MAX32600 Pulse-Train Demonstration

April 3, 2015

1 Abstract

This document describes the PulseTrainDemo sample application provided for the MAX32600. This application demonstrates how to setup 2 different pulse trains on two GPIOs (P7.0 and P7.1), using the provided firmware APIs.

2 Requirements

- MAX32600B EvKit
- Sample code for this application located in `Firmware/Applications/PTDemo`
- Olimex JTAG ARM-USB-TINY-H
- GNU ARM toolchain
- An oscilloscope for viewing the GPIO output signals.

3 Setup

- Load the compiled max32600.elf file onto the MAX32600 EvKit, the green LED should be on.
- Connect two channels of an oscilloscope to GPIO pins on header J43: pins marked “P70” and “P71” and ground.

4 Observation

- Press the button labeled “SW1 TEST”, on the EvKit, to start the pulse train output on GPIOs P7.0 and P7.1. The yellow LED should be on.
- See examples of the output patterns below:

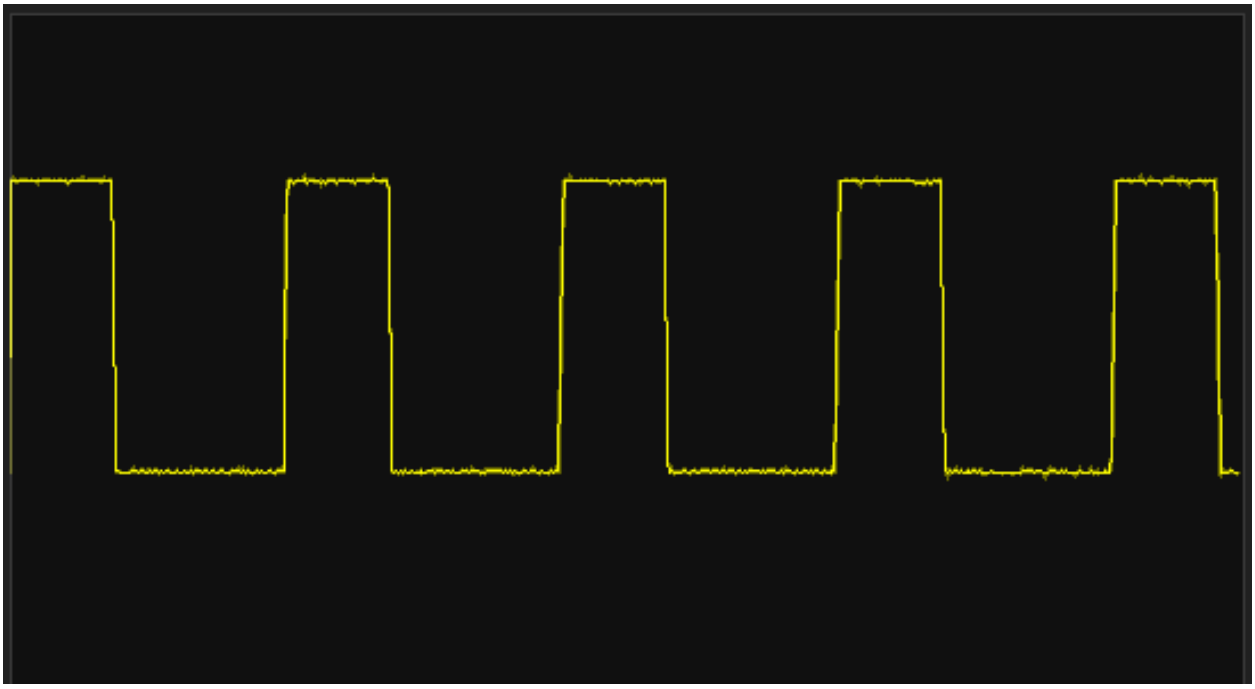

Figure 1: Pulse Train Output on GPIO P7.0

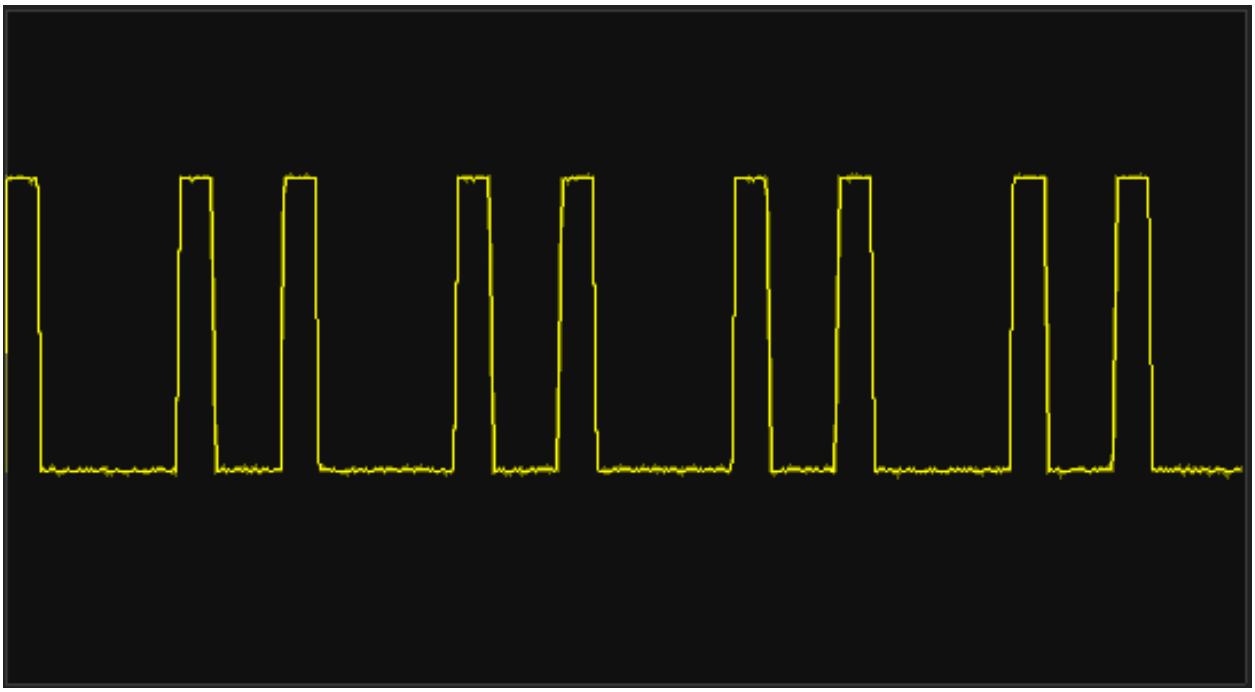

Figure 2: Pulse Train Output on GPIO P7.1

5 Source Code Overview

5.1 Drivers In Use

- Instruction Cache
- Clock Manager
- Power Manager
- GPIO
- Pulse Train

5.2 Interrupts Enabled

None

5.3 Code Operation

- Enable Instruction Cache
- Setup Clocks; system clock, systick and pulse train clock
- Initialize the pulse train modules
- Set pulse train rates and patterns
- Set GPIO for pulse train output
- Wait for interrupts
- On button interrupt, toggle PT state and yellow LED for running or stopped.