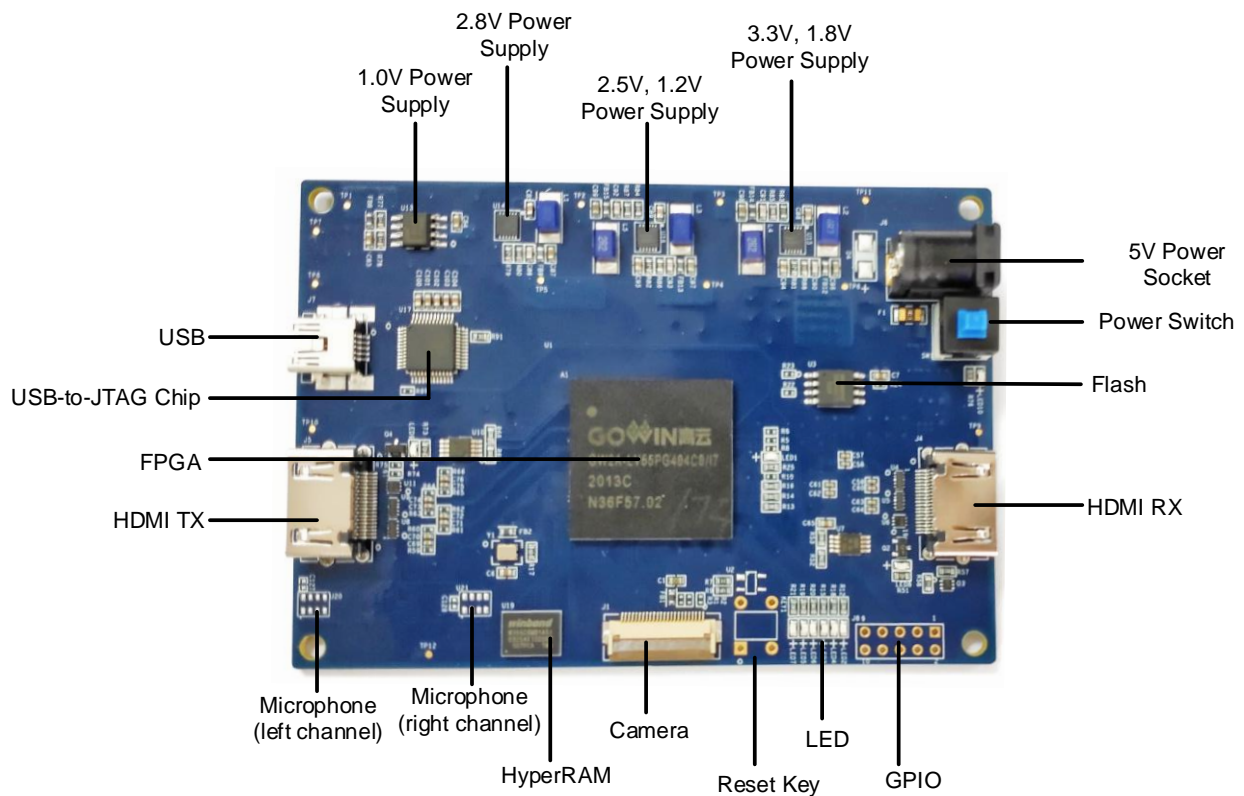


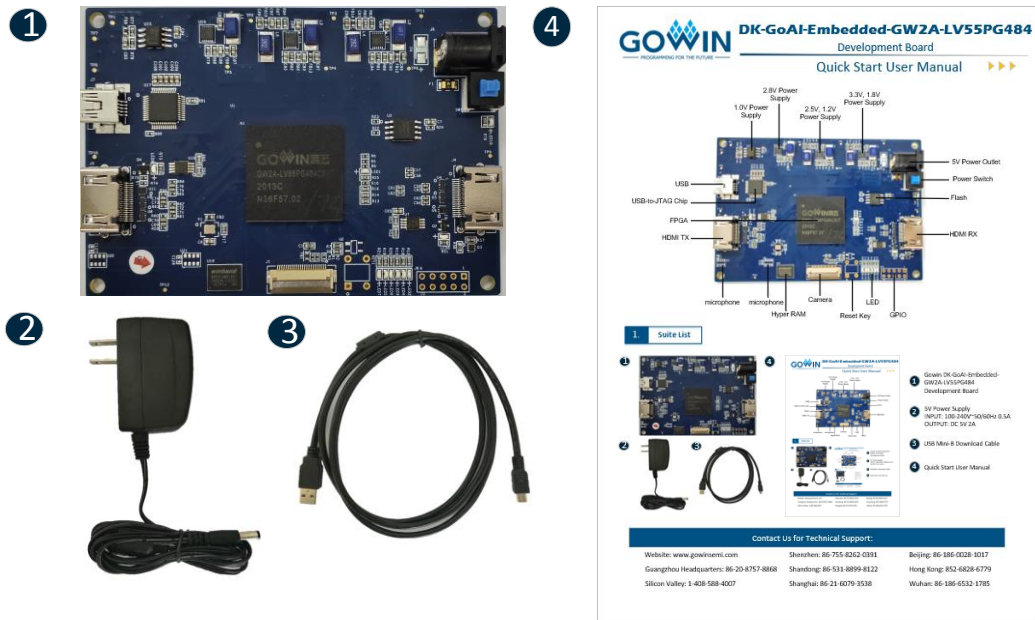
DK-GoAI-GW2A55PBGA484_V1.0 Development Board Quick Start Guide

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

- ① Gowin DK-GoAI-GW2A55PBGA484_V1.0 Development Board
- ② 5V Power Supply
- ③ USB Mini-B Download Cable
- ④ Quick Start User Manual

Introduction

Thank you very much for taking DK-GoAI-GW2A55PBGA484_V1.0 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 Software) to create, build 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 application, please see [SUG100](#), Gowin Software User Guide.

Development Board Power-on Test

