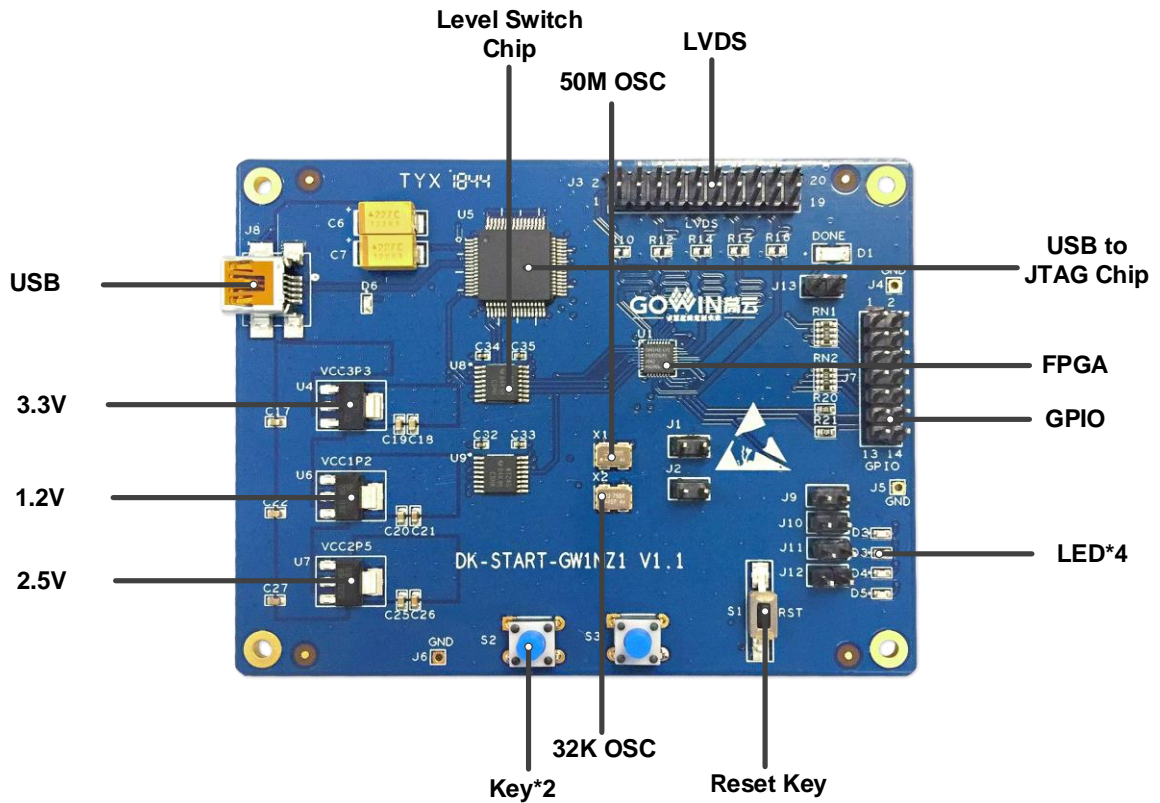


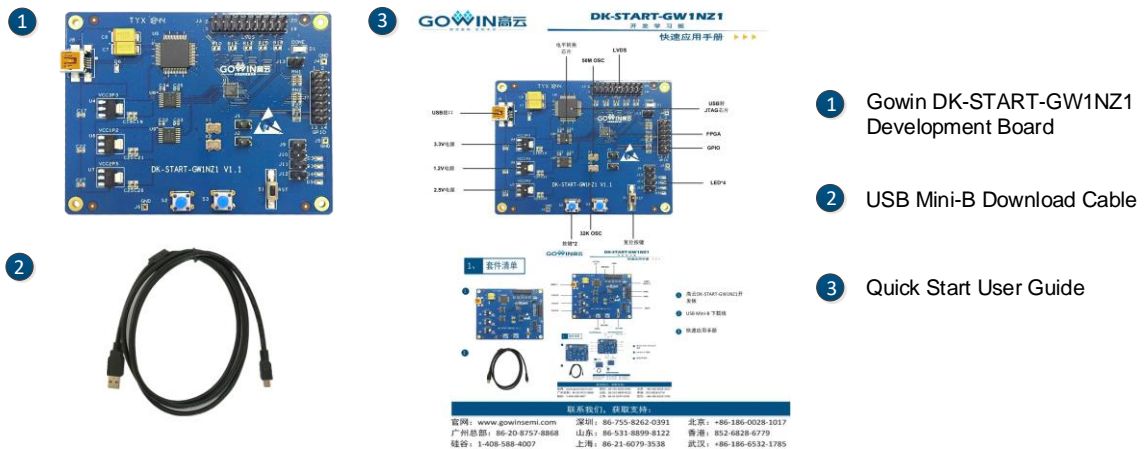
DK-START-GW1NZ1 Development Board Quick Start User Guide

