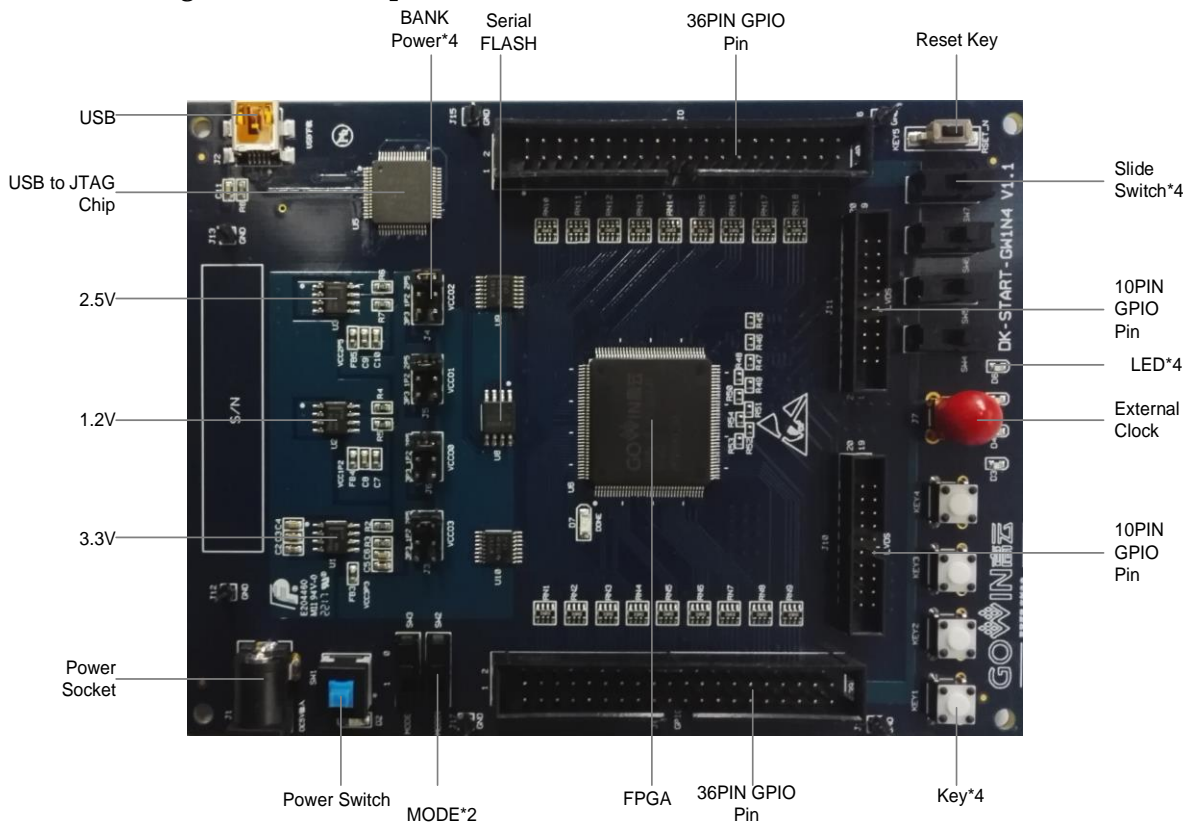# DK-START-GW1N1 Development Board

Quick Start User Guide

Figure 1 PCB Components

Kit List

Figure 2 Development Board Kit

① Gowin DK-START-GW1N1 Development Board

② 5V Power
INPUT:100-240V~50/60Hz 0.5A
OUTPUT:DC 5V 2A

③ USB Mini-B Cable

④ Quick Start User Guide

Contact Us for Technical Support:		
- Website: www.gowinsemi.com.en	Shenzhen: 86-755-8262-0391	Beijing: +86-186-0028-1017
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Introduction

Thank you very much for taking DK-START-GW1N1 as the development & learning platform. This user guide can help you install the required software, compile the Demo, and download it to the development board to test so as to be familiar with the development flow.

