



Gowin Software

Release Note

RN100-1.9.11E, 12/31/2024

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1 About This Release

The V1.9.11 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 sample, 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 Gowin Software V1.9.11(32-bit) in Windows, please contact GOWIN Support.

The following table summarizes the release items:

Feature	Description
Gowin Software: V1.9.11	
Device added	<ul style="list-style-type: none"> ● GW5AT-15 Version B <ul style="list-style-type: none"> - GW5AT-LV15MG132C1/I0 - GW5AT-LV15MG132C2/I1 - GW5AT-LV15CS130C1/I0 ● GW5ART-15 Version B <ul style="list-style-type: none"> - GW5ART-LV15CM90PC1 - GW5ART-LV15CM90PFC1 - GW5ART-LV15MG132PC2/I1 - GW5ART-LV15MG132PC1/I0
PN Supported	<ul style="list-style-type: none"> ● GW5AT-60 Version B <ul style="list-style-type: none"> - GW5AT-LV60UG225HC2/I1 - GW5AT-LV60UG324AC2/I1 - GW5AT-LV60UG324AC1/I0 - GW5AT-LV60UG324AES
New Functions	<ul style="list-style-type: none"> ● IPs added: USB Audio Class, goConfig UART, MII to RMII, FP Exponential, SDI PHY, SDI Encoder, SDI Decoder, USB3.1 PHY, BLC.

Feature	Description
	<ul style="list-style-type: none"> ● GW5A(R)T-15 devices support SerDes ● GW5A(S)(T)-138 devices support SSTL135 and SSTL135D IBIS models. ● Remote debugging supported in GAO. ● GW5A(T)-60/GW5A(R)T-15 devices support a differential resistance configuration for MIPI_IBUF. ● GoBert eye diagram is integrated. ● Place & Route Report now includes details about hard core resources and utilization, DIO, embedded IO, and IO CFG. ● Remote configuration and programming for certain devices supported in Programmer; for the details, you can see SUG502, Gowin Programmer User Guide.
Updated	<ul style="list-style-type: none"> ● IPs updated: EDP PHY, SSCPLL, UHS PSRAM Memory Interface, LTPI supporting 60K, PCIE Controller, DVI RX, EDP Encode, EDP Decode, Float to Fixed, Fixed to Float, AHB to AHB 16 Bridge, APB to APB 16 Bridge, 10G Serial Ethernet supporting 60k, AHB Bus Arbiter, FIFO/FIFO SC supporting SSRAM mode, Gamma Correction, DDR3 Memory Interface, Basic FIR Filter, Advanced FIR Filter, USB3.0 PHY, BCH Encoder. ● For GW1N(Z)-2/1P5 device, the placement of DFFs with reset/set is disabled at position CLS3[A]. ● Disables SP/SPX9/DP/DPX9 read before write mode for GW5A(S)(T)-138 C, GW5AT-75 C, and GW5A(R)T-15 B devices. ● The delay data for DSP modules and cross-BSRAM/DSP routing on Arora V devices updated. ● For Arora V devices, IOB locations without IOLOIGC no longer support ELVDS_OBUF/ELVDS_TBUF/ELVDS_IOBUF. ● Static current for GW1N-4/GW1N-9/GW1NZ-1/GW1NZ-2/GW1NSER-4C/GW1NS-4/GW1NS-4C devices updated. ● The SRAM configuration in SSPI mode for GW5A-60 B, GW5AT-60 B, and GW5AT-60 ES devices optimized in Programmer. ● The SVF file generation for GW2AN-9X and GW2AN-18X devices optimized in Programmer.

2 Platform Supported

The software is supported on the platforms listed below.

Windows	Windows 7/8/10/11 (64-bit)
Linux	Centos 6.8/7.0/7.3/7.5/8.2 (64-bit) Ubuntu 18.04/20.04/22.04 LTS

3 Memory Requirements

The table below lists the minimum and recommended memory requirements for Gowin Software to support GOWIN devices. It is recommended to use a 64-bit operating system when running Arora V devices on the Windows platform.

Device	Minimum	Recommended
GW5A(S)(T)-138	3GB	5GB
GW5A(T)-60	3GB	5GB
GW5A(S)(R)-25	2GB	4GB
GW5A(N)(R)T-15	1GB	1.5GB
GW2A(N)-55	2GB	2.5GB
GW2A(N)(R)-18	1GB	1.5GB
GW1N(R)-9	512MB	1GB
GW1N(S)(E)(R)(F)-4	256MB	1GB
GW1N(Z)(R)-2	128MB	1GB
GW1N(Z)(R)-1	128MB	1GB

4 Ports

Port No.	Port Type	Port Description
36546	Fixed Protocol Port	Used for Gowin Analyzer Oscilloscope (GAO) display communicating with JTAG server
36547	Fixed Protocol Port	Used for Gowin Analyzer Oscilloscope (GAO) display communicating with JTAG server
36548	Custom Protocol Port	Used for Gowin Programmer communicating with JTAG server
10559	Custom Protocol Port	The license server port for Gowin Software
10558	Custom Protocol Port	The license server port for Gowin Software

5 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

Documents	Description
SUG1189, Gowin Virtual Input Output User Guide	PDF

6 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`, and make the software use the library that comes with the user's computer system.

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

It is due to the fact that VHDL 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".

