



Quectel CC200A-LB Satellite Communication Module

Introduction

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Duty of Confidentiality

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Key Features

Specifications & Timeline

Satellite Solution

Typical Applications

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Satellite Module Portfolio



Proprietary



CC200A-LB

- ORBCOMM RFIC
- Inmarsat GEO satellite L-band
- GNSS L1
- 37.0 × 38.0 × 3.35 mm

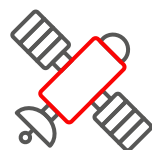
CC200A-LB Key Features



Global Satellite Connectivity



Global Coverage:
Inmarsat GEO constellation



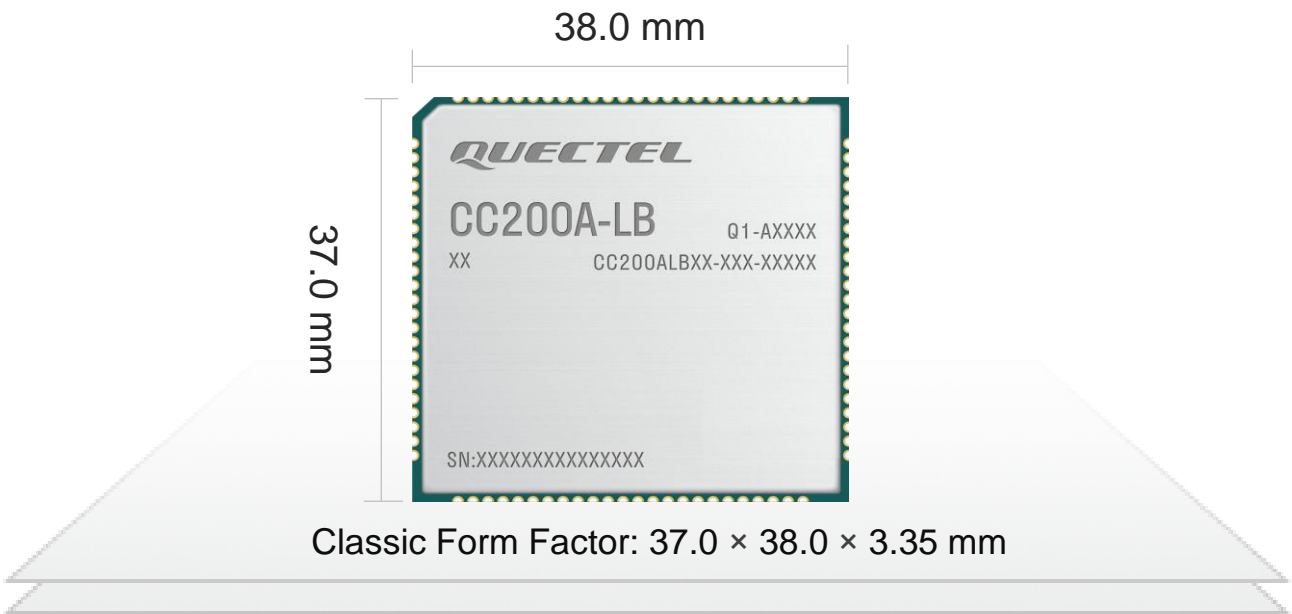
Reliable Connectivity
Two-way communication
IDP service network



