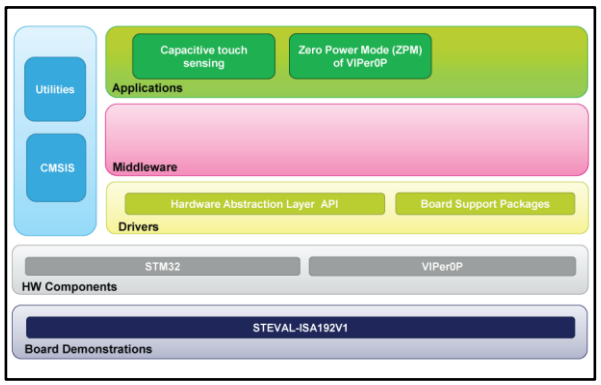
STSW-ISA192V1

Firmware for the STEVAL-ISA192V1 board

Data brief



Features

- Implementation of the firmware for the STEVAL-ISA192V1 board is based on STM32L0xx microcontroller. It features:
  - Demonstration of Viper0P zero power mode (ZPM)
  - Stop mode of STM32L0xx
  - Capacitive touch sensing
- Based on the comprehensive STM32Cube framework software for STM32 MCU that maximizes portability across the entire STM32 series without hardware dependency issues
- Source code freely available with developer-friendly license terms
- Free, user-friendly license terms

Description

The STSW-ISA192V1 firmware package demonstrates the key features of the VIPer0P zero power mode (ZPM) on the STEVAL-ISA192V1 7 W dual (-5 V and +7 V) output flyback converter.

Zero power mode is an idle state with no switching activity. A STM32L0x microcontroller is connected to the VIPer0P for smart ZPM management and the microcontroller is supplied by the VIPer0P itself during the idle state.

VIPer0P enters ZPM by pulling the OFF pin to SGND for more than 10 ms and exits ZPM (resuming normal switching) by pulling the ON pin to SGND for more than 20 µs.

The STM32L0 microcontroller on the STEVAL-ISA192V1 detects tactile push buttons and capacitive touch interface. It manipulates VIPer0P to achieve minimum power consumption during ZPM (less than 30 mW @ 230 VAC in ZPM) , while supplying the microcontroller and maintaining the user interface active (capacitive touch and push button) and still achieving high overall efficiency during normal operation.

1 Detailed description

What is STM32Cube?

STM32Cube™ is developed by STMicroelectronics to reduce development effort, time and cost. STM32Cube covers the STM32 portfolio.

STM32Cube includes:

- STM32CubeMX graphical software configuration tool that allows the generation of C initialization code using graphical wizards
- A comprehensive embedded software platform, delivered per series (such as the STM32CubeF4 for STM32F4 series)
  - STM32Cube HAL abstraction layer embedded software, ensuring maximized portability across the STM32 portfolio
  - A consistent set of middleware components, such as RTOS, USB, TCP/IP and graphics
  - All embedded software utilities, including a full set of examples

How does this software complement STM32Cube?

The STEVAL-ISA192V1 software is based on the STM32CubeHAL hardware abstraction layer for the STM32 microcontroller, for easy portability across different STM32 microcontrollers. The package extends STM32Cube by providing a board support package for the STEVAL-ISA192V1.

You can use the drivers to customize the firmware for your requirements.

2 Revision history

Table 1: Document revision history

Date	Version	Changes
27-Feb-2017	1	Initial release.

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