The test program has been downloaded into the internal FLASH before the delivery of DK-GoAI-GW2A55PBGA484_V1.0 development board. The development board can be checked whether to work when it is connected to 5V 2A adapter.

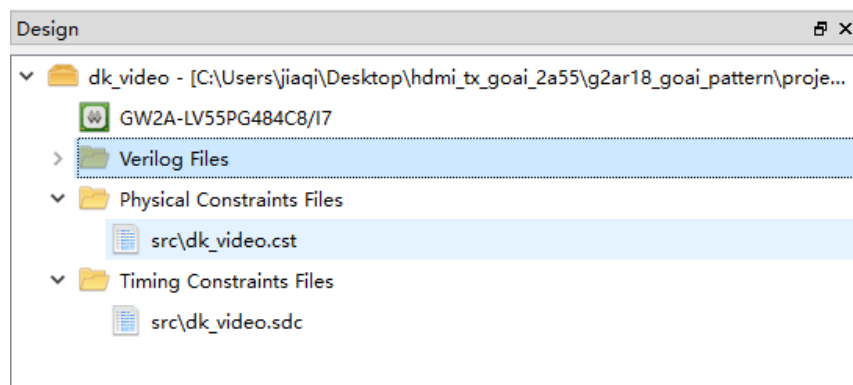
And the development board is powered by the 5V 2A adapter. If the loading is successful, the green LED2 flashes, the green LED 4 is constantly on and the screen displays the test image. It indicates that the board can work.

Build Demo Program

The test program is that HDMI outputs the test image. You 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 software.

