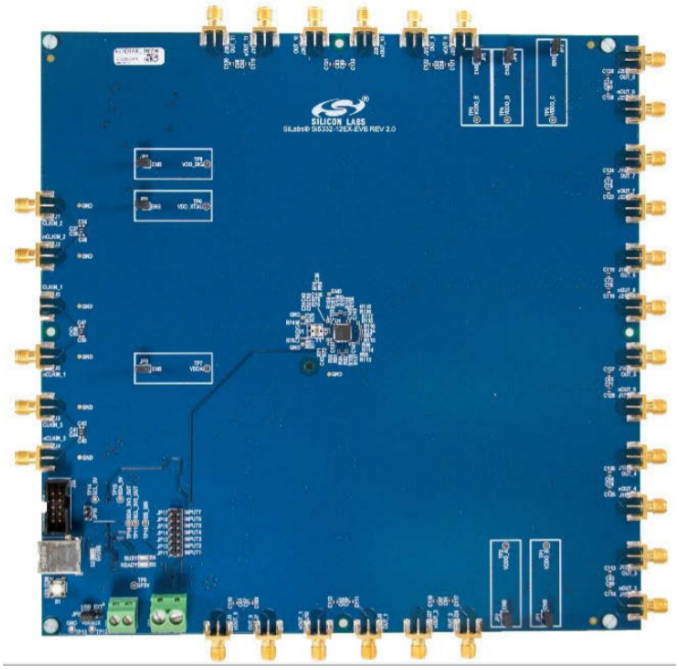
SILICON LABS UG301 Si5332-12EX-EVB Low Hitter Clock Generator User Guide

UG301: Si5332-12EX-EVB User's Guide

The Si5332-12EX-EVB is used for evaluating the Si5332 Low Jitter Any-Frequency Clock Generator. The Si5332 uses the patented Multisynth technology to generate up to twelve independent clock frequencies each with 0 ppm synthesis error. The Si5332-12EX-EVB has three independent ™input clocks. The Si5332-12EX-EVB can be controlled and configured using the Clock Builder Pro ™(CB Pro
) software tool.



EVB FEATURES

- Powered from the USB port or external power supply.
- Onboard 25 MHz XTAL allows the free-run mode of operation on the Si5332 or up to 2 input clocks for synchronous clocking.
- CBPro ™GUI programmable VDD supply allows devices to operate from 3.3, 2.5, or 1.8 V.
- CBPro GUI programmable VDDO supplies allow each of the 10 outputs to have its own power supply voltage selectable from 3.3, 2.5, or 1.8 V.
- CBPro GUI-controlled voltage, current, and power measurements of VDD and all VDDO supplies.
- SMA connectors for input and output clocks.

Contents

Functional Block Diagram

Below is a functional block diagram of the Si5332-12EX-EVB. This EVB can be connected to a PC via the main USB connector for
programming, control, and monitoring. See section “2. Quickstart” or section “7. Installing CBPro Desktop Software” for more information.

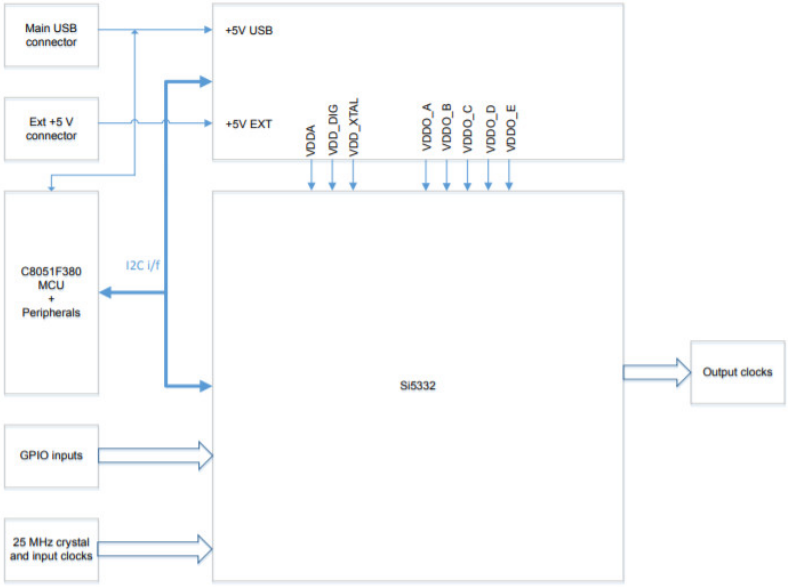


Figure 1.1. Si5332-12EX-EVB Functional Block Diagram

Si5332 CBPro™

The Si5332 is intended to be part of the CBPro software and this initial software release “showcases” that trait. This software contains:

1. An EVB GUI that communicates and controls the EVB by allowing the user to set VDD supplies
2. The ability to modify frequency plan (from the starting point CBPro file provided with this limited release) from an existing CBPro
   file.

