

Is NB-IoT right for your enterprise's needs?



With StarHub's newly launched dual band NB-IoT network (900MHz & 1800MHz), use this guide to assess if NB-IoT is a suitable connectivity solution to drive your IoT transformation.

USE OF BATTERIES ALLOW FOR CHEAP AND REMOTE CONNECTIVITY



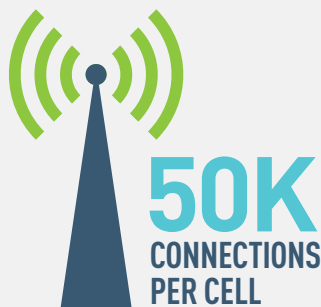
Battery Life Efficiency

Most deployed devices will use batteries as they allow for connecting devices cheaply and remotely without the running of ground wires. The longer the battery lasts without needing to be changed, the greater your ROI.

Take away: NB-IoT reduces energy consumption by stripping down the signaling protocol and reducing the amount of overheads to the bare minimum, thus allowing longer battery life of 10 years or more.

Capacity and Scalability

Scalability is a crucial factor that impacts long-term IoT investment. Some technologies are incapable of supporting a large number of devices.



Take away: Cellular networks such as NB-IoT have an advantage in this regard for applications that foresee large volumes with sustained growth at 50K connections per cell.

Security

Ensure your wireless solution provides secure connectivity from device to back office. Many proprietary Low Power Wide Area (LPWA) technologies provide only rudimentary security as they are limited by the simplicity of device and protocol.



Take away: NB-IoT inherits all security techniques associated with LTE. A secret key is built into the NB-IoT SIM to mutually authenticate network and device. It also generates frequently updated session keys for encrypting traffic between the device and deep within the core network.

Cost

In any business, having the most cost-effective solution is always the number one priority and this also applies when it comes to selecting your IoT connectivity. Traditional cellular networks have excellent existing coverage in most places and cellular LPWA can be implemented on top with only marginal costs.

AS LITTLE AS
\$2 BY END OF 2020 compared to approximately \$40 for an LTE device today

Take away: NB-IoT communications components will become more affordable than other proprietary LPWA networks.

Coverage

The extensiveness of coverage required depends on the location of your IoT application. LPWA technologies further improve the range of connectivity by employing more robust coding schemes, which makes them ideal for reaching remote areas and penetrating deep indoors.



157dB
LoRa



160dB
Singfox



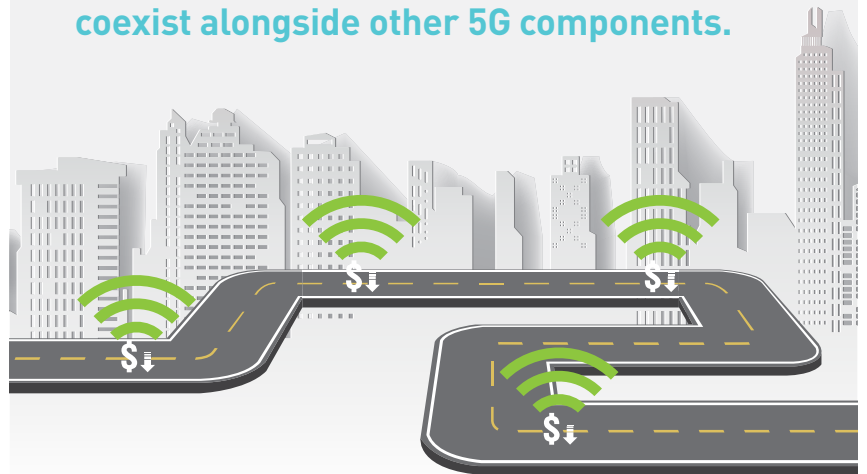
164dB
NB-IoT

Take away: NB-IoT delivers a sevenfold increase in coverage with a 20dB advantage compared to conventional GSM/GPRS.

Longevity

The long-term economic viability and availability of a technology is derived from long-term cost reduction potential. Understand the strategic intention of key stakeholders backing the technology to predict future development and ensure the investment is economically sustainable.

NB-IoT and LTE-M are 3GPP standards that will fulfil the long-term 5G LPWA requirements and are both set to coexist alongside other 5G components.



Take away: NB-IoT will address most of the massive IoT requirements that will apply in the 5G context. The 3GPP has established that LPWA use cases will continue to be addressed by evolving NB-IoT as part of 5G specifications

Limited Time Free Trial

StarHub NB-IoT Starter Kit

Try our NB-IoT SIM cards for yourself, with no hidden fees and broad connectivity management tools for connection provisioning, operation and analysis across wireless networks.

Try it for **FREE** with our NB-IoT Connectivity Starter Kit:

- **FREE** StarHub NB-IoT SIM Cards
- **FREE** trial of our NB-IoT connectivity services
- **FREE** activation
- **FREE** connectivity management tools via the StarHub IoT Platform

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