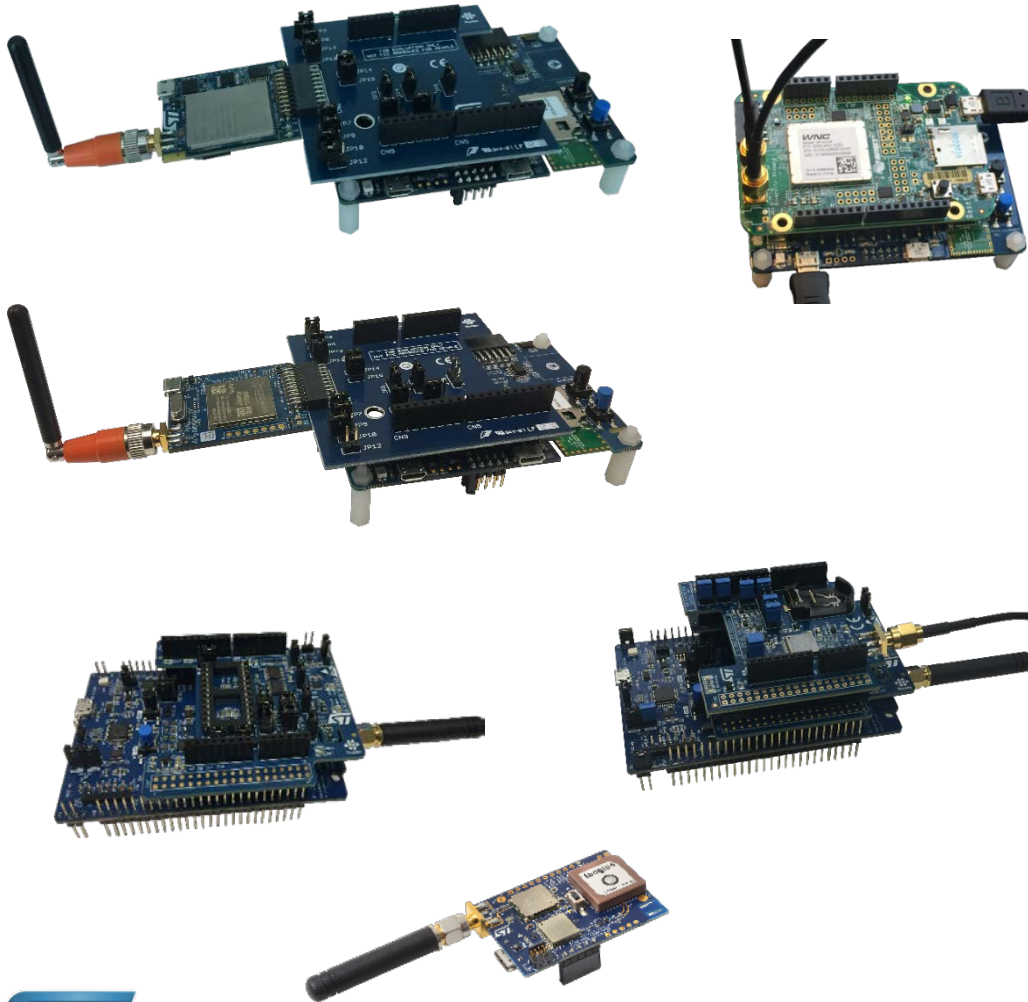


# LPWAN Connectivity – Starter Kits for IoT



LTE-M Verizon & AT&T Starter Kits

LTE-M Worldwide MVNO Starter Kit

LoRa<sup>®</sup> MachineQ Starter Kit

LoRa<sup>®</sup> Asset Tracking IoT Solutions

# LTE-M Verizon Starter Kit



Accelerate LTE-M IoT product time-to-market



Accelerometer Gyroscope	Magnetometer
Humidity Temperature	Pressure
Time of Flight Proximity Sensor	2x MEMS Microphone

