



30mm

2.4mm

L501

LTE Cat1 module

L501 is a Cat1 module for LCC+LGA package, with stable and reliable performance. It can well meet customer's requirements for cost-effective, low-power applications.

L501 size is only 30*30*2.4mm and very convenient for SMT. It can meet the needs of customers for small module products and facilitate customers to reduce product size and optimize product costs. All of these features make it suit to IoT areas, such as PoC, Mobile payment, security and alarm systems, on-board vehicle, DTU, asset tracking, sharing economy, etc.



FOTA



LTE Cat1



Temperature
-40°C to +85°C



AT



Ultra Low Power
Consumption



USB2.0



Analog Audio



VoLTE



GPRS CLASS 12



Main Features

- Module: (N: with GNSS)

L501:

GSM850, GSM1900

LTE B2/4/5/7/41/66

- GNSS:

Tracking: -162dBm

Reacquisition: -159dBm

Cold starts: -148dBm

Cold starts TTFF: 28s

Hot starts TTFF: 1s

GNSS Accuracy: 2.5m CEP

Speed: 0.1m/s

- Support AT command
- Operation Temperature Range: -40°C ~ +85°C
- Supply Voltage Range: 3.3 ~ 4.5V (3.8V Typ)
- Dimensions: 30*30*2.4mm
- Package: 135-pin LCC+LGA
- Weight: Approx 3.5g

Antenn Gain: Max support 2dBi

Interfaces

- 3 UART
- SIM (3.0V/1.8V) , or eSIM
- IIC
- 2 ADC
- USB2.0
- PCM
- GPIO
- Analog Audio
- Main/GNSS Antenna

Other features

- Firmware Update: Firmware updated via USB
- USB Drivers: Microsoft Windows XP/7/8
- Support WIFI SCAN
- Support TCP/UDP/HTTP/FTP/MQTT/SSL/TLS1.2/FOTA/PPP/VOLTE

Power consumption

- LTE Standby: 1.2mA@4V
- GSM Standby: 1.3mA@4V

Data transmission

- Support LTE Cat1 :
DL 10Mbps; UL 5Mbps

Certification

- CCC/SRRC/CE/RoHS

The following warning statements :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there

is no guarantee that interference will not

occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following

measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Exposure to Radio Frequency Radiation. This equipment must be installed and operated in accordance with

provided instructions, and the antenna(s) used for this transmitter must be installed to provide a separation

distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any

other antenna or transmitter. End-users and installers must be provided with antenna installation instructions

and transmitter operating conditions for satisfying RF exposure compliance.

This Modular Approval is limited to OEM installation for mobile and fixed applications only. The antenna installation and operating configurations of this Modular, including any applicable source-based time averaging duty factor, antenna gain and cable loss must satisfy MPE categorical

Exclusion Requirements of 2.1091.

if the host is marketed so that end users do not have straight forward commonly used methods for access to

remove the module so that the FCC ID of the module is visible; then an additional permanent label referring

to the enclosed module: Contains Transmitter Module FCC ID: 2AK9DL501G or Contains FCC ID: 2AK9DL501G must be used.