Qualcomm

Qualcomm® 216 LTE IoT Modem

Low-power, IoT-optimized LTE modem featuring integrated terrestrial positioning support.

The Qualcomm 216 LTE IoT modem is a Cat 1bis IoT-optimized LTE modem with integrated positioning support for greater connectivity, location, and compute processing capabilities both on device and at the edge.

The Qualcomm 216 LTE IoT modem is ideal for IoT devices that require power efficiency and a small form factor design with a cost-conscious design budget.

The Cat 1bis modem addresses the connectivity and location needs of IoT devices like smart utility meters, trackers, and shared scooters/bikes. Compared to GPS/GNSS location technology, the Qualcomm 216's location services utilized in conjunction with Qualcomm® Terrestrial Positioning Service consume less power and are ideal for IoT devices that require power efficiency and a small form factor design with a cost-conscious design budget.

This LTE IoT modem provides a level of edge compute to help provide health monitoring and status of the device for preventative maintenance use cases. In addition, the Cat 1bis based modem uses existing LTE cellular infrastructure and networks to support easy deployment of your IoT devices.

Highlights

Ultra-low power consumption for long battery life

This high-performance, integrated solution delivers IoT-optimized speeds at ultra-low power, thereby prolonging battery life for applications such as smart utility meters, trackers, e-metering, and smart city use cases.

Global LTE Cat 1bis

The cost-optimized modem works globally on existing LTE cellular infrastructure and delivers IoT-optimized speeds of up to 10 Mbps.

Support for indoor position location

The modem supports multi-technology scanning and is tightly integrated with the highly accurate Qualcomm Terrestrial Positioning Services which rely upon a global database of billions of geolocated beacons.

To learn more visit: qualcomm.com

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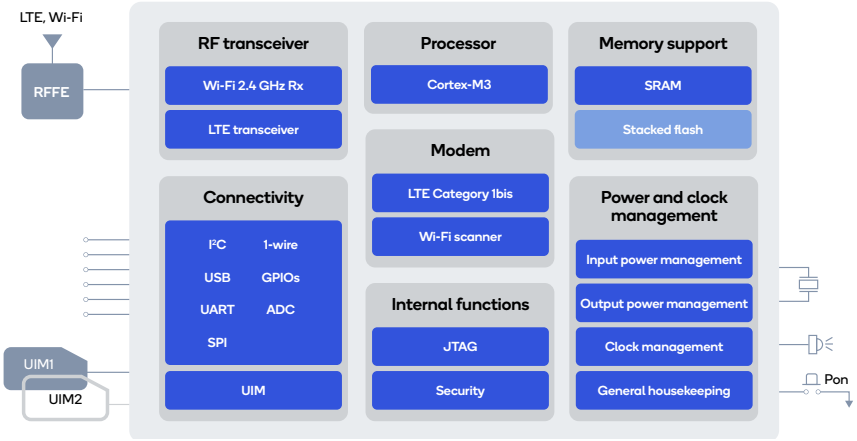
Features

- Global LTE Cat 1bis with a Wi-Fi receiver for indoor positioning
- Ultra-low power with sub-2uA sleep current
- Integrated LTE modem and RF transceiver enabling RF frequency bands from 700 MHz to 2.6 GHz
- Integrated dual-core Arm® Cortex® M3 application processor
- Support for external RF front end like Qualcomm® QPA8675 multiband PA
- Support for indoor position location with 2.4 GHz Wi-Fi Scanning capability using a shared RX with LTE
- Comprehensive set of IoT networking protocols

Block Diagram



Specifications

CPU	CPU Clock Speed: Up to 204 MHz CPU Cores: Arm Cortex Dual-Core M3
Cellular Modem-RF	Peak Download Speed: 10 Mbps (Rel.14) Peak Upload Speed: 5 Mbps (Rel.14) Cellular Technology: Rel.14 LTE
Network Protocols	IPv4/IPv6 stack with TCP and UDP, TLS, HTTPS, MQTT, OMA Lightweight M2M, CoAP, SSL, DTLS, ping
RF	LTE low bands: B5, B8, B12, B13, B14, B18, B19, B20, B26, B28, B71 LTE mid bands: B1, B2, B3, B4, B25, B34, B39, B66 LTE high bands: B7, B38, B40, B41
Power Management	Supply Voltage Range: 3.1 V to 4.5 V
Battery	Battery voltage monitoring capability
Interfaces	2x I2C, 2x I2S, Up to 32 GPIOs, 4-channel ADC, 3x UARTs, 2x SPI, USB 2.0
Operating Temperature Range	Maximum Temperature: 90 °C Minimum Temperature: -40 °C
Software Options	Operating System: Free RTOS
Location	GTP
SIM	2x SIM or eSIM
Part Number(s)	QCX216

The Qualcomm® 216 LTE IoT Modem is a Qualcomm product developed by Qualcomm Technologies, Inc., and manufactured using the company's own supply chain. As a Qualcomm product, the development, production, and sale of the Qualcomm 216 LTE IoT Modem are all subject to Qualcomm's robust trade compliance program, which includes policies and procedures designed to promote adherence to all applicable trade-related controls, including, e.g., US and EU export controls and sanctions. Qualcomm screens and regularly re-screens all of our partners against all relevant restricted party lists, including all third-party vendors whose IP may be utilized in a Qualcomm chipset platform.

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