Multi-Constellation GNSS
GPS/ GLONASS/ Galileo/ BDS



Low Power Consumption:
Various low power mode
Scheduled receive intervals



Low Latency
Ultra low latency of about 20 seconds for 100-byte message



AT Commands
AT command set



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CC200A-LB Specifications



Variant		CC200A-LB
Region		Global
Satellite Service		<ul style="list-style-type: none"> • Inmarsat GEO; • Two-way communication; • IsatData Pro (IDP)
Satellite Band		L-band
Frequency	L-Band	<ul style="list-style-type: none"> • Tx: 1626.5–1660.5 MHz, 1668–1675 MHz • Rx: 1518–1559 MHz
Max Message Size	From-Mobile Message	6.4 Kbytes
	To-Mobile Message	10 Kbytes
Typical Latency	100 Bytes Message Size	IDP: 12 s/ 20 s (Rx/Tx)
	1 Kbytes Message Size	IDP: 70 s/ 40 s (Rx/Tx)
	10 Kbytes Message Size	IDP: 5 min/ 8 min (Rx/Tx)
Communication Interface		UART
Antenna Interface		× 1 (Satellite and GNSS sharing)
GNSS		GPS L1/ GLONASS L1/ Galileo E1/ BDS B1
Certification	Satellite	Inmarsat Type Approval*
	Regulatory	FCC*/ IC*/ CE*/ RCM*
Project Stage		Pre-ES

CC200A-LB Timeline

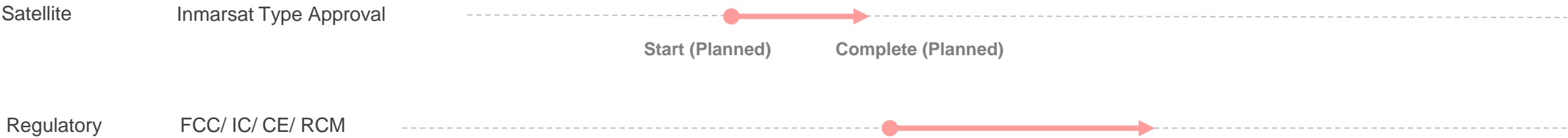


2022			2023								
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.

Project Schedule



Certification



ES: Engineering samples ready. Basic functions are available for customers' simple demo purpose.
CS: Commercial samples ready. Stable hardware design and quite stable software design. New software features can be added upon request.
MP: Hardware and software ready for mass production. For certification status, please refer to the "certification schedule".



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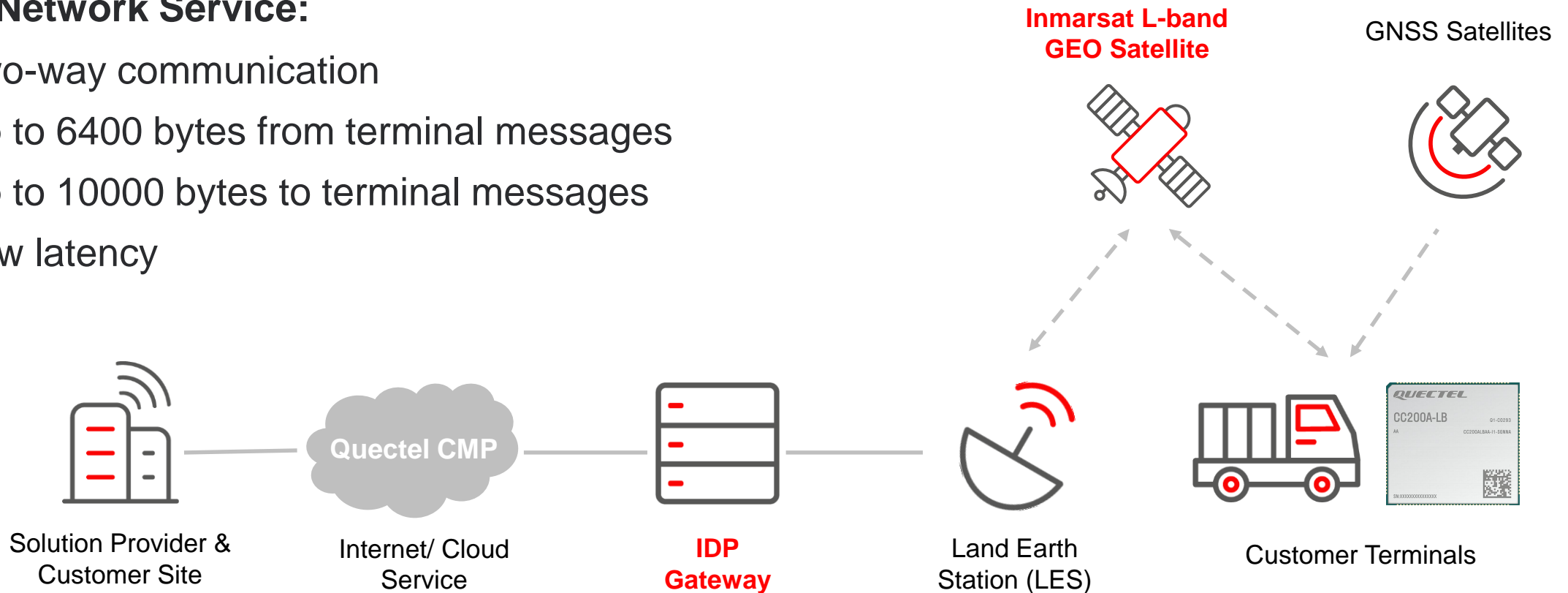
IDP Network