Install Software

Install Gowin EDA software (Gowin YunYuan Software) to creat, compile and download FPGA Demo program. Download the EDA software, apply for a license, and obtain software user guide at GOWINSEMI website：https://www.gowinsemi.com/en/support/home/. You can find the usage and installation method in the SUG100, Gowin YunYuan Software User Guide.

Development Board Power-on Test

The test program has been downloaded into the external FLASH before the delivery of DK-START-GW1N1 development board. And the development board can be checked whether to work when it is powered on.

Plug the 5V power supply into the power socket of the development board. Set MODE1 to 1 and MODE0 to 0 and switch to "ON". The four blue LEDs are blinking, indicating that the development board can work.

Compile Demo Program

The LED test program is to demonstrate four LEDs blinking. Users can download the corresponding demo at Gowinsemi website:

https://www.gowinsemi.com/en/support/database/. Save the project in the directory with no Chinese characters. Open and compile this demo using Gowin YunYuan software.
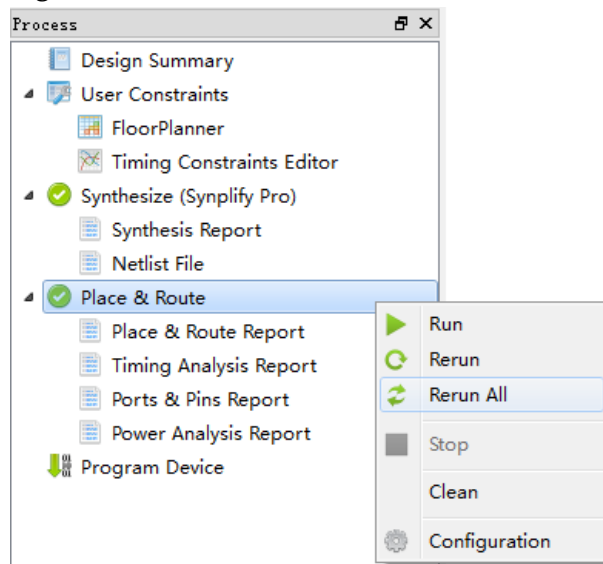
1. Open the "LED_test.gprj" project and the followings are displayed in the "Design" window:
   - GW1N-LV1LQ144C6/I5: Gowin FPGA device part number;
   - LED_test.v: Verilog code;
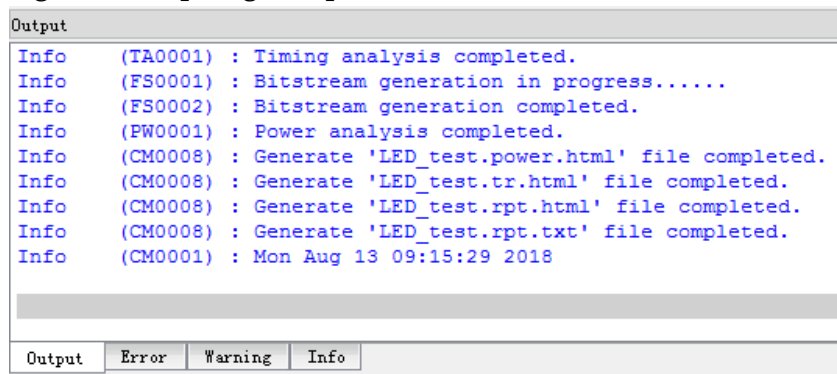   - LED_test.cst: Physical constraints file.

Figure 3 Design
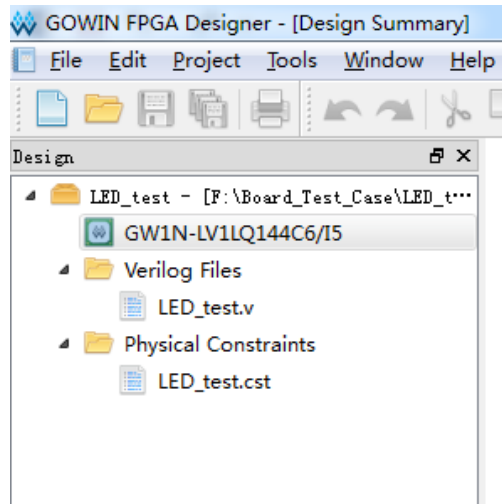
2. Right click "Place & Route" in the "Process" window and select "Rerun All".

