

Operation Summary

This is sample program that is adjusts internal oscillator using Trimming circuit (TRM) on TPM4K4.
This sample program can support to use external reference clock only.

Basic Operation

1. Comment out line 19 “#define TRMOSC_LOSC” on txz_sample_def.h and build.

1.1 The reference clock is input to the T32A02INA0 pin.

Reference clock spec. 240Hz

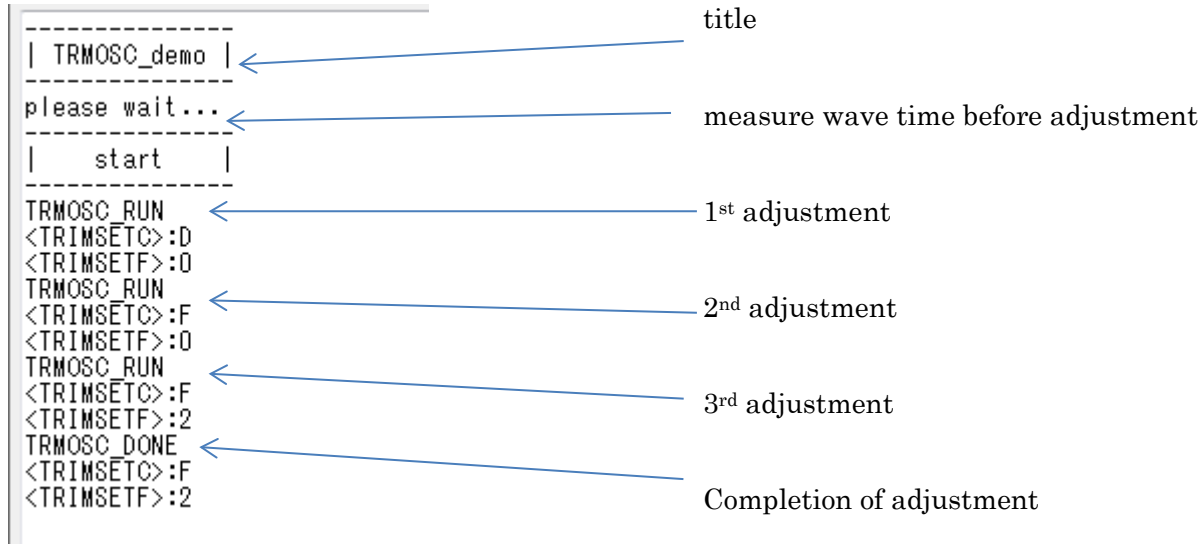
Can use the following UART signal.

e. g.

Baud Rate	2400bps
Data	8bit
Parity	none
Stop bit	1
Transmission data	0xF0
Calculated value of frequency	240 Hz

2. Calculate error on program and set adjust data to Trimming Value Setting Register.

3. Output the adjust result in terminal I/O at EWARM.



4. Monitor output signal of T32A03OUTA.

Outputs signal spec.

Adjusted frequency (expectation) : 2.5MHz

Internal oscillator	:	10MHz
Source clock $\phi T0$:	$10\text{MHz}/2 = 5\text{MHz}$
Reverse T32A03OUTA at 5MHz	:	$5\text{MHz}/2 = 2.5\text{MHz}$

Environment

Board	TMPM4K4 Evaluation Board
-------	--------------------------

Resource

CG	IHOSC1=IOSC=fosc=fc/2= ϕ T0
WDT	disable
T32A3	Output interval timer
T32A2	Input the reference clock
TRM	Trimming for frequency of internal high-speed oscillator
GPIO	35pin:T32A03OUTA 57pin:T32A02INA0

Module components

main.c	Sample program main processing Clock supply
IOSCadjustment.c	Internal oscillator adjust processing
trm_gpio.c	Port initialization
trm_t32a.c	T32A initialization and setting
trm.c	TRM registers setting