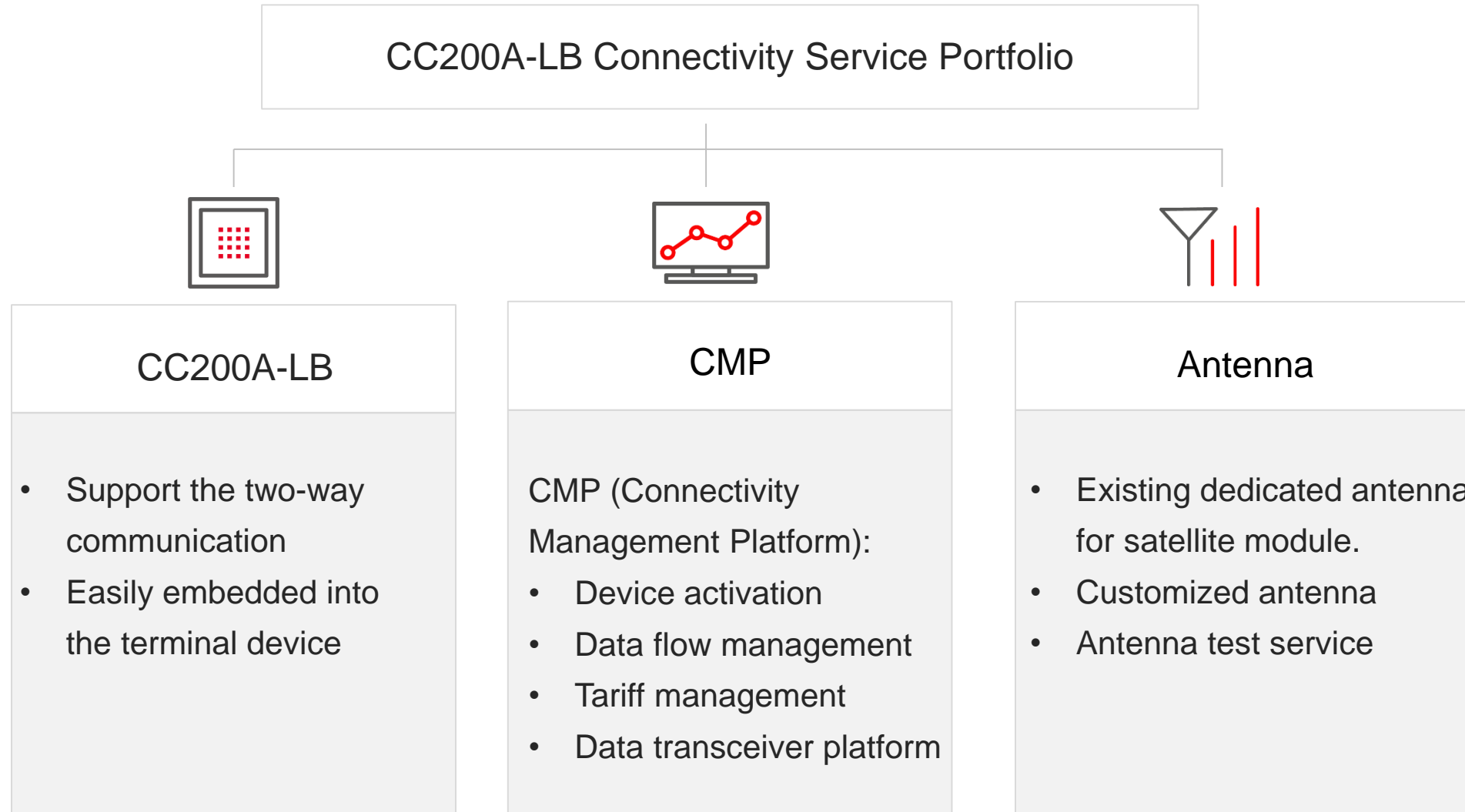
IDP network service is a two-way communications protocol offering near-real time message transfer.

