



Gowin_EMPU_M3 Software and Hardware Reference Design **Release Note**

RN924-1.0E, 04/03/2020

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Revision History

Date	Version	Description
04/03/2020	1.0E	Initial version published.

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1 About This Release

This release of Gowin_EMPU_M3 provides following items:

- Supports ARM Cortex-M3;
- Supports GPIO, Ethernet, DDR3, SPI-Flash, UART0/1, Timer0/1, WatchDog, RTC, I2C Master, SPI Master, SD-Card, AHB2 Extension and APB2 Extension;
- Supports uC/OS-III and FreeRTOS embedded real-time operating systems;
- Provides software development kit.

Gowin_EMPU_M3 SDK is available at Gowin website. Parameters have been configured in Gowin_EMPU_M3 software and hardware reference designs. These reference designs can be used in ARM Keil MDK V5.24 and above or GOWIN MCU Designer V1.0 and above, and Gowin Software V1.9.5.01Beta and above.

2 Function and Enhancement Summary

Gowin_EMPU_M3 IP functions and enhancement items are as follows:

Function	Description
	Front-end synthesis tool of MCU IPs: Synplify Pro P-2019.09G and above GowinSynthesis V1.9.5.01 Beta and above
Supports MCU IPs	<ul style="list-style-type: none"> ● Supports ARM Cortex-M3; ● Supports GPIO, Ethernet, DDR3, SPI-Flash, UART0/1, Timer0/1, WatchDog, RTC, I2C Master, SPI Master, SD-Card, AHB2 Extension and APB2 Extension; ● Supports uC/OS-III and FreeRTOS embedded real-time operating systems; ● Provides software development kit.
	Back-end placement & routing tool of MCU IPs: Gowin_V1.9.5.01 Beta and above MCU C build and debug tool: ARM Keil MDK V5.24 and above GOWIN MCU Designer V1.0 and above
Enhancements	–
New Devices Supported	GW2A-55 GW2A-55C

3 Platform Supported

The software supports the following platforms:

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

4 Documents

The released IP manuals are listed in the table below. You can download the Gowin_EMPU_M3 manuals at Gowin website or read online.

Table 4-1 Documents List

Documents	
IPUG923, Gowin_EMPU_M3 Hardware Design Reference Manual	Online, PDF
IPUG922, Gowin_EMPU_M3 Software Programming Reference Manual	Online, PDF
IPUG921, Gowin_EMPU_M3 Quick Design Reference Guide	Online, PDF
IPUG920, Gowin_EMPU_M3 Serial Debugging Reference Manual	Online, PDF
IPUG919, Gowin_EMPU_M3 IDE Software Reference Manual	Online, PDF
RN924, Gowin_EMPU_M3 Software and Hardware Reference Design Release Note	Online, PDF

