



Gowin Flash Controller IP Reference Design

Release Note

RN901-1.6E,10/28/2022

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Revision History

Date	Version	Description
08/30/2019	1.0E	Initial version published.
10/24/2019	1.1E	● FLASH64KZ Register interface controller supported. ● FLASH608K Register interface controller supported. ● FLASH608K Wishbone interface controller supported.
11/08/2019	1.2E	the FLASH256K Register interface and Wishbone interface controller of GW1NRF-4B supported.
12/05/2019	1.3E	● Simplify the user port design of FLASH96K controller. ● The known simulation issue of FLASH96K controller fixed.
01/16/2020	1.4E	● FLASH64K Register interface controller supported. ● FLASH256K and FLASH608K AHB interface controller supported.
11/09/2020	1.5E	● FLASH128K Register interface controller supported. ● FLASH256KA Register interface controller supported. ● FLASH256K, FLASH256KA and FLASH608K APB interface controller supported. ● FLASH256KA AHB interface controller supported. ● FLASH256KA Wishbone interface controller supported.
10/28/2022	1.6E	● FLASH256KA Register, AHB, APB, and Wishbone interface controller removed. ● FLASH128K Register interface controller removed. ● FLASH96KA Register interface controller supported.

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1 About This Release

This release includes:

- FLASH256KA Register, AHB, APB, and Wishbone interface controller removed.
- FLASH128K Register interface controller removed.
- FLASH96KA Register interface controller supported.

Gowin Flash Controller IP [Reference Design](#) is available at Gowin Website. The reference design can be used for simulation and overall synthesis, placement & routing after the instantiation with user design.

2 Function and Enhancement Summary

The released IP functions and enhancement items are as follows:

Function	Description
Front-end synthesis tool: GowinSynthesis V1.9.8.09	
Support Gowin Flash Controller	● FLASH256KA Register, AHB, APB, and Wishbone interface controller removed. ● FLASH128K Register interface controller removed. ● FLASH96KA Register interface controller supported.
Back-end placement and routing tool: Gowin_V1.9.8.09	
Enhancements	—
Devices Supported	● GW1N-1 ● GW1N-1S ● GW1NR-1 ● GW1NZ-1 ● GW1NZ-1C ● GW1N-1P5 ● GW1N-1P5B ● GW1N-1P5C ● GW1N-2 ● GW1N-2B ● GW1N-2C ● GW1NR-2 ● GW1NR-2B ● GW1NR-2C ● GW1N-4 ● GW1N-4B ● GW1N-4D ● GW1NS-4 ● GW1NSR-4 ● GW1NR-4 ● GW1NR-4B ● GW1NR-4D ● GW1NRF-4B ● GW1N-9

Function	Description
	● GW1N-9C ● GW1NR-9 ● GW1NR-9C

3 Platform Supported

The corresponding software of the released IPs supports the following platforms:

Windows	Windows 7/8/10(32 bits/64bits)
Linux	Centos 6.8/7.0/7.5(64 bits) Ubuntu 18.04 LTS

4 Documents

The released IP manuals are listed in the table below. You can download the PDF manuals at Gowin website or read online.

Documents	Usage
IPUG901, Gowin Flash Controller User Guide	Online, PDF
RN901, Gowin Flash Controller Reference Design Release Note	Online, PDF

5 IP Support

Since the requirements of user design and the maximum frequency are different, the reference design does not include FPGA specific location (.cst) and timing constraints (.sdc) documents, and you can determine the location and timing constraints on your own.

For the customized IP design and support, please contact Gowin sales and support line.

Website: www.gowinsemi.com

Email: support@gowinsemi.com

