Monarch GM01Q Module

Optimized, single-mode LTE category M1/NB1 IoT connectivity solution for worldwide use

The Monarch GM01Q module is an all-in-one, single-mode LTE category M1/NB1 module with worldwide deployment and roaming capability. The Monarch GM01Q module comprises Sequans' Monarch LTE Platform and all other elements necessary for a complete LTE modem system. These include an LTE-optimized transceiver, a complete Single SKU™ RF front-end to support LTE bands worldwide, and key interfaces, all in a single compact LGA package. The Monarch GM01Q module also includes Sequans' carrier-proven LTE protocol stack and a comprehensive software package for over-the-air device management and packet routing. The Monarch GM01Q module is compatible with any host running Linux, Windows and a wide range of embedded and real-time operating systems.

Highlights

- Certified by operators: AT&T, Deutsche Telekom , KDDI, NTT Docomo, Orange, Softbank, Sprint, Telstra, TELUS, Verizon Wireless
- Certified by regulatory agencies: GCF, PTRCB, FCC, IC, ACMA, JATE, TELEC
- 3GPP LTE Release 13 Cat M1/NB1
    - LTE UE category M1 (1.4 MHz bandwidth) up to 300 kbps DL/375 kbps UL in HD-FDD
    - LTE UE category NB1 (200 kHz bandwidth) up to 40 kbps DL/55 kbps UL in HD-FDD
- Operates with a single LTE antenna on LTE low and mid bands
- Upgradable to 3GPP Release 14 LTE Advanced Pro
- Ultra small 20 x 21 x 1.5 mm LGA module
- Based on Sequans Monarch LTE Platform
- Embedded LWM2M client
- Embedded TCP/IP stack
- Support for data over PPP and over AT commands
- Compatible with Linux, Windows and a wide range of embedded and real-time OSes.
- High-speed UART as primary data and AT command interface
- Fully tested and calibrated
- Pin-to-pin compatible with all other Sequans Q series modules
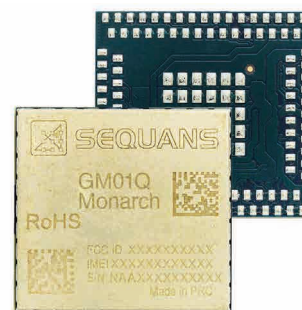
Monarch LTE Platform

At the heart of the Monarch GM01Q module is the Monarch LTE-M/NB-IoT chip platform, an ultra-compact, cost and power-efficient LTE chip for IoT and M2M device design. Monarch provides all necessary IoT features along with extremely low power consumption at a low cost for industry leading price/performance. Monarch's software suite is based on more than a decade of proven field experience. It is running in major 4G deployments around the world and is one of the most mature solutions in the global 4G ecosystem. It includes the entire LTE Release 13 software stack. It contains Sequans' standard compliant LWM2M client. A field diagnostic tool is available for faster time-to-market.

Applications

The Monarch GM01Q module is ideal for adding LTE connectivity to M2M and IoT devices. It is an ultra-compact, high performance solution, delivering a perfect blend of LTE features and ultra-low power consumption ideal for the design of cellular devices including sensors, meters, buttons, and trackers of all kinds.
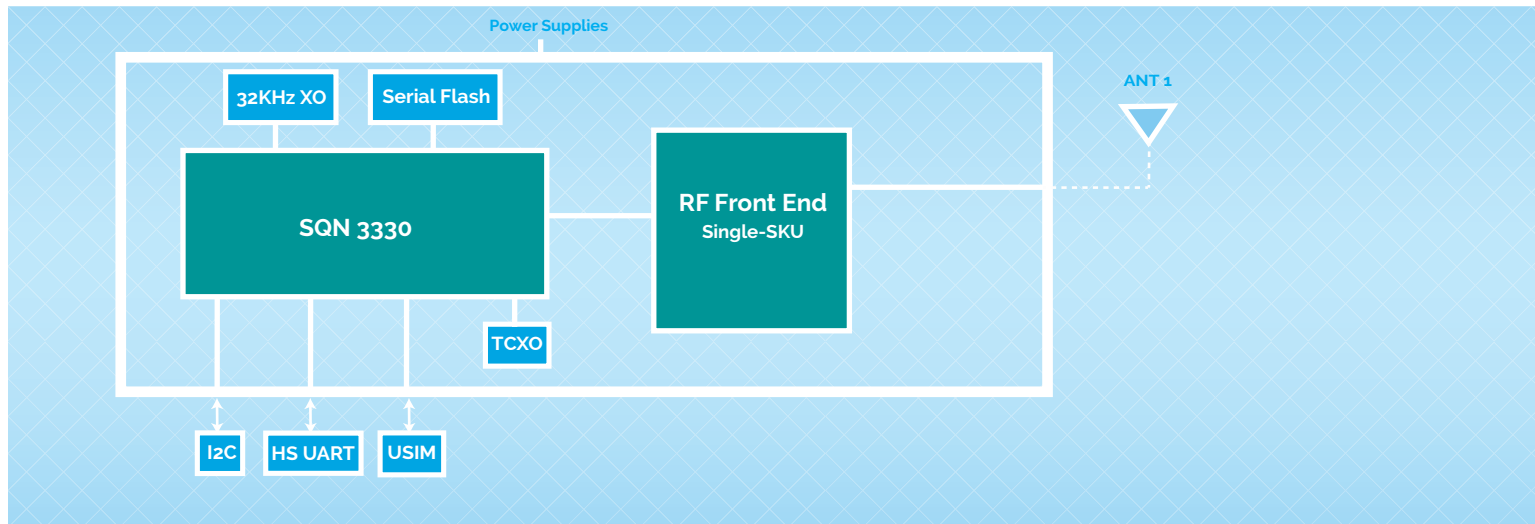
Monarch GM01Q Module Evaluation Kit

The Monarch GM01Q module evaluation kit enables plug-and-play development with all major operating systems. The evaluation kit also includes a schematic layout and BOM design files for use in PCB designs.

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Monarch GM01Q module block diagram

Product characteristics

LTE Modem

- Certified by operators: AT&T, Deutsche Telekom , KDDI, NTT Docomo, Orange, Softbank, Sprint, Telstra, TELUS, Verizon Wireless
- 20 x 21 x 1.5 mm LGA module
- HD-FDD low and mid LTE bands (1, 2, 3, 4, 5, 8, 12, 13, 14,17, 18, 19, 20, 25, 26, 28, 66)
- 3GPP Release 13 upgradable to 14
- SMS over SG
- No IMS
- LWM2M client
- Certified compliant with FCC, GCF, PTRCB, IC, ACMA, JATE, TELEC
- Max transmit power up to +23 dBm
- RoHS compliant

Throughput

- LTE UE category M1 (1.4 MHz bandwidth) up to 300 kbps DL/375 kbps UL in HD-FDD
- LTE UE category NB1 (200 kHz bandwidth) up to 40 kbps DL/55 kbps UL in HD-FDD

Interfaces

- High speed UART
- USIM
- 50 ohm antenna interface

Environmental

- Operating temperature: -30˚ C to +85˚ C
- Storage: -40˚ C to +85˚ C

SEQUANS

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Authorized Distributor

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