

Atomic Display Base

SKU:A115



Description

Atomic Display Base is a high-definition display driver unit that uses FPGA to emulate traditional SPI TFT-LCD data output, supporting up to 720P (1280x720) image output. It achieves broad compatibility for display output through a dedicated RGB-to-high-definition multimedia signal chip. Users can pair it with the ATOM series hosts to meet different memory and application requirements. The Atomic Display Base can replace traditional PC-controlled display panel solutions, offering a more cost-effective option. It is widely applicable in industrial control displays, smart home information screens, education and conference presentations, and remote monitoring displays.

Note

Atomic Display Base requires a display with adaptive resolution scaling. Some displays without this feature may experience display abnormalities.

Features

- Uses FPGA (Gowin GW1NR-9C)
- Built-in LT8618SX RGB-to-high-definition multimedia signal chip (supports 24-bit color depth)
- SPI interface (FPGA) + I2C interface (LT8618SX)
- Maximum 720P (1280x720) image output
- Various output modes with optimized frame rates of up to 12 ~ 16 FPS
- Development platforms: Arduino, ESP32-IDF (UIFlow not yet supported)

Contents

- 1x Atomic Display Base

Applications

- Display input signal source

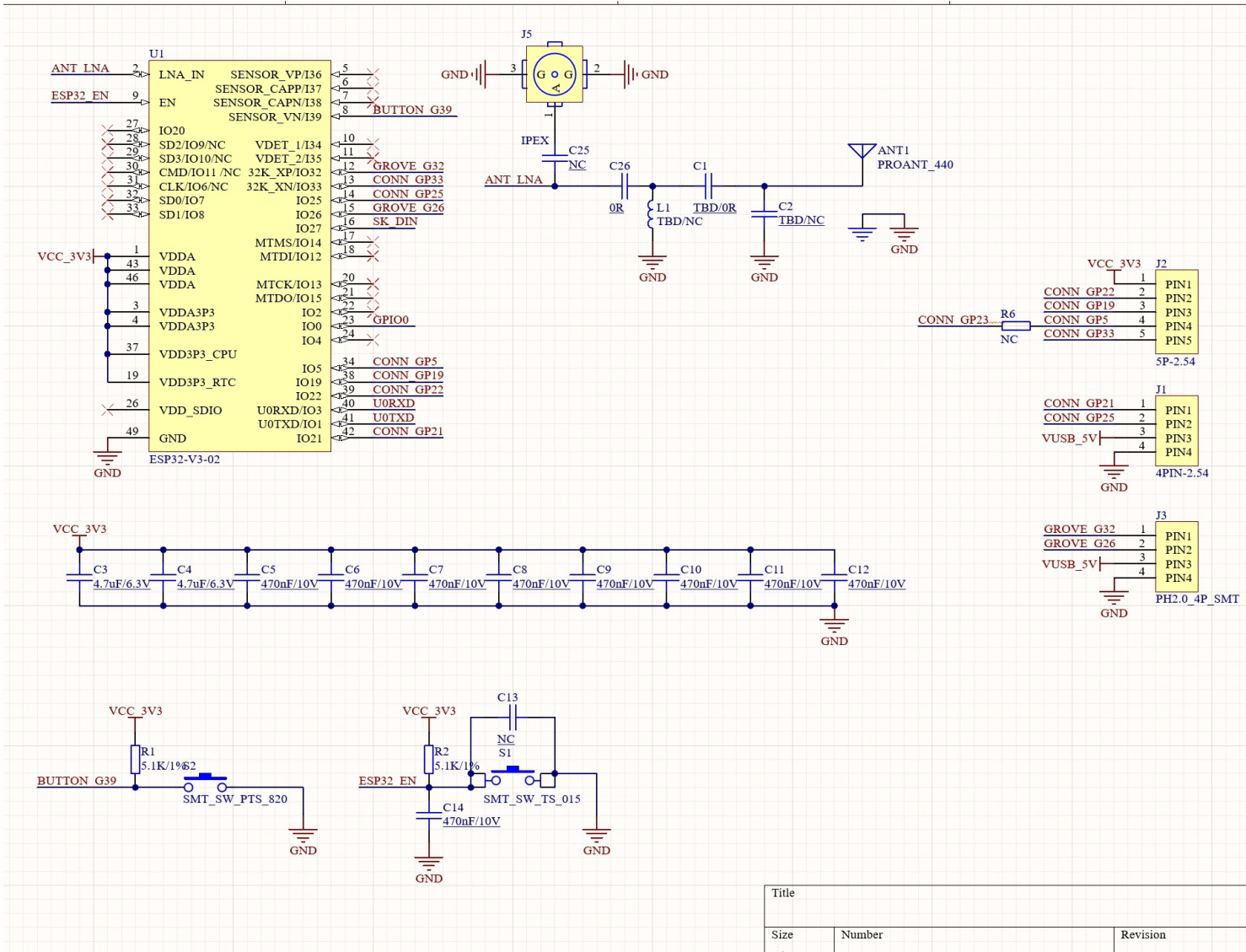
Specifications

Specification	Parameter
FPGA	Gowin GW1NR-9C
LT8618SX	RGB-to-high-definition multimedia signal chip, supports 24-bit color depth
Maximum Output Size	720P (1280x720)
Output Frame Rate	1280x720 60Hz
Product Size	64*24*29mm
Package Size	136*92*30mm
Product Weight	15.2g
Package Weight	17.3g

Related Links

- [LT8618SX](#)
- [GW1NR-9C Data Sheet](#)
- [GW1NR-9C Design Manual](#)

Schematic



◦ [Download Full Schematic](#)

PinMap

LT8618SX

Atomic Display Base	G25	G21
LT8618SX	LT_CSDA	LT_CSCL

FPGA GW1NR-9C

Atomic Display Base	CLK	CS	MISO	MOSI
ATOM LITE/ATOM Matrix	GPIO22	GPIO19	GPIO23	GPIO33
ATOMS3/ATOMS3 LITE	GPIO5	GPIO6	GPIO7	GPIO8

| Module Size
