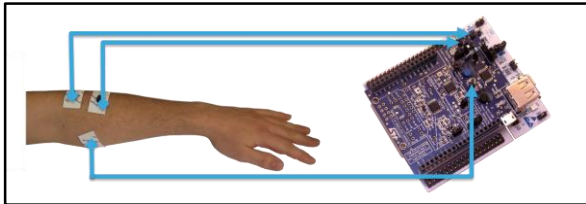


Electromyogram application based on STM32 Nucleo and op-amp expansion board

Data brief



Features

- Enables LED illumination by muscle contraction
- Based on the X-NUCLEO-IKA01A1
- Firmware for NUCLEO-F401 with IAR development environment
- Sample code includes a calibration process
- Free, user-friendly license terms

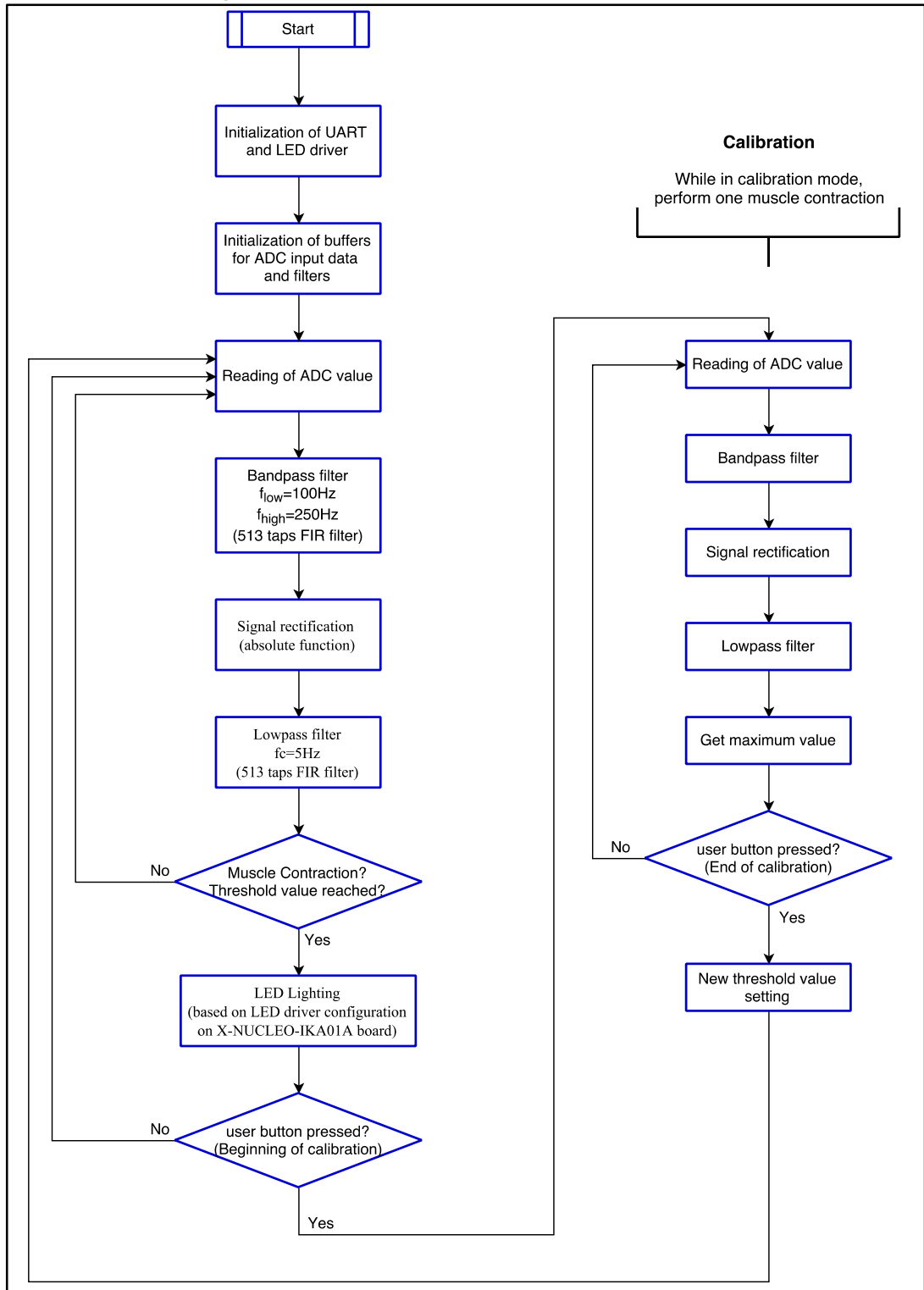
Description

The STSW-OPAMP002 package includes firmware used for an electromyogram (EMG) application. The X-NUCLEO-IKA01A1 board embeds several configurations based on operational amplifiers. This software and the associated design tip (DT0061, available on www.st.com) shows how to configure it to develop an EMG. The application allows users to trigger an action through muscle contraction using the TSZ124 operational amplifier. The magnitude of muscle contractions can vary depending on body characteristics, therefore a calibration process has been implemented.

This application can be used for fitness, healthcare, remote control, or video games for an improved gaming experience, as well and for other activities.

1 Firmware flowchart

Figure 1: Flowchart of the STSW-OPAMP002 firmware



2 Revision history

Table 1: Document revision history

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

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