

## TUOPUONE SIM8262A-M2

# TUOPUONE SIM8262A-M2 SIMCom 5G Module User Manual

Model: SIM8262A-M2

## 1. PRODUCT OVERVIEW

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The SIM8262A-M2 is a high-performance 5G module designed for advanced wireless communication applications. It utilizes the M.2 form factor and is based on the Qualcomm Snapdragon X62 platform, supporting both 5G NSA (Non-Standalone) and SA (Standalone) networking across multiple modes and frequency bands. This module is engineered for high throughput data communication in various radio propagation conditions.

Key features include:

- **Qualcomm Platform:** Based on Qualcomm Snapdragon X62, supporting 5G NSA and SA networking, multi-mode, and multi-band operations.
- **Integrated Positioning:** Features an integrated multi-constellation system for dual-frequency positioning.
- **Operating System Compatibility:** Supports Windows, Linux, Android, and other operating systems.
- **USB 3.1 Interface:** Equipped with a USB 3.1 port (compatible with USB 2.0) for high-speed 5G communication when connected to a PC, Raspberry Pi (RPi), or Jetson Nano host board.
- **M.2 B KEY Slot:** Onboard M.2 B KEY slot ensures compatibility with various 5G modules, including SIM8202X-M2, SIM8200EA-M2, and SIM8262X-M2 series.

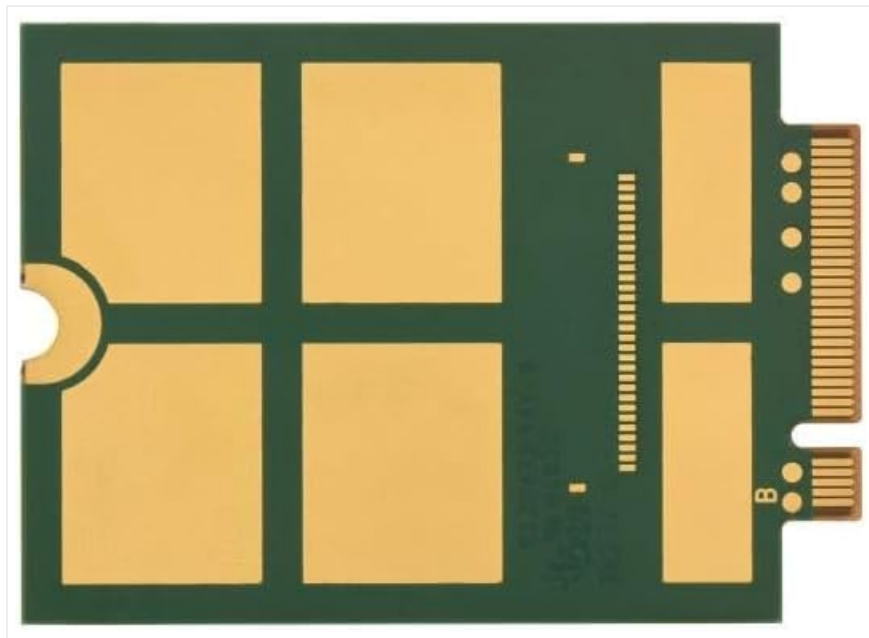


Figure 1.1: Top view of the SIM8262A-M2 5G module, showing its compact M.2 form factor.

FREQUENCY BAND			
Sub-6G	n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n40, n41, n48, n66, n71, n78	n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n40, n41, n66, n71, n77, n78, n79	n1, n3, n5, n7, n8, n20, n28, n38, n40, n41, n77, n78, n79
LTE-FDD	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71	B1, B3, B5, B7, B8, B18, B19, B20, B26, B28, B32	B1, B2, B4, B5, B7, B12, B13, B14, B17, B18, B19, B25, B26, B29, B30, B66, B71
LTE-TDD	B34, B38, B39, B40, B41, B42, B43, B48	B38, B39, B40, B41, B42, B43	B38, B41, B42, B43, B46, B48
WCDMA	B1, B2, B3, B4, B5, B8	B1, B5, B8	B1, B2, B4, B5, B8
GNSS	GPS, GLONASS, Beidou, Galileo, and QZSS		
DATA RATE			

Figure 1.2: SIM8262A-M2 module illustrating its dimensions (30mm width, 42mm length, 2.3mm thickness).

## 2. INSTALLATION GUIDE

### 2.1 M.2 Slot Installation

The SIM8262A-M2 module is designed for installation into a standard M.2 B KEY slot. Ensure the host device has a compatible M.2 slot before proceeding. Align the module's connector with the slot and gently push it in until it seats firmly. Secure the module with the appropriate screw provided by your host device manufacturer.

## Selection Guide

You can choose a 5G module or an optional case.



Figure 2.1: SIM8262A-M2 module, highlighting the M.2 connector for proper alignment during installation.

## 2.2 Host Board Connection

For communication, connect the module to a host board such as a PC, Raspberry Pi, or Jetson Nano via its USB 3.1 interface. This connection enables high-speed data transfer for 5G communication. Ensure the host board's USB port provides sufficient power to the module.

## 2.3 SIM Card and Antenna Installation

Insert a compatible SIM card (1.8V/2.95V) into the module's SIM card slot. Connect the required antennas to the IPEX-4 connectors on the module. The SIM8262A-M2 typically requires multiple antennas for optimal 3G/4G/5G/GNSS performance. Refer to the module's specifications for the exact number of antenna connectors (e.g., 6 x IPEX-4 connectors for some variants, 4 x IPEX-4 for others).

## 3. OPERATING INSTRUCTIONS

### 3.1 Supported Operating Systems

The SIM8262A-M2 module is compatible with a range of operating systems, including Windows, Linux, and Android. Ensure that the necessary drivers are installed on your host system for proper module recognition and functionality.

