

How to use AT32F415 Comparator

Introduction

This example code demonstrates how to use the analog comparator (CMP) in AT32F415 series.

Applicable products:

Product series	AT32F415
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List of major peripherals used:

Peripherals	CMP
	TIMER
	USART1

1 Quick start

1.1 Hardware resources

AT-START-F415 V1.0 evaluation board

1.2 Software resources

1. This Demo is based on AT32F415, and AT32F415_Firmware_Library_V2.x.x (BSP version)
2. Set PA1 as CMP's non-inverting input, and 1/4VREFINT as its inverting input. Connect CMP to TMR1 channel 1 and set TMR1 channel 1 as input capture mode, enable CMP to get compare results. Use USART1 to output print information

1.3 Example case

Use signal generator or others which can produce PWM signals to input PWM (3KHz-1MHz) to CMP_IN (PA1), view output results on CMP_OUT (PA0) using oscilloscope. This CMP_OUT is also captured by TMR1_CH1 and PWM frequency is printed out via USART1. Compare output results on PA0 with ones captured on TMR1_CH1.

Table 1. Document revision history

Date	Revision	Changes
2021.12.02	2.0.0	Initial release

