seeed studio

INDUSTRIAL PRODUCT DATASHEET

Tang Nano 9k FPGA board - Gowin GW1NR-9 FPGA with 8640 LUT4 + 6480 flip flops

Tang Nano 9k FPGA board with Gowin GW1NR-9 FPGA, offering 8640 LUT4, 6480 flip-flops, and versatile interfaces for learning, RISC-V verification, and diverse applications.

SKU	UPDATED	PRICE
102991677	2026-04-15 07:23:33	$14.90(Excl. VAT)



Overview

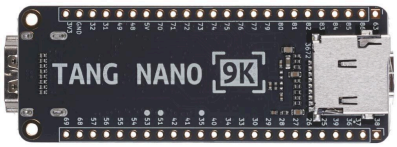


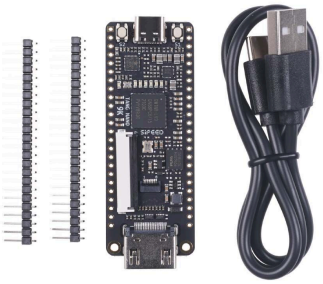
The Tang Nano 9k is a compact, low-cost FPGA board featuring the Gowin GW1NR-9 FPGA with 8640 LUT4 and 6480 flip-flops, onboard 32M-bit SPI FLASH, and a USB to JTAG & UART debugger for code download and debugging. It provides multiple development interfaces including HDMI, SPI screen, and RGB screen, and is ideal for learning FPGA, verifying RISC-V based CPUs, and applications such as internetwork communication, AI, and consumer electronics.

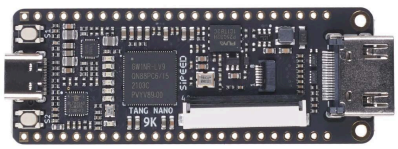
Key Features

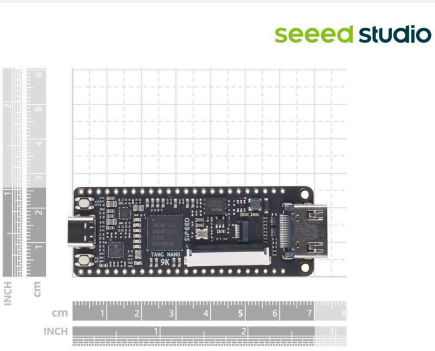
- GW1NR-9 FPGA: 8640 LUT4, 6480 FF(Flip-Flop)
- Onboard 32M-bit SPI FLASH
- Onboard JTAG Downloader
- More complete debugger: USB to JTAG & UART debugger
- Multiple development interfaces: HDMI interface, SPI screen interface, RGB screen interface
- More functional Type-C connector: 5V Power supply & Code download
- Small size, low-cost

Product Gallery









Specification

Parameter	Detail
Chip	Gowin GW1NR-9 FPGA with 8640 LUT4
Registers(FF)	6480
ShadowSRAM SSRAM(bits)	17280
Block SRAM BSRAM	468K
Number of B-SRAM	26
User flash(bits)	608K
SDR SDRAM(bits)	64M
18 x 18 Multiplier	20
External SPI FLASH	32M-bit
Number of PLL	2
Dimensions	Approximately 65 x 23mm
Type-C Power supply	5V
Display interface	HDMI interface, SPI screen interface, RGB screen interface
Debugger	Onboard BL702 chip provides USB-JTAG and USB-UART functions for GW1NR-9
IO	Support 4mA，8mA, 16mA, 24mA other driving capabilities Provides independent Bus Keeper, pull-up/pull-down resistors, and Open Drain output options for each I/O
Connector	TF card slot, 2x24P 2.54mm Header pads
Button	2 programmable buttons for users
LED	Onboard 6 programmable LEDs

Tang Nano 9k board	1
Type-C Data Cable	1
24Pin header	2

Applications

- **Learning FPGA**
- **Verifying an FPGA:** Internetwork communication, AI, and Consumer Electronics
- **Verifying RISC-V based CPU:** server, domestic appliance, Industrial, and thumb-sized sensors

Compliance & Logistics



HSCODE	8517180050
USHSCODE	8543709860
UPC	
COO	CHINA

Resource Links

- https://www.seeedstudio.com/Tang-Nano-9k-FPGA-board-Gowin-GW1NR-9-FPGA-8640-LUT4-6480-flip-flops-p-5381.html
- Install IDE and configure license
- Verilog code specifications
- SUG949-1.1E_Gowin HDL Coding User Guide.pdf
- SUG284-2.1E_Gowin IP Core Generator User Guide.pdf (Page 28)
- Datasheet of 5inch screen
- PicoRV soft-core test Code Summary
- GameBOY HDMI Code Summary
- PicoRV Code Summary

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com