### 3.2 Communication Protocols

The module supports various communication protocols essential for network connectivity and data transfer. These include TCP/IP, IPv4, IPv6, Multi-PDP, FTP, FTPS, HTTP, HTTPS, MQTTs, DNS, and SSL3.0.

### 3.3 Dial-Up and SMS Functions

For dial-up networking, the module supports RNDIS, NDIS, PPP, and MBIM modes. SMS functionalities include support for MT (Mobile Terminated), MO (Mobile Originated), CB (Cell Broadcast), and PDU (Protocol Data Unit) modes.

### 3.4 Firmware Upgrade

Firmware updates for the SIM8262A-M2 module can be performed via the USB port. Always refer to the official SIMCom documentation or TUOPUONE support for the latest firmware and upgrade procedures.

## 4. MAINTENANCE AND CARE

To ensure the longevity and optimal performance of your SIM8262A-M2 module, observe the following guidelines:

- **Operating Environment:** Operate the module within its specified temperature range of -30°C to +70°C. Avoid extreme temperatures and humidity.
- **Handling:** Handle the module with care, avoiding static discharge. Use anti-static precautions when installing or removing the module.
- **Cleaning:** Keep the module free from dust and debris. Do not use liquid cleaners directly on the module.
- **Storage:** When not in use, store the module in a dry, cool, and anti-static environment.

## 5. TROUBLESHOOTING

If you encounter issues with your SIM8262A-M2 module, consider the following troubleshooting steps:

- **No Detection by Host:** Ensure the module is correctly seated in the M.2 slot and the USB connection is secure. Verify that the necessary drivers are installed on your operating system.
- **Network Connection Issues:** Check SIM card insertion and activation status. Verify antenna connections. Ensure your host system's network settings are correctly configured for the module.
- **Power Issues:** Confirm that the host board provides adequate power (3.135V-4.4V) to the module.
- **Performance Problems:** Ensure the module is operating within its specified temperature range. Check for any physical damage to the module or connectors.

For persistent issues, consult the detailed technical documentation available from SIMCom or contact TUOPUONE customer support.

## 6. TECHNICAL SPECIFICATIONS

The following tables detail the technical specifications of the SIM8262A-M2 module, including its comparison with other SIMCom 5G modules.

HARDWARE SPECIFICATIONS		
SIM Card	1.8V/2.95V	
Antenna	For 3G/4G/5G/GNSS	
	6 × IPEX-4 connectors	4 × IPEX-4 connectors
Power Supply	3.135-4.4V	
Form Factor	M.2	
Dimensions	52.0 × 30.0 × 2.3 mm	42.0 × 30.0 × 2.3 mm
Operating Temperature	-30°C - +70°C	
APPLICATIONS		

Figure 6.1: Comparison of 5G Standard, Chip, Frequency Bands, and Data Rates for SIM8200EA-M2, SIM8202G-M2, SIM8262E-M2, and SIM8262A-M2.

SOFTWARE FUNCTIONS		
Operating systems	Windows/Linux/Android	
Communication protocols	TCP/IP, IPV4, IPV6, Multi-PDP, FTP, FTPS, HTTP, HTTPS, MQTTS, DNS, SSL3.0	
Dial Up	RNDIS, NDIS, PPP, MBIM	
SMS	Supports MT, MO, CB, Text, PDU	
Firmware upgrade	Supports firmware upgrade via USB port	
HARDWARE SPECIFICATIONS		
SIM Card	1.8V/2.95V	
Antenna	For 3G/4G/5G/GNSS	
	6 × IPEX-4 connectors	4 × IPEX-4 connectors
Power Supply	3.135~4.4V	
Form Factor	M.2	
Dimensions	52.0 × 30.0 × 2.3 mm	42.0 × 30.0 × 2.3 mm
	Operating Temperature: -30°C ~ +70°C	
APPLICATIONS		
Applicable regions	except Americas	Americas
	The applicable regions above are for reference only, please choose the right module according to your local operator network coverage and supported frequency bands	
Application examples	CPE, Smart gateway, Drone, Live streaming, Remote medical treatment, Intelligent security	

Figure 6.2: Software Functions, Hardware Specifications, and Application examples for SIM8262A-M2 and other modules.

## General Specifications:

- **Weight:** Approximately 0.006 kg.
- **Form Factor:** M.2.
- **Dimensions:** 42.0 × 30.0 × 2.3 mm.
- **Operating Temperature:** -30°C to +70°C.
- **Power Supply:** 3.135V-4.4V.
- **SIM Card:** Supports 1.8V/2.95V.
- **Antenna Connectors:** 4 x IPEX-4 connectors.

The SIM8262A-M2 is an M.2 module supplied without an antenna or base board. It is recommended to use it with compatible 5G antennas, 5G HATs (Hardware Attached on Top), and 5G DONGLE HATs for complete functionality.

**Weight:** 0.006 kg

This is an M.2 module without antenna or base board, it is recommended to used with the [5G antenna](#), [5G HAT](#) and [5G DONGLE HAT](#).

SIM8262A-M2 x1



Figure 6.3: Module weight and recommendations for compatible accessories like 5G antennas and HATs.

## 7. WARRANTY INFORMATION

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This TUOPUONE product is covered by a standard manufacturer's warranty. The warranty period typically covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. For specific warranty terms and conditions, refer to the documentation provided with your purchase or visit the official TUOPUONE website.

## 8. CUSTOMER SUPPORT

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For technical assistance, product inquiries, or support, please contact TUOPUONE customer service. You can typically find contact information on the TUOPUONE official website or through the retailer where you purchased the product. When contacting support, please have your product model (SIM8262A-M2) and any relevant purchase details ready.