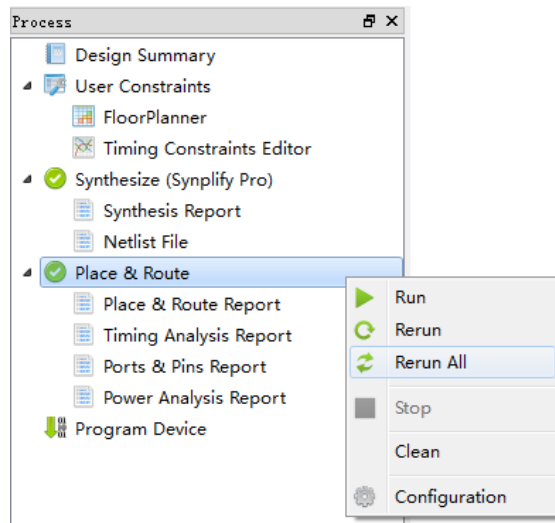
1. Open the "dk_video.gprj" project and the follows are displayed in the "Design" window:
 - GW2A-LV55PG484C8/I7: Gowin FPGA device part number;
 - Verilog Files: Verilog files;
 - dk_video.cst: Physical constraints file;
 - Dk_video.sdc: Timing constraints file.

Figure 3 Design



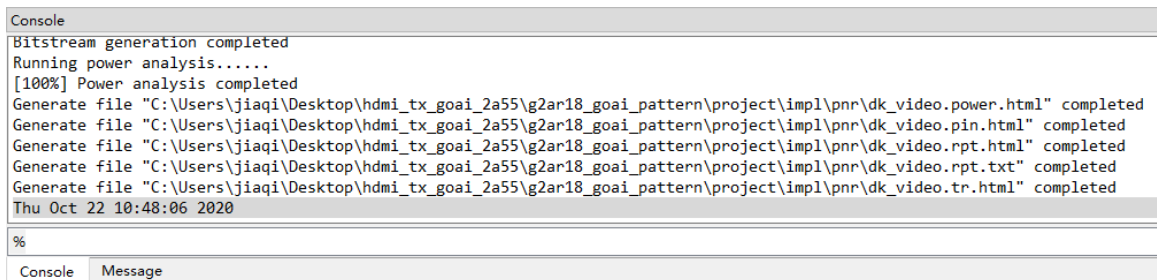
2. Right click "Place & Route" in the "Process" window and select "Rerun All";

Figure 4 Select Rerun All



3. After building, the following information will be displayed. The generated bitstream file is saved in: ..
hdmi_tx_goai_2a55\project\impl\pnr\ dk_video.fs.

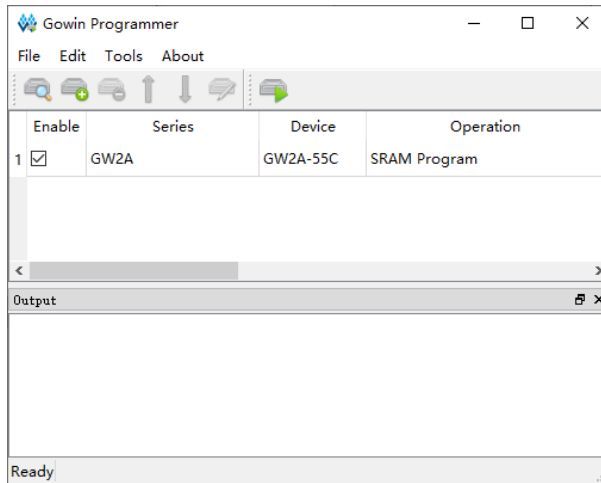
Figure 5 Build Completed



Download and Run

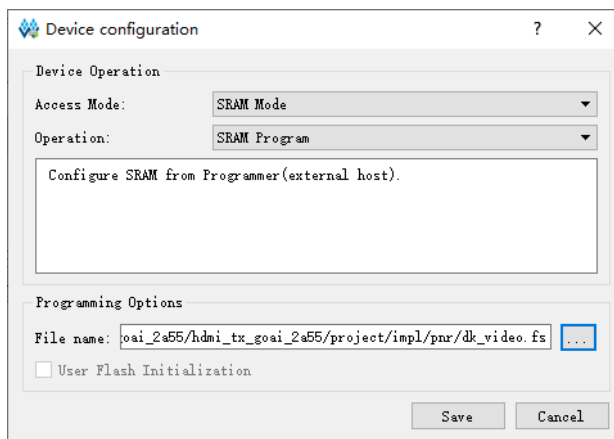
1. Connect the JTAG(J7) on the development board with PC using the USB cable. Double-click on the "Program Device" in the "Process" window. The "Programmer" window will pop up. Right-click on the device list, and select "Configure Device". The Device configuration dialog box will pop up.