Figure 4 Select Rerun All

3. After compilation, the following information will be displayed. The generated bitstream file is saved in: ..LED_test\impl\pnr\LED_test.fs.
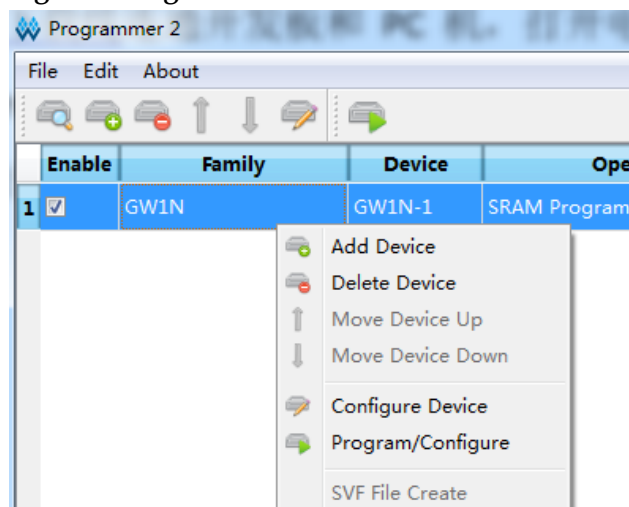
Figure 5 Compiling Completed

Download and Run

1. Connect the development board with PC using the download cable and switch on the power. Double click "Program Device" in the "Process" window, and the "Programmer" window will pop up. Right click the device list, and select "Configure Device". The Device configuration dialog box will pop up.
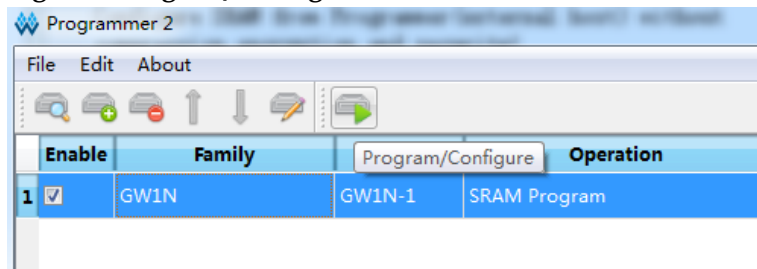
Figure 6 Programmer

2. Set the download mode as shown below and specify the bitstream file path.

Figure 7 Device Configuration
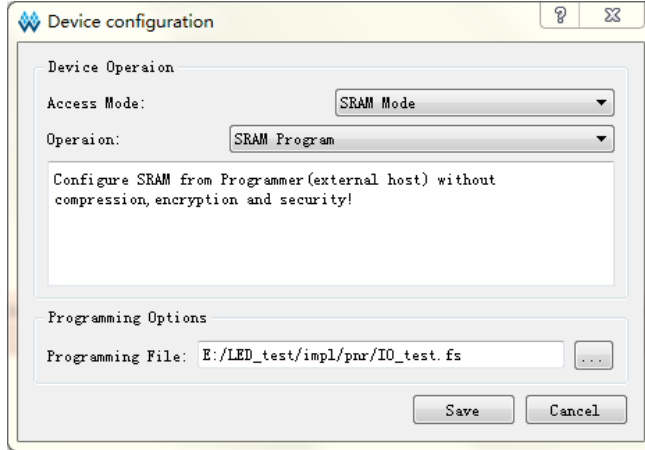
3. After configuration, click "Program/Configure" button to download the program. After finishing, the four LEDs will blink simultaneously.

Figure 8 Program/Configure

Support and Feedback

Gowin Semiconductor provides customers with comprehensive technical support. If you have any questions, comments, or suggestions, please feel free to contact us directly by the following ways.

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Revision History

Date	Version	Description
02/27/2020	1.0E	Initial version published.