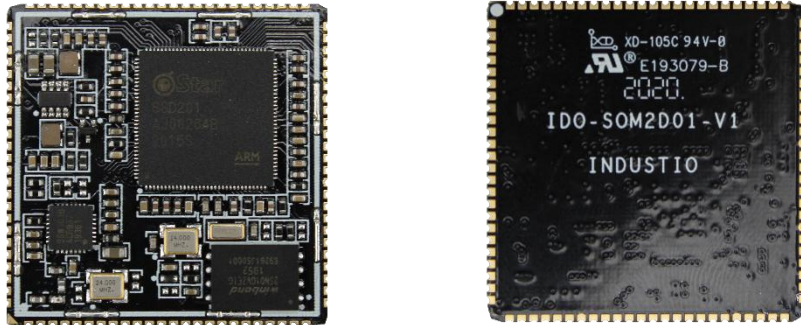


# IDO-SOM2D01 Module Datasheet



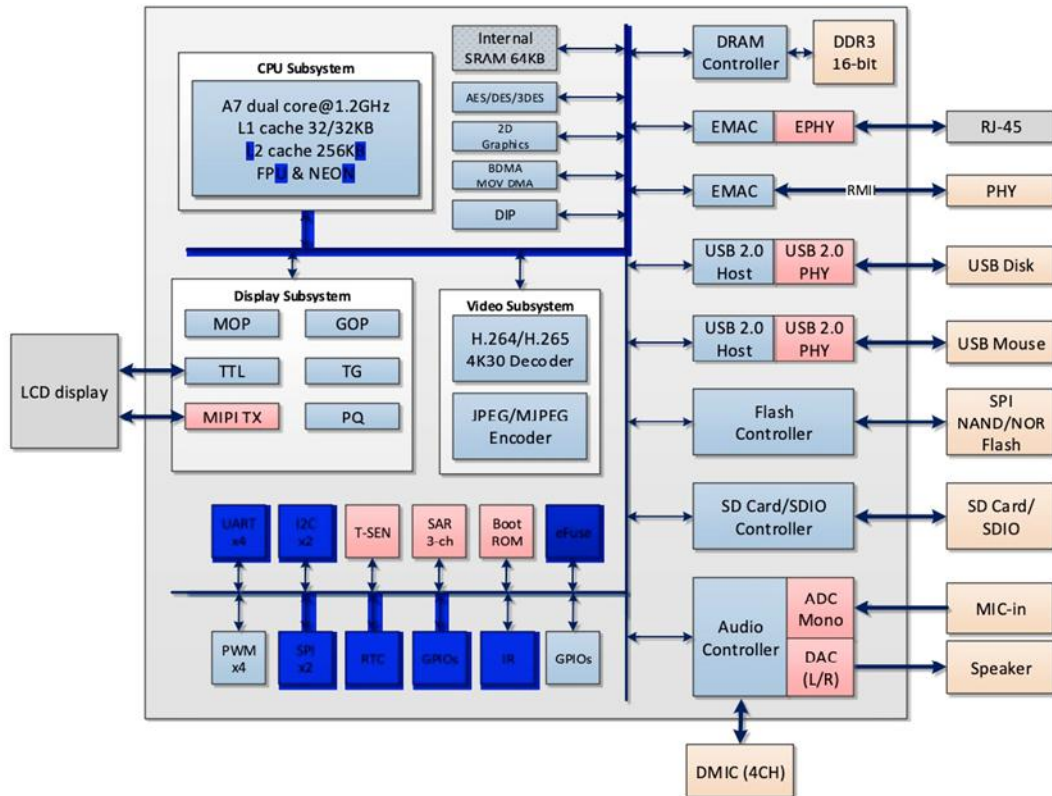
## 1 . Module Overview

IDO-SOM2D01 is an ultra-small SOM (System On Module) module based on SigmaStar SSD201 SoC (ARM Cortex A7 Core). The module integrates WiFi, NAND and power management circuits on a 2.95cm x 2.95cm PCB. It can be applied to smart display, building intercom indoor unit, medical electronics, voice recognition home appliance and IoT smart gateway, etc. It has carried out strict power integrity and signal integrity simulation design, and has passed various electromagnetic compatibility, temperature shock, high temperature and high humidity aging, long-term storage pressure and other tests. It is stable and reliable, and can be supplied in batches.

