

Field Test Device



Test and analyse network coverage

This network tester provides accurate, real-time results on NB-IoT/LTE-M networks performance by measuring parameters such as RSRP, RSRQ, SNR, eDRX and transmission power.

The FTD connects via Bluetooth to a mobile application that provides an intuitive user interface from which you can easily set up a network test, view the analysis results and export them.



With 'Adeunis FTD
NB-IoT / LTE-M'
Android/iOS
mobile app.



QUALIFYING AND VALIDATING CELLULAR NETWORK COVERAGE

- **Scan all the networks present** of the various operators within range of the tester, and make a rapid initial assessment of their performance.
- **Test NB-IoT and/or LTE-M network coverage** anywhere in the world, with any single or multi-operator nano-SIM card.
- **Qualify network coverage** at different locations and view network quality indicators for each measurement point.
- **Automatically locate** each measurement point.



- Simultaneous evaluation of NB-IoT and LTE-M networks.
- View, store and export network test results via the mobile application.
- 3 operating modes:
 - **network scan:** scan all networks and assess connection quality,
 - **network test:** select an operator and analyse network quality in detail,
 - **radiomapping project:** contextualise a network test.



Antennas

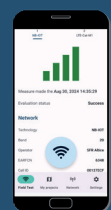


Test server



Field Test Device

Bluetooth



Mobile app.

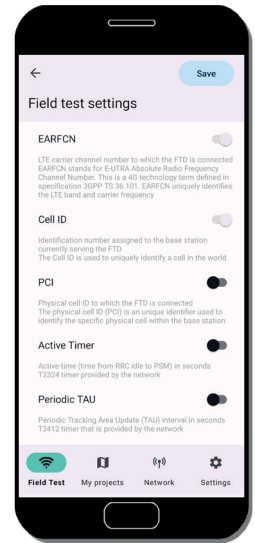
FEATURES



CUSTOMISE YOUR NETWORK TESTS AND ANALYSES

Automatically or manually select the network parameters to be evaluated:

- the operator: Vodafone, T-Mobile, SFR, Bouygues Telecom, Orange, AT&T, Swisscom, etc
- the technology: NB-IoT, LTE-M, mixed,
- frequency bands: Band 2, Band 8, Band 20, etc.
- Choose the trigger mode for each network test: manual, automatic, mixed.
- Customise your analyses:
 - Choose the network parameters and network quality measurement data you want to display for each test point: technology, frequency band, operator, EARFCN, Cell ID, PCI, eDRX, RSRP, RSRQ, SNR, CE level, transmission power, etc.



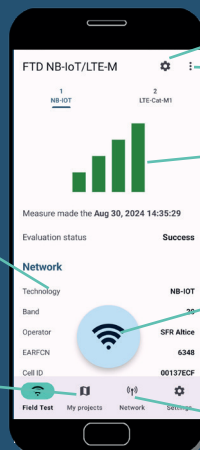
CREATE AN ANALYSIS REPORT USING RADIOMAPPING PROJECT MODE



- Start your radiomapping project and immediately see the values of the various network indicators for each measurement point.
- View each measurement point:
 - on a Google Maps map,
 - on one or more plans of your building imported into the mobile application.
- Create your reports
 - add comments and photos for each measurement point,
 - generate your report in Word,
 - share your report by email, for example, and modify it as you wish.
- Manage all your radiomapping projects from the mobile application: editing, deleting, archiving and generating reports.

Visualisation of network parameters and network quality measurement data: Cell ID, RSRP, RSRQ, SNR technologies, etc.

Create a radiomapping project.



Network test settings.

Data export.

Visual indicator based on the measurement of 2 indicators, the RSRP and the RSRQ.

Manual triggering of a network test.

Set up the network to be assessed.



OPERATING MODES

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NETWORK TEST MODE

A mode of operation that enables the quality of the NB-IoT and/or LTE-M network to be analysed for a specific operator, at different locations, and to display all the network quality indicators for each measurement point.

Configuration	Set up a network test via the dedicated mobile application
Manual tests	Trigger a network test by pressing the virtual button on the mobile application or the button on the FTD. The test results are displayed instantly on the mobile application. The quality of the signal received from a cellular network is not static; it can vary even in short intervals. For a more accurate assessment of the network, the FTD has a 'repeat' function. This allows between 1 and 10 successive tests to be carried out each time the button is pressed.
Automatic test	Automatically triggers several successive network tests based on a user-configured interval to perform a continuous assessment of the network over a long period of time. Interval from 30s to 24h with 30s granularity. Test results are displayed instantly on the mobile application. The 'repeat' function can also be activated for automatic testing.
When a network test is triggered, the mobile application automatically displays the following indicators:	
Visual indicator	4 bars based on the measurement of 2 indicators, RSRP and RSRQ.
Network identification	Technology, band, operator, MCC-MNC, EARFCN, Cell ID, PCI.
Network quality indicators	Active timer, TAU, PSM, eDRX, RSRP, RSRQ, SNR, transmission power, CE level, energy consumption, TX repeats, RX repeats, DL path loss.
Geolocation and time stamping	Based on the smartphone's position (latitude, longitude, accuracy).
Customisation of test results	Users can customise the network test by selecting the indicators they want to display from a list.
Data storage and export	Results are collected in the application and stored on the smartphone. The results are made available in the form of a .csv file. The results can be exported via the application or sent to an http server.

