X-CUBE-TIMCOOKER

Applicative examples for STM32 general-purpose timers, software expansion for STM32Cube

Data brief

Features

- Five applicative examples covering most of the features of the STM32 general-purpose-timer peripherals:
  - Timer clocking using an external clock source
  - N-pulse waveform generation using OnePulse mode
  - Cycle-by-Cycle regulation using Break input
  - Break input versus OCxRef Clear utilization
  - Arbitrary waveform generation using timer DMA burst feature
- Well-commented source code, facilitating the understanding of the timer-peripheral configuration steps used
- Source-code template generated by the STM32CubeMX software tool
- Snippet-like source code structure to facilitate its reuse
- Tailored to run readily on the NUCLEO-F302R8 boards populated with an STM32F302 microcontroller
- Easily portable to other STM32 microcontroller families (the template project is generated by the STM32CubeMX tool)
- Easily portable to other hardware environments provided by the STM32 ecosystem
- Free, user-friendly license terms

Description

The X-CUBE-TIMCOOKER embedded software package is an expansion of the STM32Cube embedded software libraries.

It provides applicative use cases for the general-purpose-timer peripherals embedded in STM32 microcontrollers. The embedded software examples provided by the X-CUBE-TIMCOOKER package, complement the set of examples provided by the STM32CubeHAL library for the STM32 timer peripherals. The main difference between these two sets of examples, is that the former are application-oriented, while the latter are timer-feature oriented.

For most of the applicative examples provided, more than one timer feature is used to carry out a well-defined application usage. However each example also puts more focus on a particular feature of the STM32 general-purpose-timer peripherals.

For all the details on the general-purpose timers, refer to the “General-purpose timer cookbook”, application note (AN4776), available at the *www.st.com* website.

Revision history

Table 1. Document revision history

Date	Revision	Changes
26-Jul-2016	1	Initial version.
05-Jul-2017	2	Updated title and *Description*.