri cikis olarak ayarla
        GPIO_PORTB_AFSEL_R &= ~0xFF;                   // Alternatif fonksiyonlar kapat
        GPIO_PORTB_DEN_R |= 0xFF;                      // Tüm Port B için Digital çalışmayı aktifleştir
}
```

Mesgul Bekleme

```
volatile int sayi = 0;
//Seven segment sayacı
void islem_1() {









}
```

Mesgul Bekleme

```
volatile int sayi = 0;
//Seven segment sayacı
void islem_1() {
	volatile unsigned long delay;
	uint8_t kodlar[] = {
		0b00111111,
		0b00000110,
		0b01011011,
		0b01001111,
		0b01100110,
		0b01101101,
		0b01111101,
		0b00000111,
		0b01111111,
		0b01101111
	};



}
```

Mesgul Bekleme

```
volatile int sayi = 0;
//Seven segment sayacı
void islem_1() {
	volatile unsigned long delay;
	uint8_t kodlar[] = {
		0b00111111,
		0b00000110,
		0b01011011,
		0b01001111,
		0b01100110,
		0b01101101,
		0b01111101,
		0b00000111,
		0b01111111,
		0b01101111
	};
	GPIO_PORTB_DATA_R = kodlar[sayi];


}
```

Mesgul Bekleme

```
volatile int sayi = 0;
//Seven segment sayacı
void islem_1() {
	volatile unsigned long delay;
	uint8_t kodlar[] = {
		0b00111111,
		0b00000110,
		0b01011011,
		0b01001111,
		0b01100110,
		0b01101101,
		0b01111101,
		0b00000111,
		0b01111111,
		0b01101111
	};
	GPIO_PORTB_DATA_R = kodlar[sayi];
	for (delay = 0 ; delay < 2000000 ; delay++);

}
```

Mesgul Bekleme

```
volatile int sayi = 0;
//Seven segment sayacı
void islem_1() {
	volatile unsigned long delay;
	uint8_t kodlar[] = {
		0b00111111,
		0b00000110,
		0b01011011,
		0b01001111,
		0b01100110,
		0b01101101,
		0b01111101,
		0b00000111,
		0b01111111,
		0b01101111
	};
	GPIO_PORTB_DATA_R = kodlar[sayi];
	for (delay = 0 ; delay < 2000000 ; delay++);
	sayi = (sayi + 1) % 10;
}
```

Mesgul Bekleme

```
// button basiliysa ledi yak, degilse sondur
void islem_2() {



}
```

Mesgul Bekleme

```
// button basiliysa ledi yak, degilse sondur
void islem_2() {
	if (GPIO_PORTF_DATA_R & 0b00001 == 0) {

	 }


}
```

Mesgul Bekleme

```
// button basiliysa ledi yak, degilse sondur
void islem_2() {
	if (GPIO_PORTF_DATA_R & 0b00001 == 0) {
		GPIO_PORTF_DATA_R |= 0b00100;
	 }


}
```

Mesgul Bekleme

```
// button basiliysa ledi yak, degilse sondur
void islem_2() {
	if (GPIO_PORTF_DATA_R & 0b00001 == 0) {
		GPIO_PORTF_DATA_R |= 0b00100;
	} else {
		GPIO_PORTF_DATA_R &= ~0b00100;
	}
}
```

Mesgul Bekleme

```
int main() {




}
```

Mesgul Bekleme

```
int main() {
        init_port_B();
        init_port_F();




}
```

Mesgul Bekleme

```
int main() {
        init_port_B();
        init_port_F();
        // surekli islem_1 ve islem_2'yi yap
        while (1) {



        }
}
```

Mesgul Bekleme

```
int main() {
        init_port_B();
        init_port_F();
        // surekli islem_1 ve islem_2'yi yap
        while (1) {
                islem_1();
                islem_2();
        }
}
```

Sorular