NETWORK SCAN MODE

Operating mode enabling all the NB-IoT and/or LTE-M networks of the various operators within range of the FTD to be scanned and the quality of the connection to be assessed.

Data included in the report	Timestamp, GPS position, operator, technology, MCC-MNC, EARFCN, Cell ID, PCI, RSRQ, RSRP.
Export	The results are collected in the application and stored on the smartphone. The scan report can be exported in .csv format.

RADIOMAPPING PROJECT MODE

Operating mode for contextualising a NB-IoT and/or LTE-M network test.

Information associated with the test	Timestamp, values of the various network indicators, comments, geolocation on a building plan or Google Maps, photos.
Data storage and export	Results are collected in the application and stored on the smartphone. These results are available and can be exported in the form of a .word report.



TECHNICAL SPECIFICATIONS

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ARF8393AAA

Network

Module	Nordic nRF9160 module
Antenna	Internal
Cellular standard	3GPP LTE Version 13
Networks	NB-IoT, LTE-M
NB-IoT frequency bands	B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66
LTE-M frequency bands	B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66

Mechanical characteristics of FTD

Dimensions	105 x 75.2 x 22.8 mm
Weight	140g
Case	Unit: ABS GP22 Lexan: Autotex polycarbonate Black colour

FTD operating conditions

Recommended range of use	-20°C / +40°C unloaded 0°C / +36°C on load
Humidity	0 to 85% RH (non-condensing)

FTD power supply

Power supply	Rechargeable lithium-ion battery 3.7V, 2Ah, 7.4Wh
Recharging	Via USB Type-C cable Charging time 6 hours
Operating autonomy	>15 hours (switched on for an average of 12 hours a day)

FTD interfaces

SIM	1 socket for nano SIM card 4FF Class C (1.8V)
LEDs	Green/red LEDs indicating battery level Blue LEDs indicating start-up, Bluetooth connection, acknowledgement of network test triggering
Buttons	1 FTD start/stop button 1 Network test button
USB Type-C	FTD loading

FTD firmware update

Bluetooth update via the Adeunis FTD NB-IoT / LTE-M mobile application

Regulations and certifications

Directive 2014/53/UE (RED)
AS/NZS 4268
FCC- Title 47 CFR Part 15
RSS-247 Issue 2



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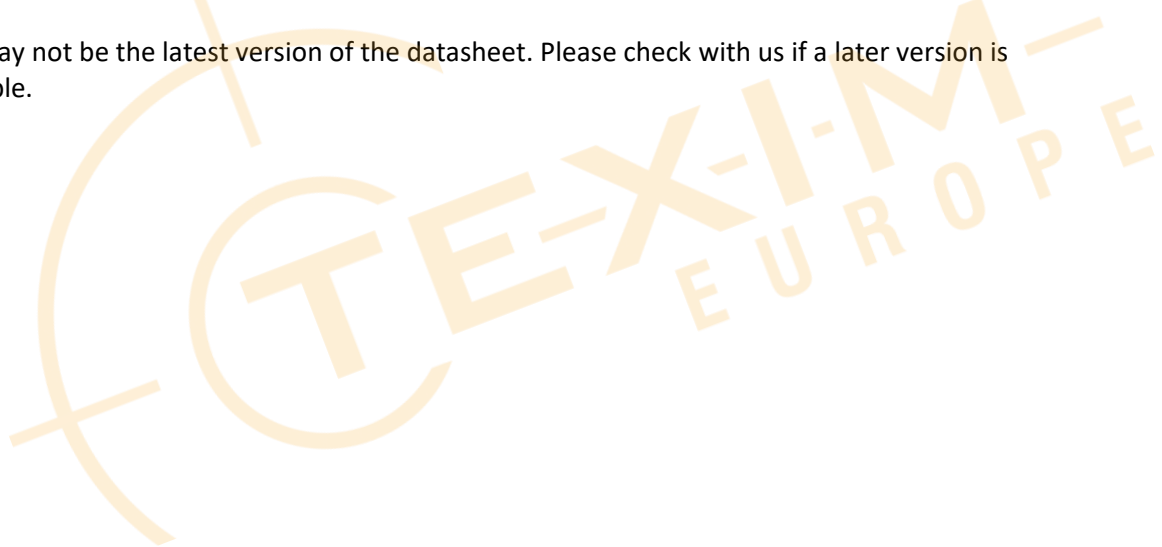
It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.





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