

AGENEWTECH

# H150MP

**Smart Module Specification\_V1.1**



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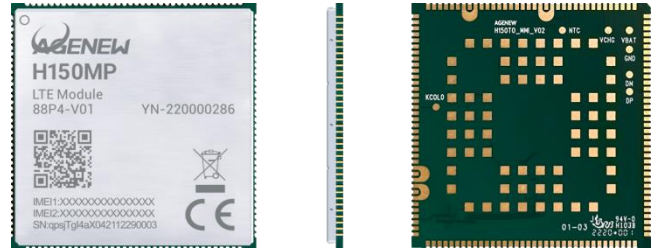
# About the Document

## History

Version	Data	Author	Description
-	2021-12-14	Zhaomingyi	Initial
1.0	2022-01-04	Zhaomingyi	Controlled Copy
1.1	2022-05-31	Yang Yanlian	Correct errors

# H150MP

Multi-network Smart 4G module  
Supports Wi-Fi & BT



H150MP is a multi-network Smart LTE Cat 4 module based on MediaTek MT8765 platform and quad-core ARM Cortex-A53 processor (the frequency is up to 1.5GHz) launched by Sunning Smart Devices Co.,Ltd, which is equipped with Android 10 operating system. It has powerful performance, neon engine processing, 2D/3D graphics acceleration processing capability, and fully meets customers' demands for high speed and multimedia functions in industrial and consumer applications. There are two versions of H150MP series modules: H150MP-CE and H150MP-W (H150MP-W only supports Wi-Fi & BT).

H150MP supports multiple-input and multiple-output technology (MIMO), and multiple receiving antennas can be used at the receiving end, so that signals can be received through multiple antennas at the receiving end, thereby increasing the download speed, reducing the bit error rate and improving the communication quality. At the same time, H150MP supports GPS/GPS+GLONASS/GPS+Beidou satellite positioning, which meets the needs of different environments and greatly improves the positioning speed and accuracy.

H150MP integrates rich interfaces (such as LCM, camera, touch screen, microphone, speaker, UART, USB, I2C, SPI, SDIO and ADC interfaces, etc.), which greatly expands its application in M2M field. It is widely used in intelligent cash register, intelligent POS, tax control machine, security monitoring, vehicle-mounted equipment, high-end information collection equipment, intelligent robot, smart home, intelligent hardware, industrial intelligent handheld equipment, unmanned aerial vehicle, high-end police or law enforcement equipment, intelligent intercom equipment, intelligent wear, vending machine, logistics cabinet and other equipment, and is applied to different industries.



## Main Advantages

- ✓ Comprehensive coverage of multi-network standard.
- ✓ Support Wi-Fi 802.11a/b/g/n and BT4.2 short-range wireless communication
- ✓ Support GPS/GLONASS/BeiDou satellite positioning
- ✓ Support multiple audio and video codecs
- ✓ The main screen supports up to HD+ 1440x720
- ✓ Support 1080P@30fps video recording and playback
- ✓ Possess audio and video input and output interfaces and rich GPIO interfaces



Quad-core ARM Cortex-A53



IEEE 802.11 a/b/g/n



Support Android 10



GPS/GLONASS/BeiDou



Powerful multimedia



BT4.2

LTE Cat4	H150MP
Region/Operator	China/India/Korea/Thailand/Japan/Australia/Taiwan Province/Brazil, Europe, Middle East, Africa, North America and Latin America
Operating system	Android 10
Memory	8 GB eMMC + 1 GB LPDDR3(Default)/ 16 GB eMMC + 2 GB LPDDR3(Optional)
Module size (mm)	40.5× 40.5 ×2.8
Packaging	LCC + LGA
Temperature range	
Operation temperature	Normal operating temperature: -35 °C ~ + 75°C Extended operating temperature: -40 °C ~ + 80 °C Storage temperature range: -40 °C ~ + 90 °C
Frequency band information	
LTE-FDD	B1/B3/B5/B7/B8/B20
LTE-TDD	B34/B38/B39/B40/B41B
WCDMA	B1/B2/B5/B8
TD-SCDMA	B34/B39
GSM/EDGE	B2/B3/B5/B8
WLAN	2.4/5GHz, 802.11 a/b/g/n
Bluetooth	4.2
GNSS	GPS/GPS+GLONASS/GPS+BeiDou
Authentication	
Operator Certification	Undetermined
Compulsory Certification	SRRC*/NAL*/CCC*
Other Certifications	RoHS/REACH
Frequency Band Information	
LTE-FDD (Mbps)	150Mbps (DL)/50Mbps (UL)
LTE-TDD (Mbps)	150Mbps (DL)/50Mbps (UL)
DC-HSPA+ (Mbps)	11Mbps (UL)
WCDMA (Kbps)	3.1Mbps (DL)/1.8Mbps (UL)
EDGE (Kbps)	236.8Kbps (DL)/236.8Kbps (UL)
GPRS (Kbps)	85.6Kbps (DL)/85.6Kbps (UL)
Outstanding characteristics	
Six-mode communication	3GPP E-UTRA Release LTE: Support diversity receiving antenna and MIMO 2×2 downlink
Bandwidth (MHz)	1.4 - 20 MHz Radio frequency bandwidth
Charging chip	•
OTG	•
SIM card detection	•
Dual sim dual standby	•
USB Firmware upgrade	•
OTA Firmware upgrade	•

LTE Cat4	H150MP
<b>Electrical specification</b>	
<b>Operating Voltage</b>	3.5~4.4 V, typical value 3.8 V
<b>Consumption (typical)</b>	Undetermined
<b>Interface</b>	
<b>LCD</b>	4-lane MIPI DSI HD+ 1440×720
<b>Camera</b>	Road 2-4 lane MIPI CSI, up to 13MP
<b>TP</b>	Capacitive touch screen
<b>Audio</b>	3 Analog inputs: 3 groups of analog microphone inputs 3 Analog outputs: K-class speaker, AB-class receiver and AB-class stereo earphone
<b>USB</b>	USB 2.0, Supports OTG
<b>(U)SIM</b>	2 sets (1.8V/3V)
<b>UART</b>	2 UART for debugging and applications
<b>SD Card</b>	1 set
<b>ADC</b>	3 sets
<b>I2C</b>	5 I2C to control peripheral devices
<b>SPI</b>	3 SPI
<b>PWRKEY</b>	Internal pull up to VBAT
<b>Flashlight Interface</b>	1 set
<b>Aerial</b>	Main antenna, Diversity antenna, GNSS antenna, WIFI/BT antenna

Remarks: 1. \*: In progress

2. ●: Supports

3. Extended operating temperature: If the module works in this temperature range, its RF performance might be worse but it can still work properly.