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H1502RP

Smart Module Specification_V1.0

Our aim is to provide customers with timely and comprehensive service. For any assistance, please contact our company headquarters:

Wuxi Sunning Smart Devices Co.,Ltd.

No.52, Zone C, Huigu Pioneer Park, Huishan Economic Development Zone, Wuxi

Postal Code：214174

PhoneNum：+86 0510 8235 0372 MailBox：Asupport@agenewtech.com

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About the Document

History

Version	Data	Author	Description
-	2024-05-30	Wu Danyi	Initial
1.0	2024-06-15	Wu Danyi	Controlled Copy

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H1502RP

Multi-network Smart LTE module Supports Wi-Fi & BT
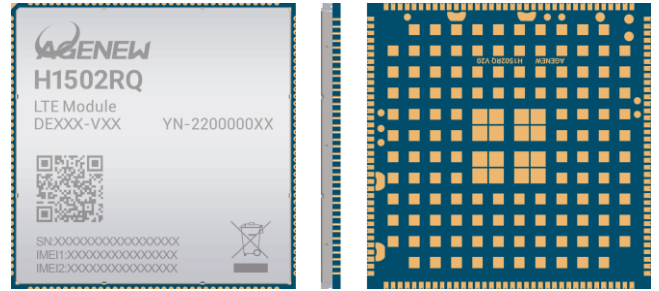
H1502RP is a multi-network Smart LTE Cat 4 module based on MediaTek's Octa-core (Dual-core ARM Cortex-A75 + Six-core ARM Cortex-A55) processor launched by Sunning Smart, equipped with Android 13 operating system. Its powerful performance, neon engine processing, 2D/3D graphics acceleration processing capabilities, fully meet the needs of customers for high-speed and multimedia functions in industrial and consumer applications.

H1502RP supports full coverage of all network systems, WI-FI 802.11a/b/g/n/ac, and BT5.0 near-field wireless communication. In addition, the H1502RP also has audio and video input and output interfaces and rich GPIO interfaces. It also supports a variety of audio and video codecs. The home screen supports HD+1280*800 at most. At the same time, H1502RP supports GPS/GLONASS/BeiDou/Galileo positioning systems, making its positioning function fast and accurate.

H1502RP is a patch module with a total of 274 pins, including 146 LCC pins and 128 LGA pins. The size is only 40.5mm × 40.5mm × 2.8mm, which can be embedded in various M2M product applications through pads, making it widely used in smart cash registers, smart POS, tax control machines, security monitoring, vehicle equipment, and high-end information Collection equipment, smart robots, smart homes, smart hardware, industrial smart handheld devices, drones, high-end police or law enforcement equipment, smart intercom devices, smart wearables, vending machines, logistics cabinets and other equipment are used in different industries.

Main Advantages

- ✓ Comprehensive coverage of multi-network standard
- ✓ Support Wi-Fi 802.11a/b/g/n/ac and BT5.0 short-range wireless communication
- ✓ Support GPS/Glonass/BeiDou/Galieo and other standard satellite positioning
- ✓ Support multiple audio and video codecs
- ✓ The main screen supports up to FHD+ 2520×1080
- ✓ Support 1080P@30fps video recording and playback
- ✓ Possess audio and video input and output interfaces and rich GPIO interfaces

Dual-core ARM Cortex-A75 + Six-core ARM Cortex-A55	IEEE 802.11 a/b/g/n/ac	Support Android 14
GPS+Glonass+BeiDou+Galileo	Powerful multimedia	BT5.0

LTE Cat4	H1502RP
Region/Operator	China/South America
Operating System	Android 14
Memory	32GB eMMC + 4GB LPDDR4X
Module size (mm)	40.5 × 40.5 × 2.8
Packaging	LCC + LGA
Temperature Range	
Operation Temperature	Normal operating temperature: -20 °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/B41
WCDMA	B1/B2/B5/B8
GSM/EDGE	B2/B3/B5/B8
WLAN	2.4/5GHz, 802.11 a/b/g/n/ac
Bluetooth	5.0
GNSS	GPS + GLONASS + BDS + Galileo
Authentication	
Operator Certification	Undetermined
Compulsory Certification	SRRC*/NAL*/CCC*
Other Certifications	RoHS*/REACH*
Data Rate	
LTE-FDD (Mbps)	300Mbps (DL) / 75Mbps (UL)
LTE-TDD (Mbps)	260Mbps (DL) / 90Mbps (UL)
DC-HSPA+ (Mbps)	42Mbps (DL) / 11.2Mbps (UL)
WCDMA (Kbps)	384Kbps (DL) / 384Kbps (UL)
EDGE (Kbps)	296Kbps (DL) / 236.8Kbps (UL)
GPRS (Kbps)	107Kbps (DL) / 85.6Kbps (UL)
Outstanding characteristics	
Six-Mode	LTE: Release 12 UMTS: Release 9
Bandwidth（MHz）	1.4/3/5/10/15/20
Rx-Diversity	●
DL supports MIMO 2 × 2	●
SIM Card Detection	●
Dual SIM Dual Standby	●
USB Firmware Upgrade	●
OTA Firmware Upgrade	●

Remarks: 1. *: In progress

        2. ●: Supports

LTE Cat4	H1502RP
Electrical specification	
Operating Voltage	3.5~4.4 V, typical 3.8 V
Consumption (typical)	Undetermined
Interface	
LCD	4-lane MIPI_DSI, support horizontal screen, Resolution up to FHD+ 2520×1080@60fps
Camera	3 4-lane MIPI_C_SI, up to 25MP
TP	Capacitive touch screen
Audio	Lineout Interface、receiver、earphone and 3 sets of microphones
USB	USB 2.0，Supports OTG
(U)SIM	2 sets（1.8V/3V)
UART	2 UARTs for debugging and applications
SD Card	1 set (SD3.0)
ADC	1 set general ADC interface, 1 set for battery ID
I2C	7 I2Cs to control peripheral devices
SPI	4 SPIs
PWRKEY	Internal pull up to VBAT
GPIO	18 GPIO reserved
ANT	Main antenna, Diversity antenna, GNSS antenna, WIFI/BT antenna