**QUECTEL**  
ST LTE Modem

**verizon**  
ST SIM-Card

**X-Nucleo**  
Expansion Board

**STM32L4 Discovery**  
Kit IoT Node

<b>Bluetooth</b> ® Low Energy
<b>Sub GHz</b>
<b>WiFi</b> ™
<b>LTE Cat-M</b> NB-IoT

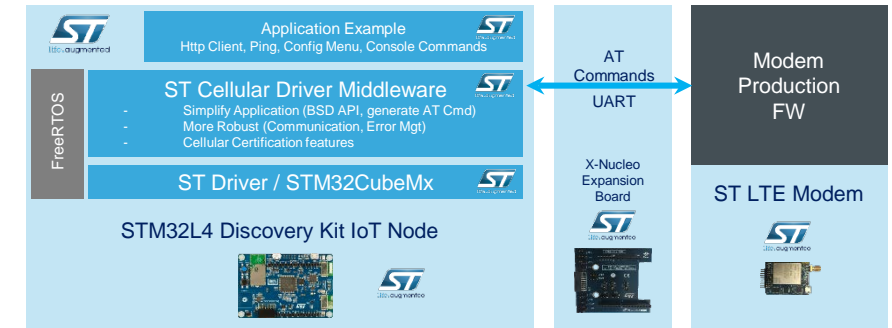


# Simplify Application For Cellular Devices to various Cloud Partners

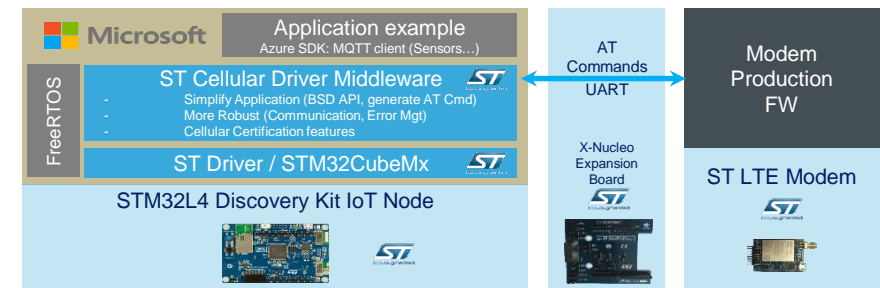
## X-CUBE-CELLULAR

## STM32 Cellular Driver Middleware

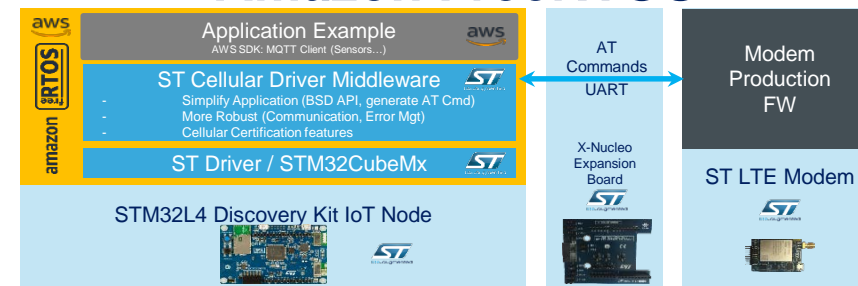
- No need to be a Cellular expert
- Simple Application
  - BSD like Socket APIs → Data Plane
  - HAL
    - Abstract all key Cellular AT commands
    - Control various modem vendors
  - Error Management (Device, Network)
- Certification added value
  - Partial GSMA TS34/35 compliance



