



Gowin SDRAM Controller

Release Note

RN279-1.0E, 07/05/2017

Copyright©2017 Guangdong Gowin Semiconductor Corporation. All Rights Reserved.

No part of this document may be reproduced or transmitted in any form or by any denotes, electronic, mechanical, photocopying, recording or otherwise, without the prior written consent of GOWINSEMI.

Disclaimer

GOWINSEM[®], LittleBee[®], Arora[™], and the GOWINSEMI logos are trademarks of GOWINSEMI and are registered in China, the U.S. Patent and Trademark Office and other countries. All other words and logos identified as trademarks or service marks are the property of their respective holders, as described at www.gowinsemi.com. GOWINSEMI assumes no liability and provides no warranty (either expressed or implied) and is not responsible for any damage incurred to your hardware, software, data, or property resulting from usage of the materials or intellectual property except as outlined in the GOWINSEMI Terms and Conditions of Sale. All information in this document should be treated as preliminary. GOWINSEMI may make changes to this document at any time without prior notice. Anyone relying on this documentation should contact GOWINSEMI for the current documentation and errata.

Revision History

Date	Version	Description
07/05/2017	1.0E	Initial version published.

Contents

Contents i

About This Release 1

Functions and Enhancement Summary 2

Platform Supported 3

Document 4

About This Release

This release includes three SDRAM controller reference designs, and the IP Core Generator supports SDRAM controller IP generation via the use of the IP Core Generator.

1. 32-bit SDRAM Controller for device GW2AR-18LV7LQ144C
Maximum Performance > 155 Mhz
2. 32-bit SDRAM Controller for device GW1NR-4LV5QN88C
Maximum Performance > 90 Mhz
3. 16-bit SDRAM Controller for device GW1NR-4LV5QN88C
Maximum Performance > 90 Mhz

Three SDRAM controller reference designs are available on the Gowin Website. The key parameters, such as the input data width, have been configured in the reference designs. The reference designs can be used for simulation and instantiation of the overall synthesis, placement, and routing after user design.

Functions and Enhancement Summary

The released IP functions and enhancement items are as follows:

Function	Description
Front-end synthesis tool: SynplifyPro, L-2016.09G-1w	
Support SDRAM Controller	Initialization, data read/write, refresh, precharge, etc.
Back-end place and routing tool: GoWinYunYuan_V1.7.6Beta	
Enhancements	–
Devices Supported	● GW1N-4 ● GW1NR-4 ● GW2A-18 ● GW2AR-18

Platform Supported

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

Windows	Windows 7 (32/64-bit)
Linux	Red Hat Enterprise Linux 5/6/7 (64-bit)

Document

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

Document	Access
Gowin SDRAM Controller User Guide	Online, PDF
Gowin SDRAM Controller Reference Design	Online, PDF