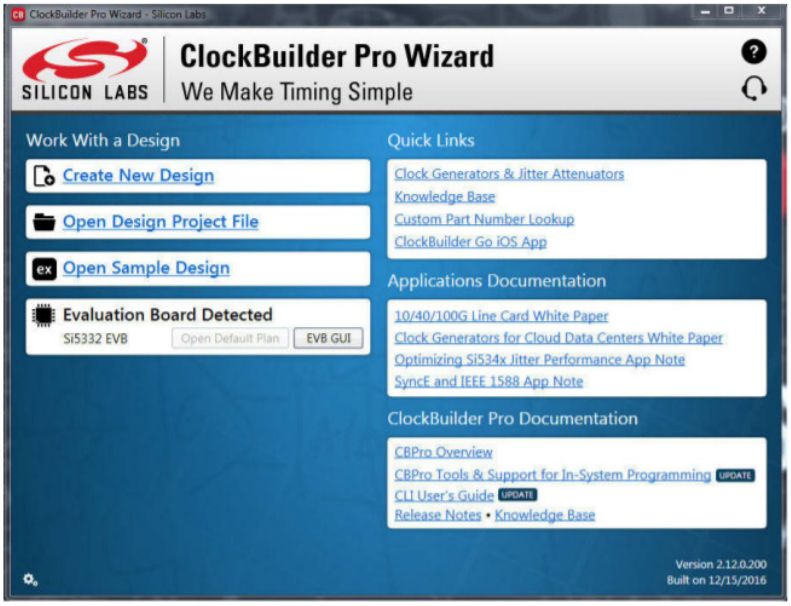


Figure 2.1. CBPro Start Screen

Si5332-12EX-EVB Schematics

The schematic and layout files are provided in here: schematics and layouts.
Please review the files, especially the DUT page in order to get familiar with using the EVB through CBPro™

Si5332 CBPro.™

EVB GUI
The EVB GUI can be used to communicate the part for register access:
The first page shows the board's identity.

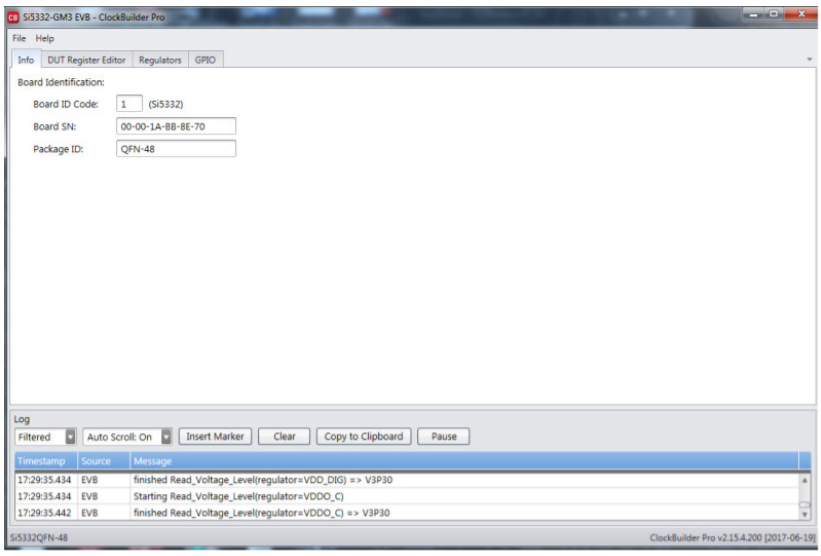


Figure 4.1. Board ID Page

The other pages for register access, VDD control, and GPIO control.

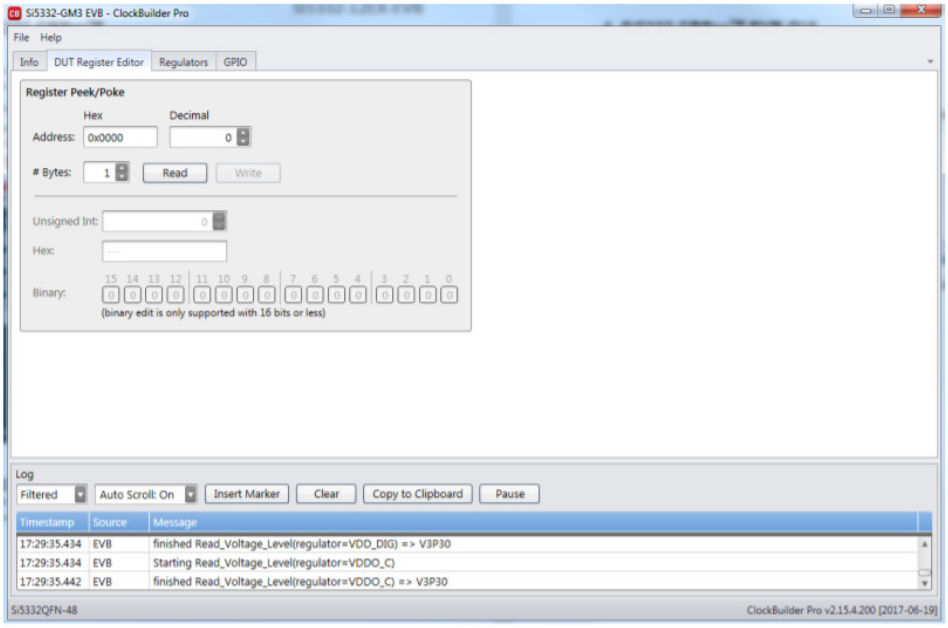


Figure 4.2. Register Access

Installing ClockBuilderPro (CBPro) Desktop Software

To install the CBOPro software on any Windows 7 (or above) PC:
Go to **https://www.silabs.com/products/development-tools/software/clockbuilder-pro-software** and download ClockBuilderPro software.
Both installation instructions and the User's Guide for ClockBuilderPro can be found at this link. Please follow the instructions as indicated.

ClockBuilder Pro
One-click access to Timing tools, documentation, software, source code libraries & more. Available for Windows and iOS (CBGo only).
www.silabs.com/CBPro

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Documents / Resources

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