## Microsoft Azure IoT Central



## Amazon FreeRTOS



# LTE-M AT&T Starter Kit

STM32-based Development Kit with AT&T

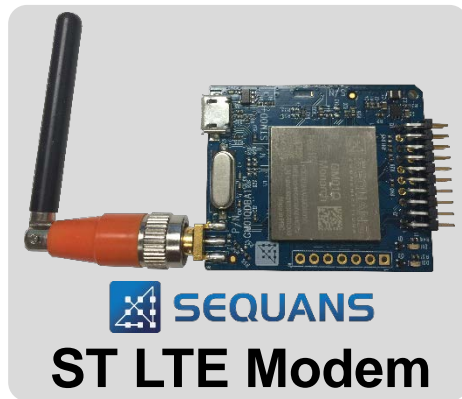
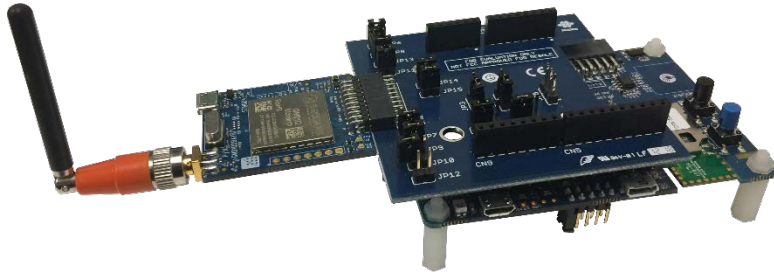


Published [HERE](#)



# LTE-M Worldwide MVNO Starter Kit

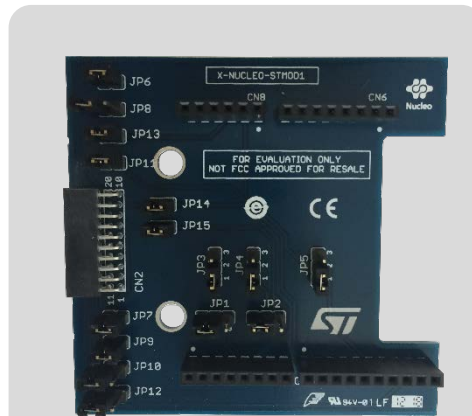
Accelerate LTE-M IoT product time-to-market



