Gowin Software

Release Note

RN100-1.9.9E, 11/30/2023

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1 About This Release

The V1.9.9 release includes features and enhancement functions of Gowin Software. GOWINSEMI recommends downloading this version to get the latest software.

Note!

1. When programming GW5AT-LV138FPG676A, GW5AT-LV138PG676A, GW5AT-LV138PG484A samples, and creating a new project, you need to select the corresponding GW5AST-138 Version B PN to generate the bitstream file, and select the GW5AST-138 Version B device in Programmer.
2. If you need Windows V1.9.9 (32-bit) software, please contact GOWIN Support.

The following table summarizes the release items:

Feature	Description
Gowin Software: V1.9.9	
New Devices	● GW5AS-25 Version A - GW5AS-EV25UG256ES - GW5AS-EV25UG256C1/I0 - GW5AS-EV25UG256C2/I1 ● GW5AT-75 Version B - GW5AT-LV75UG484ES
PN Supported	● GW5AT-138 Version B - GW5AT-LV138UG324AES - GW5AT-LV138UG324AC1/I0 - GW5AT-LV138UG324AC2/I1 - GW5AT-LV138UG324A0 ● GW5A-25 Version A - GW5A-EV25LQ144ES - GW5A-EV25LQ144C1/I0 - GW5A-EV25LQ144C2/I1 ● GW1NZ-2 Version C - GW1NZ-LV2CS42C6/I5

Feature	Description
	- GW1NZ-LV2CS42C5/I4
New Functions	● IPs added: SLVS_EC_RX, 10G Serial Ethernet, EDP Decode, EDP Encode, USB To Multi Serial Protocol Bridge ● GAO configuration interface's Capture Signal right-click menu supports enabling and disabling signals ● GAO waveform interface supports adding divider lines for grouping signals ● GAO waveform interface supports Long Name and Short Name for signals ● GAO waveform interface supports color modification, adds shortcut keys for triggering; and shortcut keys for waveform zooming in/out is updated ● Gowin USB Cable added in Cable dropdown menu on GAO interface ● GAO-programmer supports download frequency setting ● Prompt for license expiration added in IDE ● For Arora V devices, multiplier supports unsigned IP Core setting ● Schematic Viewer supports saving schematic in PDF format ● Place option adds 2 sub-options to improve timing
Updated	● IPs updated: EDP PHY, Beamforming, UHS PSRAM Memory Interface, RiscV_AE350_SOC, DDR3 Memory Interface, Video Frame Buffer, AEC, FFT ● Loading rate greater than 66.6 for 55nm devices removed ● DPI to MIPI TX and MIPI RX to DPI moved into the Deprecated ● Sub-protocol IP 10GBASE-R under SerDes in IP Core removed ● OTP primitive for Arora V devices updated, that is, the CLK port added and MODE parameter modified to 2 bits
Not Supported	● GW5A(S) (T)-138 and GW5A-25 devices do not support GPA, power report, and IBIS file output currently ● IP Core does not support SDP36KE initial value configuration for GW5A(S) (T)-138 devices currently

2 Platform Supported

The software is supported on the platforms listed below.

Windows	Windows XP (32-bit) Windows 7/8/10/11 (64-bit)
Linux	Centos 6.8/7.0/7.3/7.5 (64-bit) Ubuntu 18.04/20.04 LTS

3 Ports

Port No.	Port Type	Port Description
36545	User-defined protocol port	Used for Gowin Analyzer Oscilloscope (GAO) display communicating with JTAG server
36546	User-defined protocol port	Used for Gowin Analyzer Oscilloscope (GAO) display communicating with JTAG server
10559	User-defined protocol port	The license server port of Gowin Software
10558	User-defined protocol port	The license server port of Gowin Software

4 Documents

The released documents are listed in the table below and the PDF versions are packaged in the installation directory.

Documents	Description
SUG501, Gowin Software Quick Installation User Guide	PDF
SUG918, Gowin Software Quick Start Guide	PDF
SUG100, Gowin Software User Guide	PDF
SUG940, Gowin Design Timing Constraints User Guide	PDF
SUG114, Gowin Analyzer Oscilloscope User Guide	PDF
SUG282, Gowin Power Analyzer User Guide	PDF
SUG283, Gowin Primitive User Guide	PDF
SUG550, GowinSynthesis User Guide	PDF
SUG935, Gowin Design Physical Constraints User Guide	PDF
SUG502, Gowin Programmer User Guide	PDF
SUG937, Gowin Software User Messages Reference	Online help, PDF
SUG755, Gowin HDL Schematic Viewer User Guide	PDF
SUG949, Gowin HDL Coding User Guide	PDF
UG287, Gowin DSP User Guide	PDF
UG285, Gowin BSRAM & SSRAM User Guide	PDF
UG286, Gowin Clock User Guide	PDF
UG288, Gowin Configurable Function Unit (CFU) User Guide	PDF
UG289, Gowin Programmable IO (GPIO) User Guide	PDF
UG295, Gowin User Flash User Guide	PDF
SUG1018, Arora V Design Physical Constraints User Guide	PDF
UG300, Arora V BSRAM & SSRAM User Guide.	PDF
UG303, Arora V Configurable Function Unit (CFU) User Guide	PDF
UG304, Arora V Programmable IO (GPIO) User Guide	PDF
UG305, Arora V Digital Signal Processing (DSP) User Guide	PDF
UG306, Arora V Clock User Guide	PDF

5 Known Problems and Solutions

The following problems apply to the supported functions in Gowin Software.

1. **GAO Capture Signal Failure**

   Solution: Try to reduce the number of capture signals and capture depth. If the problem still exists, please contact GOWIN support.

2. **GAO PnR Failure**

   ERROR (PR1011): Failed to capture GAO signal<name>, because there is no wire to route for the signal.

   Solution: Check whether the signal is hard-wired, such as the output of IOLOGIC.

3. **The information output pane displays messy code in Ubuntu 18.04 LTS system**

   The information output pane displays messy code in Linux; when the content is copied and pasted to the code editing pane, the display is normal.

   Solution: Delete ide/lib/libfreetype.so.6, so that the software uses the library that comes with the user's computer system.

4. **When using dynamic value that is based on the input instead a static constant value in places such as the initial value of a for loop and branches of a case statement, GowinSynthesis compiler maybe encounter a memory issue**

   Solution: Make sure that all loops used in a design have definite bounds (upper and lower).

5. **In the Windows operating system, panels on the IDE may encounter a locked state**

Solution: Use the Reset Layout option in Windows tab on the menu bar to

unlock.

6. When simulating vho, the simulator reports an error: Failed to find INSTANCE 'GSR'

It is due to the fact that VHD language does not support the duplication of names for primitives and their instantiations.

Solution: Modify the instantiation name of the primitive GSR in both the vho and .sdf files to "GSR_ins".


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