

CHEERZING • GSM/GPRS Modules

Product	MG2260
Summary	
Picture	
Dimension(mm)	17.7×15.8×2.6
Packaging	44pin LCC
Frequency Bands(MHz)	850/900/1800/1900
Weight(g)	1.3
Temperature Range	-40°C~+85°C
Data Transmission	
Data Rate(kbps)	85.6(DL)/85.6(UL)
SMS	●
Protocols	TCP/UDP/PPP/HTTP/FTP/PING/NTP/NITZ/SSL/MQTT/HTTPS
Interfaces	
SIM	1.8V/3.0V
Audio Analog	1 Input 2 Output
UART	x2
ADC	x1
I2C	●
GPIO	●
Antenna	x1, Primary
Power On/Off	●
Enhanced Features	
DTMF	●
FS	●
FOTA	●
TTS	●
OPENCPU	●
CMUX	●
Electrical Features	
Power Supply	3.4~4.2V(typ.3.8V)
Recommended Applications	
Applications	Internet Of Vehicles Mobile Payment Smart Metering Smart Home Wearable Devices Smart Healthcare Tracker Remote Maintenance and Control Security and Alarm System

CHEERZING • LTE Cat.4 Modules

Product	ML830
Summary	
Picture	
4G	LTE Cat.4
Dimension(mm)	32.0×29.0×2.6
Packaging	144pin LCC+LGA
Frequency Bands(MHz)	-CN FDD LTE: B1/B3/B5/B8 TDD LTE: B34/B38/B39/B40/B41 WCDMA: B1/B8 GSM: 900/1800 -EU FDD LTE: B1/B3/B5/B7/B8/B20/B28 TDD LTE: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 900/1800 -AU FDD LTE: B1/B2/B3/B4/B5/B7/B8/B66 TDD LTE: B40 WCDMA: B1/B2/B4/B5/B8 GSM: 850/900/1800/1900
Weight(g)	4.8
Temperature Range	-40°C~+85°C
Data Transmission	
LTE Rate(Mbps)	FDD LTE: Max 50 (UL)/150(DL) TDD LTE: Max 35(UL)/130(DL)
DC-HSPA+Rate(Mbps)	Max 5.76(UL)/42(DL)
EDGE Rate(Kbps)	Max 236.8(UL)/236.8(DL)
GPRS Rate(Kbps)	Max 85.6(UL)/85.6(DL)
SMS	●
Protocols	TCP/UDP/PPP/FTP/HTTP/NTP/PING/PAP/CHAP/MQTT
Interfaces	
SIM	1.8V/3.0V
Audio Analog	1 Input 1 Output
UART	x2
ADC	x2
USB	●
I2C	●
SPI	●
GPIO	●
Antenna	x2, Primary and Rx-diversity
Enhanced Features	
DTMF	●
FS	●
RIL Driver	●
NDIS	●
ECM	●
USB Serial Driver	●
FOTA	●
Electrical Features	
Power Supply	3.4V~4.2V(typ. 3.8V)
Recommended Applications	
Applications	PTT Over Cellular, Mobile Payment Internet Of Vehicles, Smart Grid CPE, Multimedia Terminal Wireless Handheld Terminal Smart Home Industrial Applications