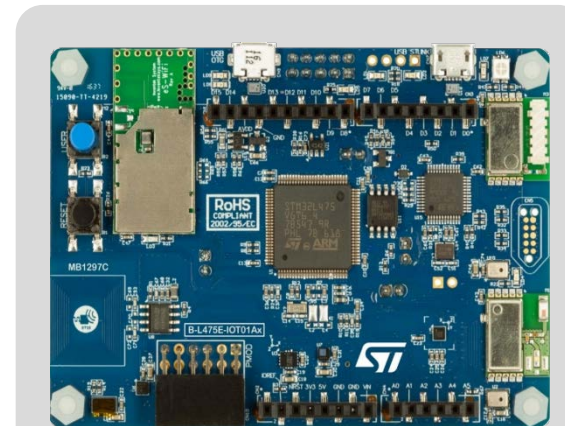
**SEQUANS**  
ST LTE Modem



**TRUPHONE**  
ST SIM-Card



**X-Nucleo**  
Expansion Board



**STM32L4 Discovery**  
Kit IoT Node

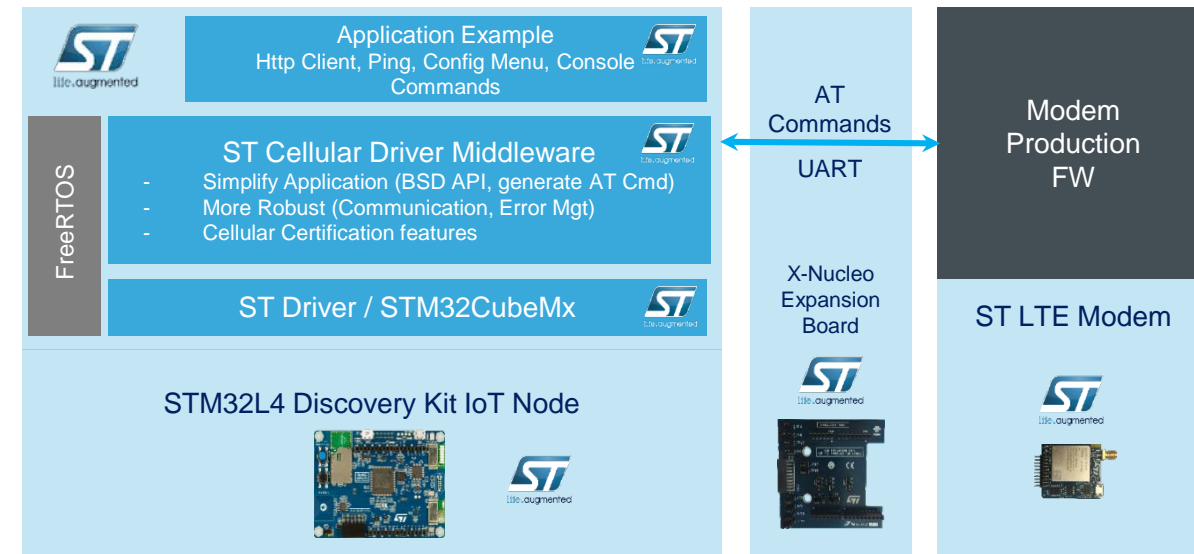


# Simplify Application For Cellular Devices

## STM32 Cellular Driver Middleware

- No need to be a Cellular expert
- Simple Application
  - BSD like Socket APIs → Data Plane
  - HAL → Abstract all key Cellular AT commands
    - Control various modem vendors
  - Error Management (Device, Network)
- Certification added value
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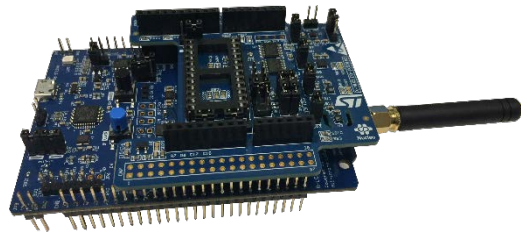
## X-CUBE-CELLULAR



# LoRa<sup>®</sup> MachineQ Starter Kit

Accelerate Time-to-Market

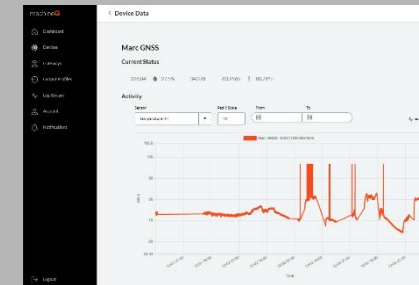
MACHINEQ<sup>™</sup>  
A COMCAST COMPANY



