

Monarch LTE-M Development Kit



The Monarch LTE-M Development Kit is a cellular IoT enablement platform featuring the NXP LPC55S69-EVK and the Monarch Go Arduino Shield. This kit is an ideal entry point for starting your next LTE IoT application development. The LPC55S69 dual-core Arm Cortex-M33 microcontroller chipset with the production-certified Monarch Go modem allows for easy transition from development to production.

Out of box, the Monarch LTE-M Development Kit is enabled with Microsoft Azure and AWS cloud support. This includes an Azure IoT Central and Avnet IoTConnect cloud example. Having these examples available for user development out of box will save the user hundreds of hours in application development cost in addition to providing a time-to-market advantage.

In addition to providing Monarch Go LTE connectivity, the Monarch Go Arduino shield is fitted with a MikroElektronika shuttle click expansion connector for click module ecosystem enablement. The click module ecosystem enables over 700 3.3V I/O, I2C, SPI, UART and GPIO-based click modules. This click module ecosystem enables sensors, interfaces, displays, motor controls and more to allow for thousands of LTE IoT development applications.

In addition to the click module interface, the Monarch Go Arduino Shield also has an onboard VEML6030 ambient light sensor and a SE050 plug-and-trust secure element. The availability of these capabilities on board enables prototyping of both motion and secure LTE applications out of box.

The Monarch Go Cat-M1 modem delivers the shortest possible route to market and lowest development cost for cellular IoT-connected devices. Unlike traditional cellular modules, this modem is certified for use on the Verizon network, which avoids costly lab testing while improving time to market. The Monarch Go has an integrated antenna and pre-installed Verizon ThingSpace IoT SIM card, giving developers an easy, cost-effective approach to developing LTE IoT solutions.

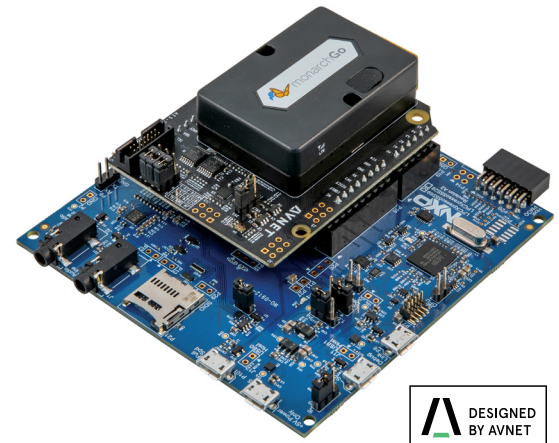
KIT INCLUDES

- Avnet Monarch Go Arduino Shield
- Sequans Monarch Go LTE modem
- Verizon ThingSpace IoT SIM card
- NXP LPC55S69-EVK
- Quick start card

TARGET APPS

- Asset tracking
- Remote monitoring
- Embedded kiosk
- LTE IoT platform enablement

To purchase this kit, visit [Avnet.me/Monarch-M1-DK](https://www.avnet.me/Monarch-M1-DK)



FEATURES

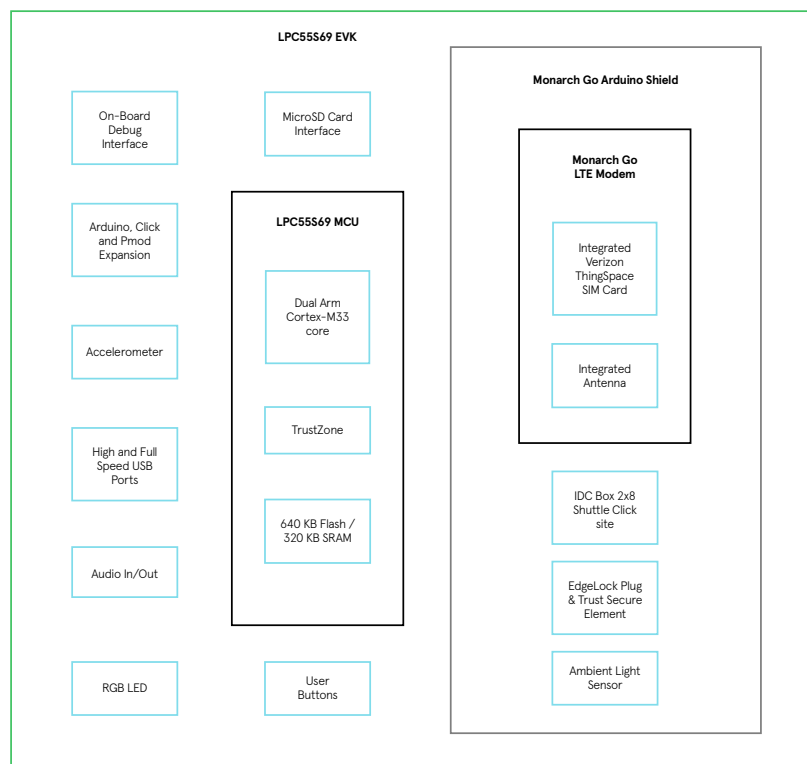
Monarch Go Arduino Shield

- Arduino Form Factor Enables Use with NXP EVK and third-party boards
- Monarch Go Modem (Sequans)
 - LTE Cat-M1 Connectivity
 - Integrated LTE Antenna
 - Pre-installed ThingsSpace IoT SIM Card (Verizon)
 - Production-Ready, Certified Solution
- SE050 EdgeLock Plug & Trust Secure Element (NXP)
- VEML6030 Ambient Light Sensor (Vishay)
- I/O Voltage Level-Shifters (1.8V to 3.3V)
- Shuttle Expansion Connector (for expansion via MikroE Click boards)
 - I2C, SPI, GPIO, PWM, ADC, UART (3.3V I/O)

LPC55S69-EVK

- NXP LPC55S69 MCU
 - Arm Cortex-M33 core @ 150 MHz
 - 2nd co-processor M33 core
 - TrustZone
 - 640 KB Flash / 320 KB SRAM
- High and full speed USB ports
- MMA8652FCR1 accelerometer
- RGB LED, reset, ISP, user push buttons
- MicroSD card interface
- Audio In/Out
- On-board debug interface
- Arduino UNO Rev3, Click, and Pmod expansion

BLOCK DIAGRAM



FEATURED MANUFACTURERS



SEQUANS

MIKROE



molex®

PARTS

Part Number	Description	Resale
AES-NXP-MNRCH-M1-DK-G	Monarch LTE-M Development Kit that features the NXP LPC55S69-EVK paired along with the Monarch Go Arduino Shield	\$99.00 USD

RELATED PARTS

Part Number	Description	Resale
MONARCH-GO	Production-certified LTE Cat-M1 Modem	\$38.00 USD
MONARCH-GO-GPS	Production-certified LTE Cat-M1 Modem w/ GPS	\$44.67 USD
AES-SQN-MNRCHGO-SHLD1-G	Monarch Go Arduino Shield	\$69.95 USD
AES-SQN-MNRCHGO-HT1-G	Monarch Go Pi HAT	\$72.95 USD
MIKROE-2880	mikroBus socket expansion board	\$8.00 USD

Countries available for purchase: United States

CONTACT INFORMATION

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