IDP Network Service:

- Two-way communication
- Up to 6400 bytes from terminal messages
- Up to 10000 bytes to terminal messages
- Low latency



For the terminal device based on CC200A-LB module, Quectel can provide the following service portfolio.

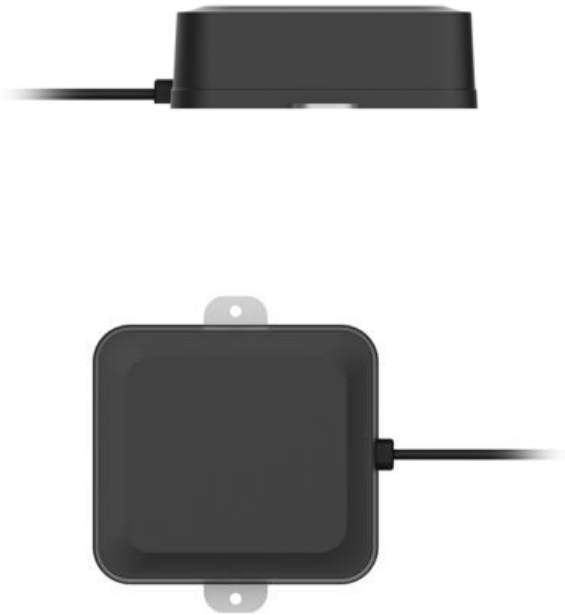


Antenna Specifications



The following is the existing dedicated antenna for CC200A-LB module designed by Quectel, which supports satellite-band and GNSS frequency.

Quectel OC Number		YEGM023AA
Passive Electrical Specifications		
Frequency Range	L-Band	● Tx: 1626.5–1660.5 MHz, 1668–1675 MHz ● Rx: 1518–1559 MHz
	GNSS	GPS L1/ GLONASS L1/ Galileo E1/ BDS B1 (1559–1606 MHz)
Polarization Type		RHCP
Impedance		50 Ω
VSWR		< 2
Axial Ratio		< 3 dB
Gain		< 4 dBic
Mechanical Specifications		
Antenna Size (mm)		75 × 84 × 25
Casing		ABS
Cable Type & Length		RG174 Black & 500 mm
Connector Type		SMA Male (center pin)
Working Temperature		-30 °C to +80 °C
Weight		Typ.: 112 g
Color		Black
Mounting Type		Screw + Magnetic