### Key Features:

- ◆ Default configuration 64MB DDR2, 128MB Nand Flash (up to 2GB)
- ◆ Ultra small size (29.5mm\*29.5mm) . Single-sided layout, fully shielded on the back, optional shielding cover on the front
- ◆ The back of the PCB is completely flat and has no traces, and the board can be routed at will without interference
- ◆ Supports Linux system, super fast boot within 1s
- ◆ Integrates 1 way 10/100M PHY
- ◆ Strict signal integrity and power integrity design and test
- ◆ 96Pin with 1.1mm pitch, extends all pin resources of SSD201

The internal functional block diagram of SigmaStar is as follows:



The detailed specifications of the module are as follows:

Items	Specifications
CPU	SigmaStar SSD201 ARM® Cortex-A7 dual-core processor, up to 1.2GHz
Video processor	Supports max. resolution FHD (1920x1080)/60fps decoding, H.265/HEVC Decoder, I/P/B slices, all intra-prediction modes, all inter-prediction modes, supports max. resolution HD (1920x1080)/60 fps decoding
Power supply	Input voltage 3.3V
RAM	Embedded DDR2/DDR3 memory, supports auto-refresh and self-refresh mode, 64MB
Storage	Supports 1/2/4-bit SPI-NOR/SPI-NAND Flash, default 128MB (Up to 2GB)
System	Linux
Ethernet	Supports two Ethernet ports, supports 10/100Mbps half/full duplex, one built-in 10/100M Ethernet PHY, supports one RMI to connect external PHY

WIFI/BT	Equipped with Singmaster wifi chip (SSW101B) , with high performance, and 500 meters transmission distance in open space
Display	Supports mipi/RGB interface: MIPI TX DSI 4-lan with max, 1.5Gbps and output up to FHD 60fps; Supports FHD graphic layer with Index 4/8,ARGB1555/ARGB4444/ARGB8888,RGB565,and YUV422 format.
Audio	1 x Mono AMIC 1 x Dual channel DMIC 1 x LINEOUTR/L, supports 8K/16K/32K/48KHz Sampling Rate;
USB	1 x USB 2.0 HOST
Infrared	1 x Infrared receiving interface (PM_IRIN)
Peripherals	4 x UART (PM_UART is used as Debug Serial by default) 1 x SDIO2.0 (Data bus 1/4 bit mode, compatible with SD Specification 2.0) 2 x I2C、1 x I2S、1 x SPI、4 x PWM、several GPIOs
Dimensions	29.5mm x 29.5mm
Interface Type	Stamp hole (96 PIN, 1.1mm pin pitch)
PCB	1.2mm thickness, 4-layer board, high Tg material, immersion gold process
Weight	8g