MACHINEQ<sup>™</sup>  
IoT Gateway

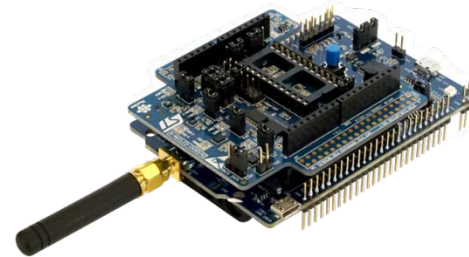
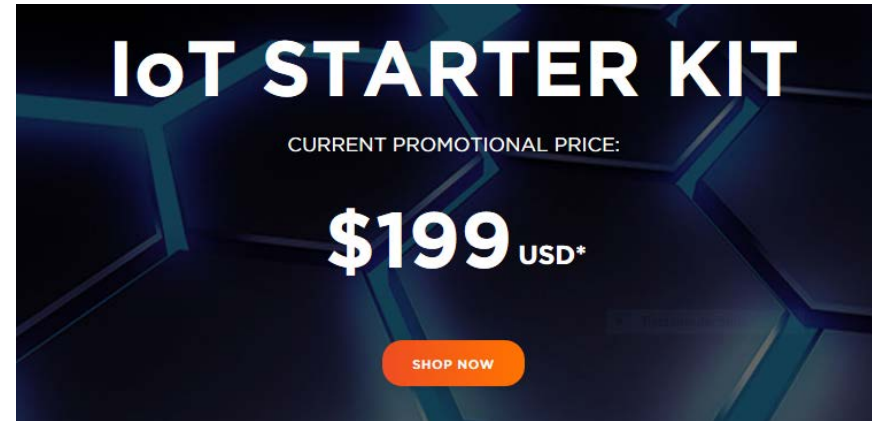
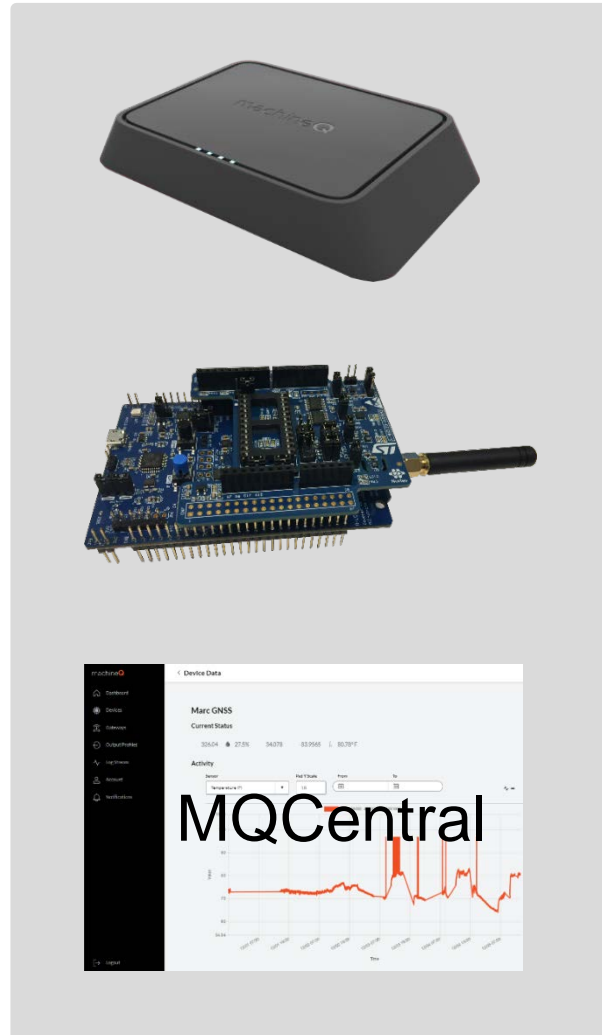


MQcentral (SaaS)



<https://machineQ.com/st-lora-dev-kit/>

# ST LoRa<sup>®</sup> Dev-Kit Deal



## ST LoRa Dev Kit

The ST LoRa development board and sensor is an advanced development kit optimized for engineers that are ready to prototype scalable solutions towards a complete IoT implementation.

<https://MachineQ.com/iot-starter-kit/>

- MachineQ Gateway (8 channel)
- + ST LoRa Dev Kit
- + 3 months MQcentral IoT Management





