

# monarch<sup>2</sup> GM02SP EVK

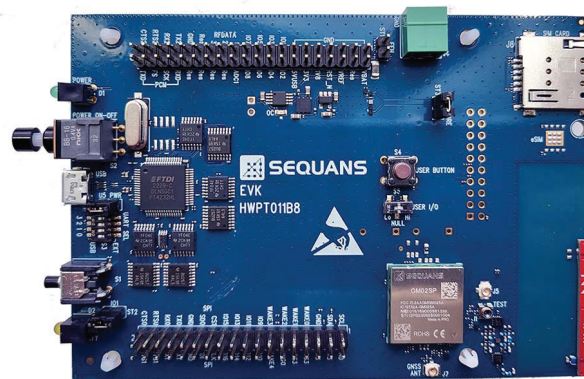
## LTE-M & NB-IoT GNSS

### Evaluation Kit --- Connect to worldwide LTE-M & NB-IoT networks and get GNSS location with Monarch 2 GM02SP

In minutes, the Monarch 2 GM02SP evaluation kit (EVK) allows you to connect to cellular LTE-M & NB-IoT networks and receive GNSS positioning information. The EVK comes pre-packaged with a global SIM card with pre-paid connectivity and an internal antenna. You can connect the EVK to your PC via the USB port, or you can connect it directly to your favorite MCU by using the UART port available on header pins. The EVK supports worldwide cellular IoT connectivity, as well as GNSS location positioning and is powered by Sequans' Monarch 2 GM02SP module. With this EVK you can very easily measure the ultra-low power consumption of Monarch 2 GM02SP and test its rich set of AT commands.

#### Highlights

- Monarch 2 GM02SP LTE-M & NB-IoT worldwide module with GNSS
- Pre-paid SIM with global connectivity included
- Integrated, on-board LTE antenna, 617-900Mhz, 1695-2200Mhz
- GNSS location positioning support
- Easy power measurement with external power supply
- Suitable for lab or field testing
- Access to all module interfaces for development and testing
- Interface connector for daughter boards



## Product Characteristics

### Interfaces

- ❑ 4xUART over USB
- ❑ UART direct access
- ❑ Removable SIM
- ❑ MFF2 SIM
- ❑ JTAG
- ❑ Power plug
- ❑ LTE RF connector
- ❑ GNSS RF input (external antenna)

### Other Features

- ❑ Soldering bridges to easily change pull-up/pull-down configuration
- ❑ Remote reset over USB
- ❑ Automatic switching when using external power supply

### Software

- ❑ Field proven LTE software stack
- ❑ Adjustable GNSS operating modes

### Reference Design

- ❑ Schematics, BOM and layout of EVK available as reference design

### RF Frequency

- ❑ Worldwide Single SKU™ design
- ❑ 617 – 2200MHz (incl. bands 1,2,3,4,5,8,12,13, 14,17,18,19,20,25,26,28,66,85)
- ❑ L1 band support for GPS and Galileo satellite constellations

### Operating Supply

- ❑ 5V when operated via USB
- ❑ 2.2V-5.5V when using external power supply
- ❑ UART/GPIO logic: 1.8V

### Evaluation Kit Contents

- ❑ EVK board with Monarch 2 GM02SP module
- ❑ Pre-paid SIM card with 150MB of data (90 days validity)
- ❑ One MiniUSB cable, embedded Ignion® antenna with antenna tuner, and external GNSS antenna with cable
- ❑ User manual available for download

### Usage

- ❑ Connecting to a host PC (Windows / Linux) via USB cable
- ❑ Connecting to a MCU via the header UART pins (1.8V)
- ❑ Controlling the module through AT commands
- ❑ Attaching to LTE live network or test equipment (CMW500 or similar)
- ❑ Determining location via GNSS technology
- ❑ Sending data through PPP, or Sockets (TCP, UDP) with support of MQTTS, HTTPS, CoAP
- ❑ Measuring power consumption of Monarch 2 GM02SP

For more documentation on Monarch 2 GM02SP EVK, check our documentation site <https://cloud.sequans.com/>

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