Figure 1 PCB Components



Kit List

Figure 2 Development Board Kit



Contact Us for Technical Support:

| | | |
|---|----------------------------|----------------------------|
| - Website: www.gowinsemi.com.en | Shenzhen: 86-755-8262-0391 | Beijing: +86-186-0028-1017 |
| - Guangzhou Headquarters: 86-20-8757-8868 | Shandong: 86-531-8899-8122 | Hong Kong: 852-6828-6779 |
| Silicon Valley: 1-408-588-4007 | Shanghai: 86-21-6079-3538 | Wuhan: +86-186-6532-1785 |

Introduction

Thank you very much for taking DK-START-GW1NZ1 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 create, 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/>. For details on the software installation method and usage, please refer to [SUG100](#), Gowin YunYuan Software User Guide.

Development Board Power-on Test

The test program has been downloaded into the internal FLASH before the delivery of DK-START-GW1NZ1 development board. And the development board can be checked whether to work when it is powered on.

Connect the download cable of the USB Mini-B to the USB interface, the internal FLASH is loaded successfully if the power indicator and DONE light are on. After loading is done, four green LED lights will be blinking, indicating that the development board can work.

Compile Demo Program

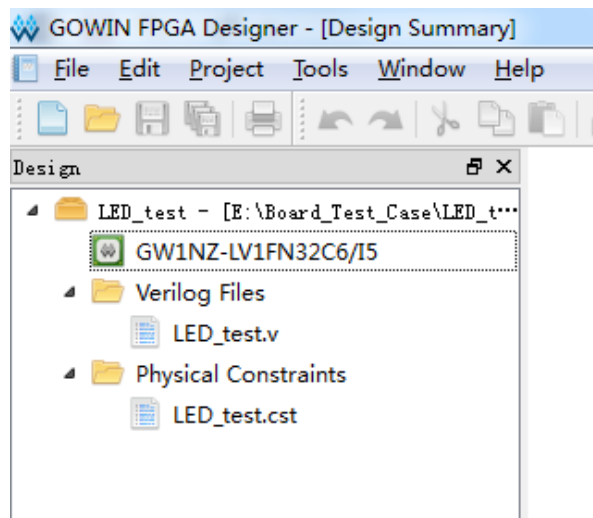
The LED test program is to demonstrate four LEDs blinking. Users can download the corresponding demo at Gowinsemi website:

<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 follows are displayed in the "Design" window:

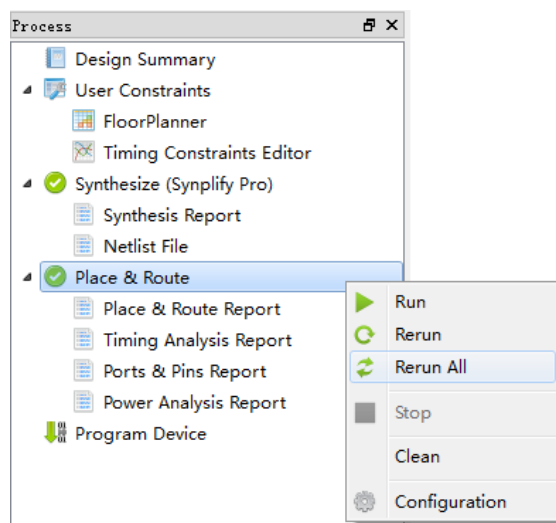
- GW1NZ-LV1FN32C6/I5: Gowin FPGA device part number;
- LED_test.v: Verilog code;
- LED_test.cst: Physical constraints file.

Figure 3 Design



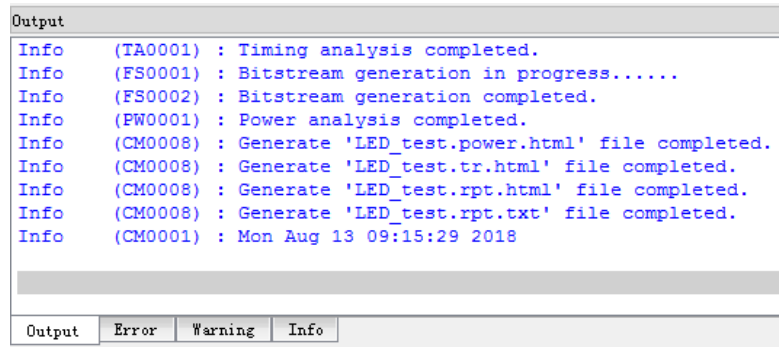
2. Right click "Place & Route" in the "Process" window and select "Rerun All".

