



Gowin AEC IP **Release Note**

RN761-1.0E, 01/28/2021

Copyright©2021 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

GOWINSEMI[®], 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
01/28/2021	1.0E	Initial version published.

Contents

Contents.....	i
About This Guide.....	1
Overview	2
Documents	3
IP Support	4

About This Guide

This release includes Gowin AEC IP user guide. Gowin AEC IP user guide and reference design are available at Gowin website. Take specific parameters in the reference design as an instance, which can be used for simulation, synthesis, PnR and testing.

Overview

Gowin AEC IP is used to cancel echoes of the acquisition signals. The IP determines whether the acquisition signal contains echoes by cross correlation operation; the echoes with highly correlation of the acquisition signal are filtered out using NLMS adaptive filter (hereinafter referred to as NLMS) to achieve echo cancellation.

Table 1 Gowin AEC IP Overview

Gowin AEC IP	
IP Core Application	
Supported Devices	GW1N series: GW1N-9, GW1N-9C GW1N series: GW1NR-9, GW1NR-9C GW2A series GW2AR series GW2ANR series
Delivered Doc.	
Design Files	Verilog (encrypted)
Test and Design Flow	
Synthesis Software	Synplify Pro/GowinSynthesis
Application Software	Gowin Software

Documents

This software release includes Gowin AEC IP documents, which are listed below:

Table 2 Gowin AEC IP Documents

Documents	Usage
IPUG761, Gowin AEC IP.pdf	PDF
RN761, Gowin AEC IP Release Note.pdf	PDF

IP Support

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

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

Email: support@gowinsemi.com

Official Website: www.gowinsemi.com

