

# Nemo Backpack Pro

## Lightweight and Modular Benchmarking Solution with Free OTA Reception

People increasingly use their smartphones in shopping malls, theaters, and sports arenas and demand uninterrupted and high-quality access to wireless networks. Because the majority of cellular data today is consumed indoors, performing 5G in-building benchmarking in live networks is vital. When performing benchmarking measurements of live 5G networks, the network quality of different mobile operators is compared against each another.

Nemo Backpack Pro is a lightweight and modular benchmarking solution for indoor and outdoor use with Nemo Outdoor. Nemo Backpack Pro allows users to measure in-building key performance indicators (KPIs) across multiple mobile operators' 5G networks simultaneously using up to eighteen measurement devices and 1-2 scanning receivers.



### Features

- Free OTA RF reception and radiation for all test phones. No obstacles blocking the signal reception or transmission.
- Use with up to 18 UEs and 1-2 scanning receivers
- Lightweight and ergonomic, high-quality backpack enables measurements in crowded indoor spaces
- Smart design provides easy access to test devices and cables
- Use as a standalone system without an external power source or mounted on a vehicle with an external +12 V DC power source
- Built-in lithium-ion battery packs to perform long measurement campaigns

Due to the innovative structural design, all the test handsets have free over-the-air (OTA) RF reception and radiation without any path loss or attenuation of the signal coming from the network. This enables operators to measure 5G FR1 and FR2 network QoS and QoE using the most accurate and scientific methods.

With high-quality lithium-ion batteries, Nemo Backpack Pro can be used as a standalone system without an external power source. When mounted in a vehicle, a cigarette lighter connector providing +12 V power can be used to power up the devices or charge batteries.

The new Nemo Backpack Pro is also designed to be used with commercial non-rooted phones which enables the quick verification of data and call performance and the comparison of QoE and QoS using the latest Android phones. The system allows the simultaneous use of different combinations of measurement modes, such as, voice calls, voice quality calls, and data transfers. The system is operated with a Tablet PC or a laptop.

Nemo Backpack Pro will radically improve benchmarking efficiency as you can measure everything with one walk test without the need to visit the same location twice. As Nemo Backpack Pro supports up to 18 measurement phones, you can measure, for example, data, calls, streaming, voice quality, and OTT apps for several operators simultaneously.

Thanks to the extremely small Nemo log file size, the log files and test results can be uploaded over the air into the Nemo Cloud during the measurements. Nemo Cloud can be configured to initiate automatic test report generation and to email the report to the related recipients. As the report will be ready immediately after tests have been completed, the solution will radically reduce time, work effort, and costs related to mobile network benchmarking.



### Benefits

- Measures end-user QoE with no over-the-air path loss to measurements, improving the accuracy of captured data
- Improves benchmarking efficiency because everything can be measured with one walk test
- Reduces time, work effort, and costs related to indoor benchmarking and drive testing
- Enables longer walk tests and benchmarking measurements thanks to the ergonomic and lightweight design
- Works also without access to a GPS signal with the automatic indoor positioning function

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