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Typical Application



Transportation

- Vehicle Tracking
- Asset Tracking
- Chassis Tracking
- Container Tracking



Energy

- Oil & Gas Pipe Line Monitor
- Mining
- Smart Grid



Maritime

- Vessel Connection
- Maritime Buoys



Heavy Industry

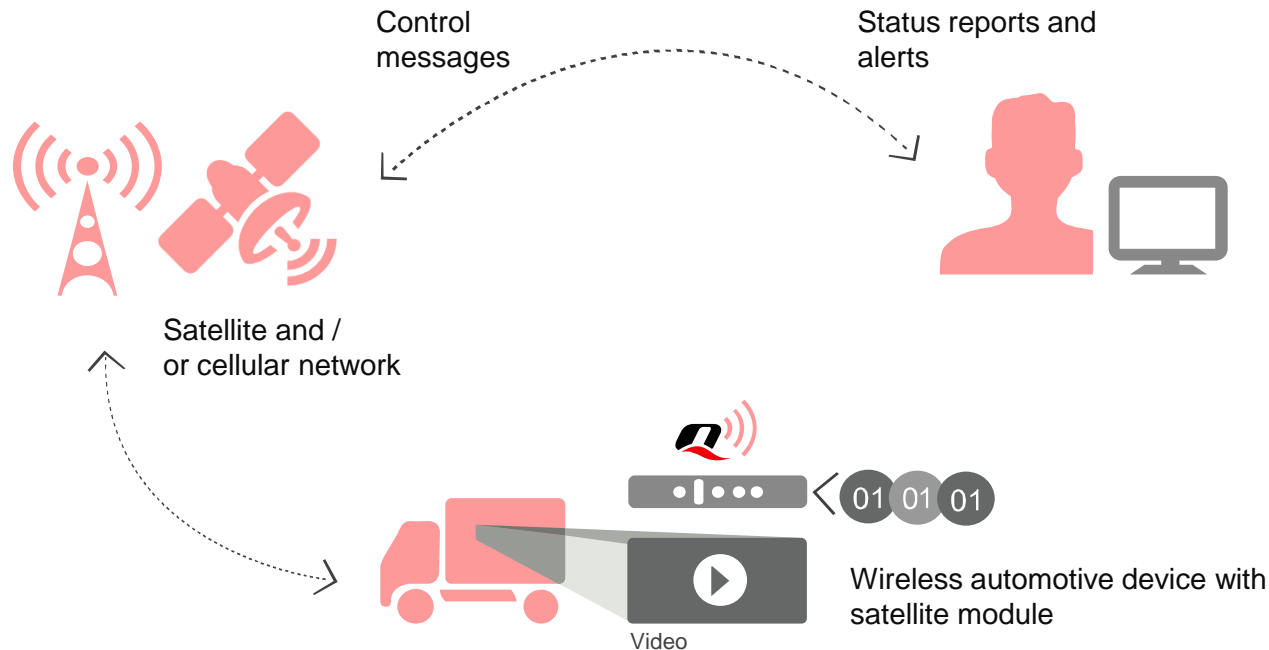
- Heavy Equipment Monitor
- Construction Fleet Management



Agriculture

- Smart Agriculture
- Environmental Monitor

Typical Application — Tracker



Service Coverage:

Global tracking (both sea and land)

Real-time tracking:

Item location and status, as well as daily vehicle use record

monitoring of operational devices and events for better asset management

Multiple positioning:

GPS/ BDS, etc.

Electronic fence:

Notification of geofence entry or exit

Emergency SOS



**We are a global IoT solutions provider,
backed by outstanding support and
services, to deliver a smarter world.**

- Unbeatable choice from the broadest module portfolio in the world
- High quality range of off-the-shelf and customized antennas
- Providing Connectivity-as-a-Service
- Superb support with the largest R&D team in the industry
- Continuous innovation – in 5G, LPWA, CV2X, Smart Modules
- A passionate, dedicated team of “Quectelers” ensure our customers always come first

Thank You

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Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: **+86 21 5108 6236** Sales Support: sales@quectel.com

Technical Support: support@quectel.com General: info@quectel.com

Mouser Electronics

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