From first data to fleet operations with lifecycle visibility

ST87M01 + Wireless Logic Conexa Low Power SIM

Compact, battery powered NB IoT devices need more than a working lab prototype.
To succeed at scale you must:

- Connect quickly and reliably on NB IoT networks
- Manage SIM profiles and operators over time
- Secure traffic from module to cloud
- Keep power consumption and operating costs under control

This is exactly what this session in our **ST87M01** webinar series addressed.

You need lifecycle visibility you can trust

With **ST87M01** and **Wireless Logic's Conexa Low Power SIM**, you get:

- A proven **NB-IoT module** platform (ST87M01, LTE Cat NB2, industrial grade, GCF/PTCRB certified)
- **Embedded protocol stacks** for secure module to cloud connectivity (CoAP/LwM2M, MQTT, HTTP/HTTPS, TCP/UDP, DTLS, IPv4/IPv6)
- A **fast path from first connection to KPIs** with EVKITST87M01-2 and a Conexa IoT SIM for NB-IoT access
- Complete plug and play evaluation kit: **EVKITST87M01-2** with evaluation board, antennas, and Conexa Low Power SIM with 6-month free connectivity access (50 MB data)

Now you also have insights about:

- **SIM profile management** options, including in-factory profile provisioning (SGP.42) and IoT Remote SIM Provisioning (SGP.32)
- **Demonstrated module-to-cloud data flows** using ST87M01 embedded stacks and the Easy Connect Library

The result

If you apply what you learned in this session:

- You reduce the risk of **connectivity and security issues** when moving from lab to field
- You prepare for **operator changes and multi-region deployments** with RSP
- You shorten the path from first NB-IoT data to a **managed, scalable fleet**
- You keep **battery life and operating costs** under control over the device lifecycle

An ST87M01 based NB IoT design that:

- Starts from a **certified, low-power module**
- Integrates with **Conexa Low Power SIM and connectivity management**
- Scales to a fleet with **end-to-end visibility and control**

How it works – in three steps:

STEP 1

Start from a solid NB IoT platform

Use **ST87M01 and EVKITST87M01-2** with the ST87Mxx GUI to establish your NB-IoT link:

- Bring up the module, configure APN/PLMN and **attach to the network**
- Use the **ST87Mxx startup package and firmware tools**
  - Control the module with the **ST87MGUI** (AT console, logs, GNSS/Wi-Fi panels, etc.)
  - Program and update **ST87M01 firmware** bundles directly from your PC
  - Refer to application notes and design guides included in the package
- Send your **first data packets** in minutes using the Conexa IoT SIM
- Measure initial KPIs such as registration time, latency and basic power modes

The EVKIT provides a practical platform to evaluate **NB-IoT connectivity, performance and power** and to get you quickly from lab setup to first data packets.

STEP 2

Plan SIM and connectivity lifecycle

Design your product for long term connectivity and operator flexibility:

- Define how you will **manage SIMs and subscriptions** over the device lifetime
- Plan for **in-field adjustments** (coverage, commercial conditions, roaming) through suitable SIM/eSIM and tariff options
- Leverage **Wireless Logic's connectivity management platform** to monitor SIM status, profiles, coverage and data usage

This gives your ST87M01-based devices a clear path to remain connected and cost optimized over many years.

STEP 3

Build your IoT device

Combine ST87M01 with an STM32 NUCLEO board

- Use ST87M01 as your NB-IoT connectivity module
- Use an STM32 NUCLEO board as the host MCU running your application

Leverage Easy Connect Library examples

- Start from ready-to-use C examples to manage AT commands and data exchange
- Access NB-IoT, GNSS and Wi Fi resources through a simple API
- Adapt the examples to your own sensors and application logic

Use **STEVAL-NBIOTV1** reference design for your asset tracking and smart city applications.

From here you can quickly evolve from an **evaluation setup** to your **own custom hardware**, reusing the same ST87M01 firmware, Easy Connect Library and reference design shown in the webinar.

What is next

With the RF foundations from the first ST87M01 webinar and the connectivity and lifecycle focus of this session, you are ready to:

- Use **ST87M01** and **EVKITST87M01-2** to finalize your proof of concept
- Define your **SIM and connectivity lifecycle strategy** together with **Wireless Logic** and **Conexa Low Power SIM**
- Design your own hardware around ST87M01, applying the connectivity, power and lifecycle rules summarized here.

Build an NB-IoT product that stays **reliable, secure and efficient** from the first prototype to full scale deployment.

Order your ST87M01 now