PAC25xxx Example Code V1.0 Release Notes

Aug 2023

PAC25xxx Example Code Overview

- The PAC25xxx Example Code firmware provides the simple examples to use the features on PAC25140 devices.

- The firmware project includes example code for both of AFE and MCU peripherals.

- Flexible enable desired features test by enable the test defines in pac25xxx_peripheral_examples > src > config.h

Features Description

MCU Peripherals

Feature	Description
System clock	Create PLL clock from ROSC/ CLKREF, setting SCLK, HCLK, ACLK, PCLK.
Watchdog timer	Config WDT, count-down to reset MCU.
Real time clock timer	Set/read RTC timer, set alarm.
GPIO	Config GPIOs output/ input.
Timer	Control GP Timer count, Timer Interrupt, PWM, Capture Timer, QEP.
Flash memory	Erase and write to Flash, InfoROM-3.
ADC	Config ADC Manually, Auto Sequence and Multi Auto Sequence.
Sleep mode	Config Sleep mode/ Deep sleep mode and wake-up process.

Feature Description Cont.

MCU Peripherals

Feature	Description
System Tick	Set System Tick register.
RAM function	Execute a simple function run in RAM.
SPI communication	Config as a SPI Master/ Slave mode to communicate with a peripheral.
UART communication	Config UART to communicate (TX/RX) with a peripheral.
I2C communication	Config as I2C Master/ Slave mode to communicate with a peripheral.
CAN communication	Config CAN to communicate (TX/RX) with a peripheral.
CRC	Config CRC engine inside the device to calculate CRC checksum.
Code protect	Process disable SWD, after run code protect with highest level, prevent connect to PAC25xxx device.

Feature Description Cont.

AFE Peripherals

Feature	Description
AFEMUX	Monitor the AFEMUX signal.
Driver control	Driver enable or source flow, ON/OFF CHG/DSG, Fuse control.
Hibernate	Enter hibernate, wake up by PACK+, Wakeup Timer, Push Button.
AIO0	Config AIO0 Input, Output and Muxing.
IADC conversion	Enable IADC with various gain then make a conversion.
VADC conversion	Enable VADC then make a conversion at VBx.
SCP	Enable SCP protect, setting by code, print SCP fault status.
OCC	Enable OCC protect, setting by code, print OCC fault status.

Feature Description Cont.

AFE Peripherals

Feature	Description
OCD	Enable OCD protect, setting by code, print OCD fault status.
BATOV	Enable BATOV protect, setting by code, print BATOV fault status.
Power Fault	Enable power fault then read status.
Temp Fault	Enable temp fault and read status.
Cell balancing	Enable cell balancing, ON/OFF FET balance.
CLK output	Enable low speed clock output.
Window Watchdog Timer	Enable and config window watchdog timer.
SOC Bus bridge	Read/write to analog die.

Supported Tool Chains

The PAC25xxx Example Code firmware is supported in the following tool chains:

- Keil uVision   v5.38.0.0
- IAR Embedded Workbench   v9.32.2
- Eclipse IDE   v4.27.0

Thank You