# DIO Driver Test

void APP\_init(void)

{

DIO\_init(PORT\_A, PIN0, IN);

DIO\_init(PORT\_A, PIN1, OUT);

DIO\_init(PORT\_A, PIN2, OUT);

DIO\_Port\_Direction(PORT\_B, IN);

DIO\_Port\_Direction(PORT\_C, OUT);

}

void APP\_start(void)

{

uint8\_t Test = 0;

DIO\_read(PORT\_A, PIN0, &Test);

DIO\_write(PORT\_A, PIN1, Test);

DIO\_toggle(PORT\_A,PIN2);

DIO\_Port\_Read(PORT\_B,&Test);

DIO\_Port\_Write(PORT\_C,Test);

}

# Interrupt Driver Test

void APP\_init(void)

{

LED\_init(PORT\_A,PIN2);

LED\_init(PORT\_B,PIN2);

BUTTON\_init(INT0\_PORT,INT0\_PIN);

BUTTON\_init(INT1\_PORT,INT1\_PIN);

Enable\_INT0 (INT\_FALLING);

Enable\_INT1 (INT\_RISING);

sei();

}

void APP\_start(void)

{

}

ISR(EXT\_INT\_0)

{

LED\_blink(PORT\_A,PIN2);

}

ISR(EXT\_INT\_1)

{

LED\_blink(PORT\_B,PIN2);

}

# Timer0 Driver Test

Str\_Timer0Configuration\_t timer0test = {TIMER\_MODE, NORMAL\_MODE, F\_CPU\_CLOCK\_1024\_TIMER\_0, POLLING};

/\*

1024/ 1000000 = 0.001024

0.001024 \* 244 \* 2 = 0.499712 sec ~= 0.5 Sec

\*/

void delayHalfSec(void)

{

TIMER0\_init(&timer0test);

for(uint8\_t i = 0; i < 2; i++)

{

TIMER0\_start(&timer0test,244);

uint8\_t FLAG = 0;

while(FLAG == 0)

{TIMER0\_Get\_FlagStatus(&timer0test,&FLAG);}

TIMER0\_Flag\_Reset(&timer0test);

TIMER0\_stop();

}

}

void APP\_init(void)

{

LED\_init(PORT\_A,PIN2);

}

void APP\_start(void)

{

LED\_blink(PORT\_A,PIN2);

delayHalfSec();

}

Str\_Timer0Configuration\_t timer0test = {TIMER\_MODE, NORMAL\_MODE, F\_CPU\_CLOCK\_1024\_TIMER\_0, INTERRUPT};

uint8\_t COUNTER = 0;

/\*

1024/ 1000000 = 0.001024

0.001024 \* 244 \* 2 = 0.499712 sec ~= 0.5 Sec

\*/

void APP\_init(void)

{

LED\_init(PORT\_A,PIN2);

TIMER0\_init(&timer0test);

TIMER0\_start(&timer0test,244);

sei();

}

void APP\_start(void)

{

if(COUNTER == 2)

{

LED\_blink(PORT\_A,PIN2);

COUNTER = 0;

TIMER0\_start(&timer0test,244);

}

}

ISR(TIMER0\_OVF)

{

COUNTER ++;

TIMER0\_Reset();

TIMER0\_Flag\_Reset(&timer0test);

}

Str\_Timer0Configuration\_t timer0test = {TIMER\_MODE, CTC\_MODE, F\_CPU\_CLOCK\_1024\_TIMER\_0, INTERRUPT};

uint8\_t COUNTER = 0;

/\*

1024/ 1000000 = 0.001024

0.001024 \* 244 \* 2 = 0.499712 sec ~= 0.5 Sec

\*/

void APP\_init(void)

{

LED\_init(PORT\_A,PIN2);

TIMER0\_init(&timer0test);

TIMER0\_start(&timer0test,244);

sei();

}

void APP\_start(void)

{

if(COUNTER == 2)

{

LED\_blink(PORT\_A,PIN2);

COUNTER = 0;

TIMER0\_start(&timer0test,244);

}

}

ISR(TIMER0\_COMP)

{

COUNTER ++;

TIMER0\_Reset();

TIMER0\_Flag\_Reset(&timer0test);

}

# Timer1 Driver Test

#include "application.h"

Str\_Timer1Configuration\_t timer1test = {TIMER\_MODE, CTC\_MODE, F\_CPU\_CLOCK\_1024\_TIMER\_1, INTERRUPT};

uint8\_t COUNTER = 0;

/\*

1024/ 1000000 = 0.001024

0.001024 \* 4883 = 5.000192 sec ~= 5 Sec

\*/

void APP\_init(void)

{

LED\_init(PORT\_A,PIN2);

TIMER1\_init(&timer1test);

TIMER1\_start(&timer1test,4883);

sei();

}

void APP\_start(void)

{

if(COUNTER == 2)

{

LED\_blink(PORT\_A,PIN2);

COUNTER = 0;

TIMER1\_start(&timer1test,4883);

}

}

ISR(TIMER1\_COMPA)

{

COUNTER ++;

TIMER1\_Reset();

TIMER1\_Flag\_Reset(&timer1test);

}

# LED + BUTTON included in test above