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.

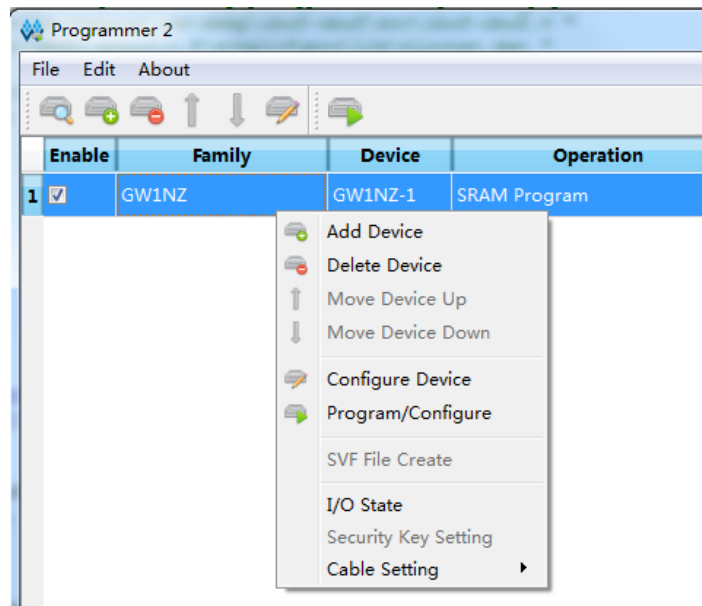
Figure 5 Compiling Completed



Download and Run

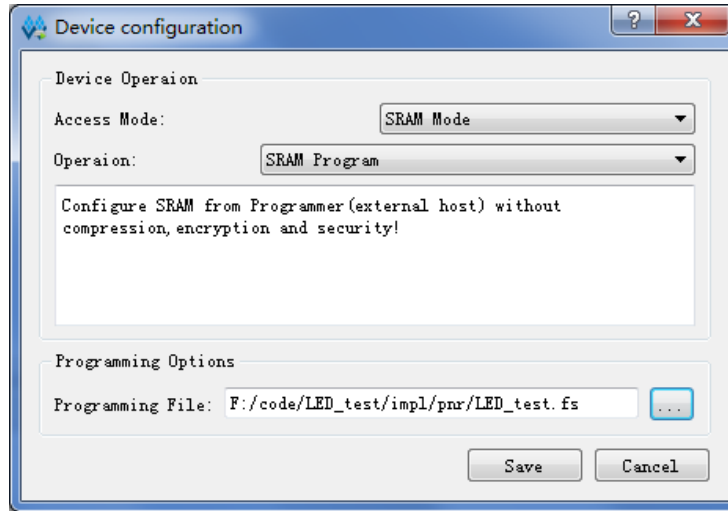
1. Connect the development board and PC using the download cable, turn on the power switch, and double-click the Program Device in the "Process" window. The "Programmer" window will pop up, right-click on the device list, and select "Configure Device", the "Device configuration" dialog box will pop up.

Figure 6 Programmer



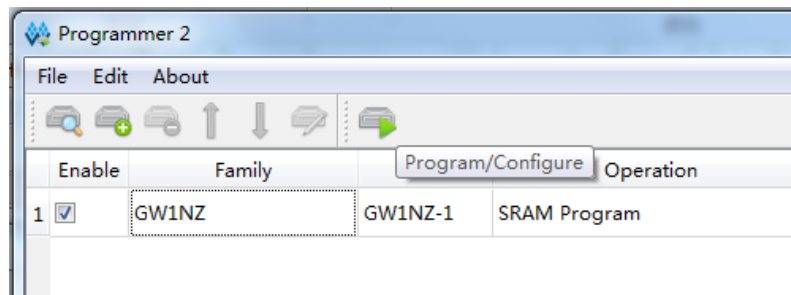
2. Set the download mode as shown below and specify the bitstream file path.

Figure 7 Device Configuration



3. After configuration, click the "Program/Configure" to download the program. After finishing, the four LEDs of the development board 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.

Website: www.gowinsemi.com

E-mail: support@gowinsemi.com

Tel: 00 86 0755 82620391

Revision History

| Date | Version | Description |
|------------|---------|----------------------------|
| 02/26/2020 | 1.0E | Initial version published. |