## 2 . IDO-SOM2D01 Module Block Diagram

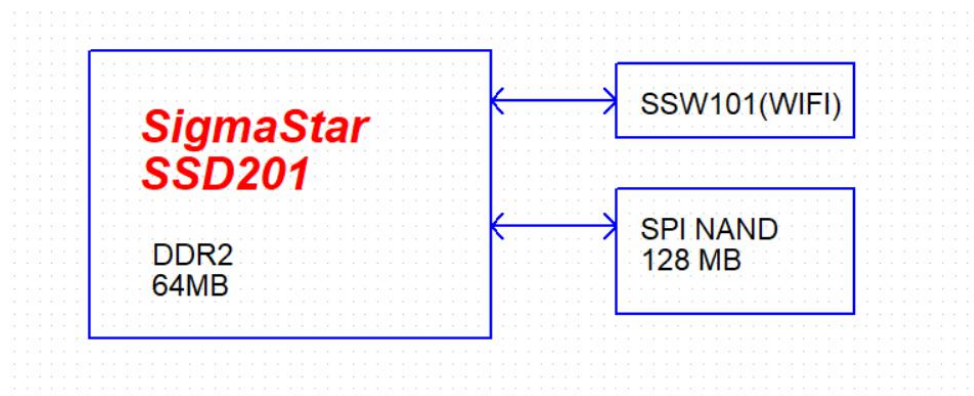


Figure 2. IDO-SOM2D01 Module Block Diagram

## 3 . IDO-SOM2D01 Pin Definition

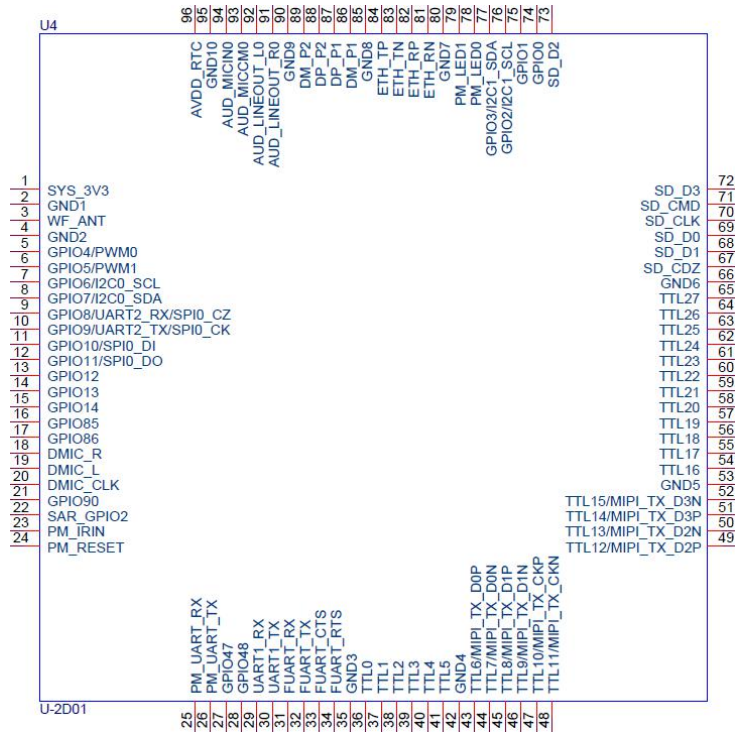


Figure 3. IDO-SOM2D01 module pin definition

Note: For detailed pin definitions and function multiplexing, please refer to the document "IDO-SOM2D01 Pinout.pdf".

#### 4 . Module Dimensions

Unit: mm

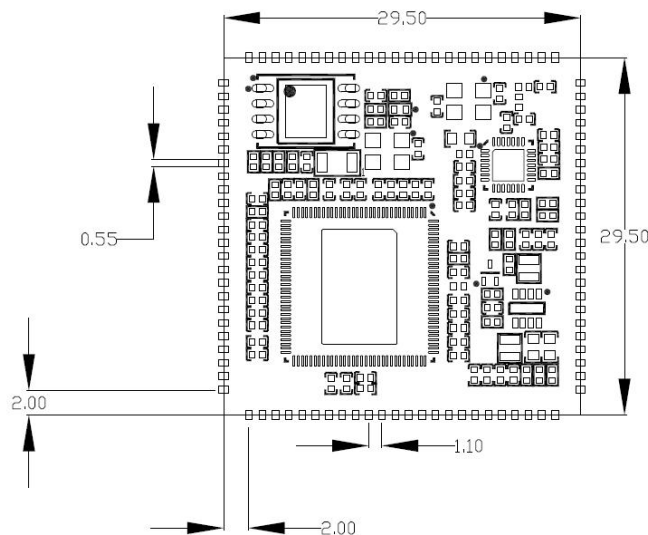


Figure 4. IDO-SOM2D01 dimensions

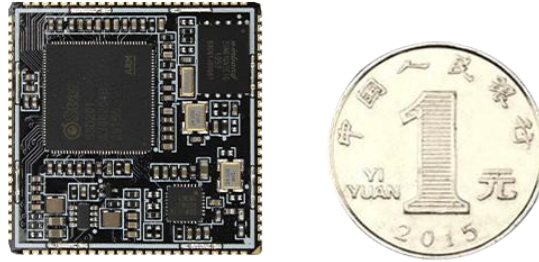


Figure 5. Comparison between IDO-SOM2D01 module and one yuan coin

### 5 . Module electrical parameters

Power pin	Min	Max	Current	Power supply ripple requirements
SYS_3V3	3.2V	3.4V		<30mVrms

### 6 . Product ordering

Order Part Number	DDR3L	ROM	Main frequency	Temperature