Note: ● Support — Non-support ○ Under development

CHEERZING • LTE Cat.1 Modules

Product	ML160T Bluetooth	ML160T GNSS	ML120R	ML162	ML163
Summary					
Picture					
4G	LTE Cat.1	LTE Cat.1	LTE Cat.1	LTE Cat.1	LTE Cat.1
Dimension(mm)	21.9×22.9×2.3	21.9×22.9×2.3	15.8×17.7×2.2	28.0×31.0×2.4	19.9×23.6×2.4
Packaging	96pin LCC+LGA	96pin LCC+LGA	109pin LCC+LGA	144pin LCC+LGA	126pin LGA
Frequency Bands(MHz)	-CN FDD LTE : B1/B3/B5/B8 TDD LTE : B34/B38/B39/B40/B41	-CN FDD LTE : B1/B3/B5/B8 TDD LTE : B34/B38/B39/B40/B41	-CN FDD LTE : B1/B3/B5/B8 TDD LTE : B34/B38/B39/B40/B41	-EU FDD LTE : B1/B3/B5/B7/B8/B20/B28 TDD LTE : B38/B40/B41 GSM : 850/900/1800/1900 -LA FDD LTE : B2/B3/B4/B5/B7/B8/B66 TDD LTE : B38/B40/B41 GSM : 850/900/1800/1900	-EU FDD LTE : B1/B3/B5/B7/B8/B20/B28 GSM : 850/900/1800/1900 -LA FDD LTE : B2/B3/B4/B5/B7/B8/B66 GSM : 850/900/1800/1900
Weight(g)	2.3	2.3	1.5	4.3	2.6
Temperature Range	-35°C~ 75°C	-35°C~ 75°C	-35°C~ 75°C	-35°C~ 75°C	-35°C~ 75°C
Data Transmission					
LTE Rate (Mbps)	FDD LTE : Max 5 (UL)/10(DL) TDD LTE : Max 1 (UL)/7.5(DL)	FDD LTE : Max 5 (UL)/10(DL) TDD LTE : Max 1 (UL)/7.5(DL)	FDD LTE : Max 5 (UL)/10(DL) TDD LTE : Max 1 (UL)/7.5(DL)	GSM : Max 85.6(UL)/85.6(DL) FDD LTE : Max 5 (UL)/10(DL) TDD LTE : Max 1 (UL)/7.5(DL)	GSM : Max 85.6(UL)/85.6(DL) FDD LTE : Max 5 (UL)/10(DL) TDD LTE : Max 1 (UL)/7.5(DL)
SMS	●	●	●	●	●
Protocols	TCP/UDP/MQTT/HTTP(S)/SSL	TCP/UDP/MQTT/HTTP(S)/SSL	TCP/UDP/MQTT/HTTP(S)/SSL	IPv4/IPv6/PPP/TCP/UDP/MQTT/HTTP(S)/SSL/FILE/CMUX*	TCP/UDP/MQTT/HTTP(S)/SSL
Interfaces					
SIM	1.8V/3.0V	1.8V/3.0V	1.8V/3.0V	1.8V/3.0V	1.8V/3.0V
Audio Analog	1 Input 1 Output	1 Input 1 Output	1 Input 1 Output	1 Input 1 Output	1 Input 1 Output
UART	x2	x2	x3	x2	x2
ADC	x5	x2	x2	x3	x2
USB	●	●	●	●	●
I2C	●	●	●	●	●
SPI	●	●	●	●	●
GPIO	●	●	●	●	●
Antenna	x2, Primary	x2, Primary, GNSS	x2, Primary, GNSS	x2, Primary, GNSS	x1, Primary
Power On/Off	●	●	●	●	●
Enhanced Features					
VoLTE	●	●	●	●	●
FS	●	●	●	●	●
FOTA	●	●	●	●	●
TTS	●	●	●	●	●
OPENCPU	●	●	●	●	●
Electrical Features					
Power Supply	3.4V~4.2V(typ. 3.8V)	3.4V~4.2V(typ. 3.8V)	3.4V~4.2V(typ. 3.8V)	3.4V~4.5V(typ. 3.8V)	3.4V~4.2V(typ. 3.8V)
Recommended Applications					
Applications	Mobile Payment PTT Over Cellular Sharing Equipment Commercial Retail Security and Alarm System Emergency Alarm In-vehicle Smart Metering Industrial Internet Of Things	Mobile Payment PTT Over Cellular Sharing Equipment Commercial Retail Security and Alarm System Emergency Alarm In-vehicle Smart Metering Industrial Internet Of Things	Mobile Payment PTT Over Cellular Sharing Equipment Commercial Retail Security and Alarm System Emergency Alarm In-vehicle Smart Metering Industrial Internet Of Things	PTT Over Cellular Mobile Payment Internet Of Vehicles CPE Multimedia Terminals Wireless Handheld Terminal Smart Home Industrial Applications	Mobile Payment PTT Over Cellular Sharing Equipment Commercial Retail Security and Alarm System Emergency Alarm In-vehicle Smart Metering Industrial Internet Of Things

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