Figure 6 Programmer Window



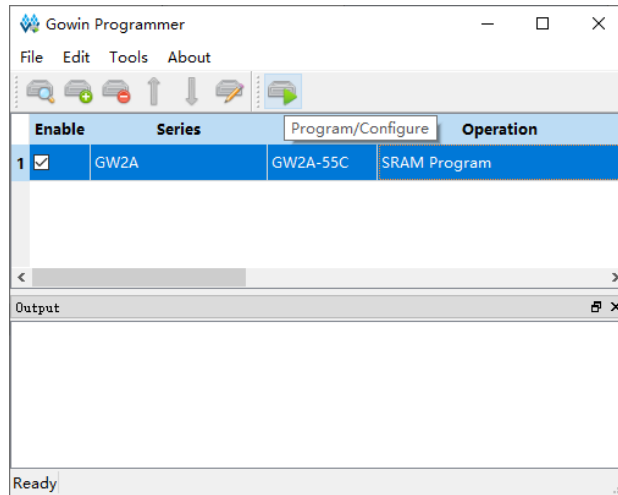
2. Set the download mode as shown below and specify the bitstream file path.

Figure 7 Device Configuration



3. After configuration, click the "Program/Configure" to download the program.. After the download, the green LED2 flashes, the green LED4 is constantly on and the screen outputs the test image (scroll).

Figure 8 Program/Configure



Demo

Figure 9 Connection

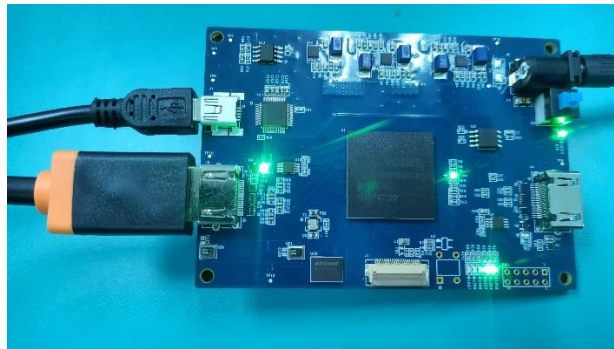
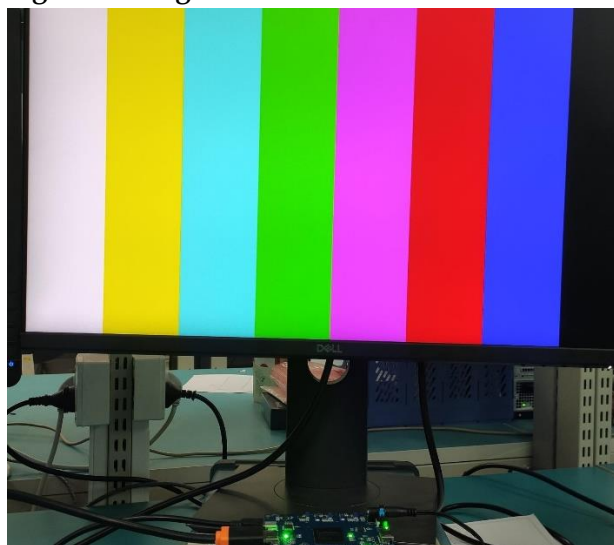


Figure 10 Program the Device



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

Revision History

Date	Version	Description
10/26/2020	1.0E	Initial version published.

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