# LoRa<sup>®</sup> Asset Tracking IoT Solutions

Expand LoRa to Asset Tracking IoT use cases

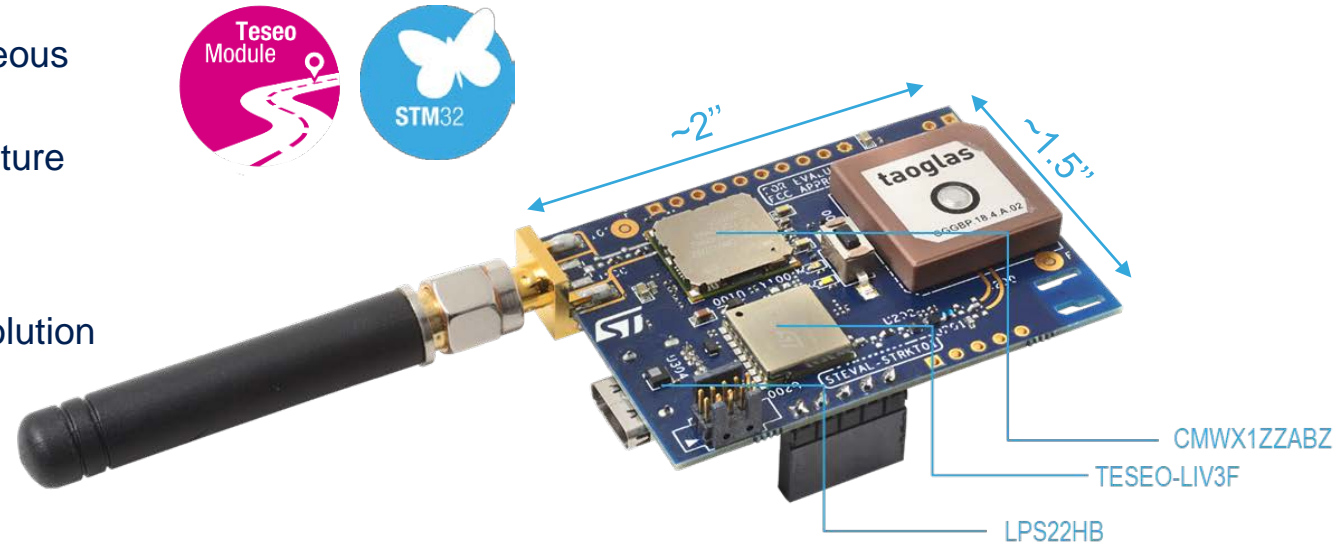
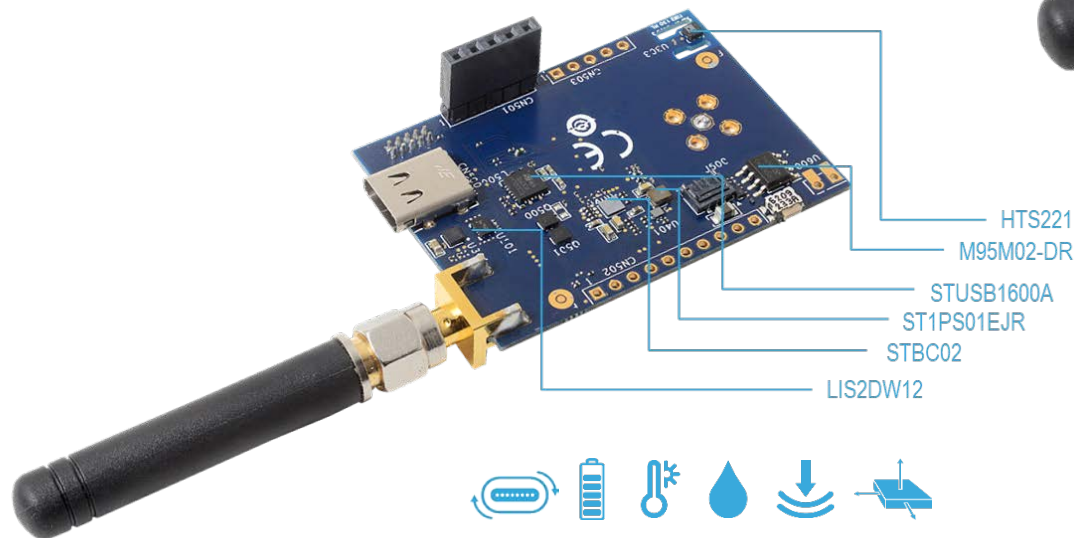


# ST LoRa<sup>®</sup> Asset Tracking Ref Design

## STEVAL-STRKT01

### Key Features

- Optimized tracker solution over LoRaWAN network with simultaneous multi-constellation GNSS positioning and Geofencing support
- Battery-operated solution with smart power-management architecture
- Environmental and motion sensors / Data Logging
- IoT ST reference with USB Type-C
- FW Function Pack **FP-ATR-LORA1** for modular and integrated solution



### Key Products

- **CMWX1ZZABZ**: LoRa<sup>®</sup> module
  - **STM32L072**, and **SX1276** Semtech LoRa transceiver
- **TESEO-LIV3F**: GNSS standalone module based on TESEO III
- **STBC02**: Li-Ion linear battery charger with LDO and power path
- **ST1PS01EJR**: 400mA Nano-Quiescent<sup>™</sup> Synchronous step-down converter
- **STUSB1600A**: USB Type-C controller
- **LIS2DW12**, **HTS221**, **LPS22HB**: Motion and environmental sensors
- **M95M02-DR** EEPROM