STM32 firmware for STPM32 access and a basic metrology application

Data brief

Firmware block diagram

Features

- Initialization of STM32 MCU
- Reset sequence of the STPM32 ASSP
- Communication through UART or SPI interface
- Block transfer in read and write mode
- Data latch through SYN pin of STPM32 ASSP
- Basic metrology application example based on STM32 MCU timer to read energy and voltage
- Easy portability across different MCU families
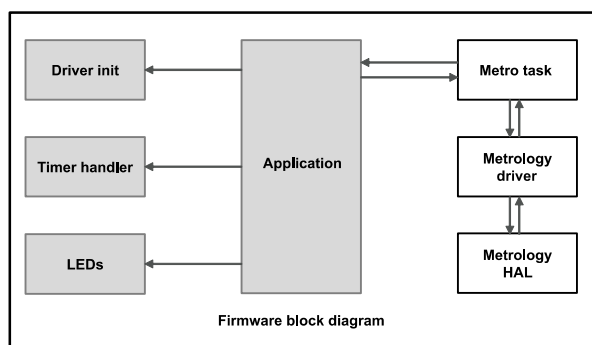
Description

This firmware is a starting point for the development of a metrology application using the STPM32 ASSP for metering applications, and an STM32 microcontroller. It has been implemented for the STEVAL-IPE023V1 USB interface board for the STPM series of energy meter ASSPs, interfaced with the EVALSTPM32 single-phase energy metering evaluation board, but can easily be ported across different MCU families.

The firmware provides the basic functions to initialize, read and write to the STPM32 metrology ASSP through an SPI or UART interface, as well as a basic metrology application based on a microcontroller timer. The firmware uses the IAR toolchain.

1 Revision history

Table 1: Document revision history

Date	Version	Changes
06-May-2016	1	Initial release.

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