



PRIMATA
Tecnologia Eletrônica

Technical Specifications

P91

NB-IoT / CAT-M Mobile Network Radar



Presentation

The **NB-IoT / CAT-M Mobile Network Radar P91** is a high-performance, portable mobile network signal analyzer, designed for testing and researching **NB-IoT**, **CAT-M**, and **2G** networks in Brazil.

Developed by **PRIMATA** for conducting **comparative tests** between different **Operators and Networks**, the **Radar P91** can save test results locally in its memory, and also allows for quick searches of mobile network signal levels through its **Network Scanner** function, with an interface provided via a color touch-screen display.

The **Radar P91** supports the connection of up to **03 (three) active SIM Cards** for conducting comparative tests between Operators and Networks. These tests include SIM Card activation, operator identification, signal strength, network availability check, latency, and even data transfer tests, enabling the decision-making process regarding the best Operator and Network to be chosen for a specific location.

The **Radar P91** is supplied with a set of **02 (two antennas)**: one **Omnidirectional** antennas for greater test efficiency and one **GPS** antenna for accurate determination of the device's location, date, and time. It also includes two battery chargers, one for bench use and one for vehicle use.



Applications

- ✓ Definition of the most suitable operator and network for field applications, considering the actual location constraints;
- ✓ Advanced research of new and existing installations on NB-IoT, CAT-M, and 2G networks;
- ✓ Quick searches for mobile network signal levels (Network Scanner function);

Main Features

- ✓ 02 supported NB-IoT: 700 / 1800 MHz;
- ✓ 02 supported CAT-M: 700 / 1800 MHz;
- ✓ 04 supported 2G: 850 / 900 / 1800 / 1900 MHz;
- ✓ Supports up to 03 activated SIM Cards for 4G for full operation and detailed testing;
- ✓ Allows configuration of public or private APN;
- ✓ One omnidirectional antennas for simultaneous use across 700 MHz to 2600 MHz bands;
- ✓ GPS antenna for precise test location;
- ✓ Configuration of test parameters and URL;
- ✓ LCD touch-screen display, easy to read and navigate;
- ✓ Records and queries results of up to 100 tests with circular memory;
- ✓ Export of reports to CSV file;
- ✓ Long-lasting rechargeable battery, supplied with two chargers (bench and vehicle);
- ✓ Hardcase for transportation and storage of equipment and accessories;

Technical Specifications

Power Sources (Input / Output)	
Bench charger	100-240V 50/60Hz / 5VDC 1A
Vehicle charger	12V DC / 5VDC 1A
Main Tests	
SIM Card activation ¹	Yes
Operator identification	Yes
Signal level	Yes
Network availability verification	Yes
Latency	Yes
Data Transfer	Yes
Operating Environmental Conditions	
Protection level	IP 52
Temperature	-10 to 50 °C
Humidity	20% to 85% non-condensing
Rechargeable battery	Lithium-Ion 7.4V, 4400mAh
Autonomy	8 hours of continuous use

¹ SIM Cards are not provided with the equipment.



Mechanical Specifications

Dimensions (H x W x D)	
Radar P91	40 x 107 x 215 mm
Omnidirectional Antennas	8 x 16 x 195 mm
GPS Antenna	17 x 38 x 50 mm
Weight (with antennas)	600g
Touch-screen display	2.8" TFT LCD
Portable	Yes
Enclosure	
Material	ABS Thermoplastic
Protection level	IP 52

Internal Control Program (Firmware)

Memory type	Internal and Circular
Memory capacity	100 complete tests
Internal parameter programming	Automatic location, date, and time via GPS at the time of test recording

Configurable Parameters

- ✓ Test Networks and Bands;
- ✓ URL for network availability tests and data transfer;
- ✓ Public or private APN;
- ✓ Test name;

Reports

- ✓ Test – Classification between Operators and Network;
- ✓ Test – Relative Classification of Networks for Each Operator;
- ✓ Detailed Result – Parameters of Networks for Each Operator;
- ✓ Network Scanner – Search for operators and signal level with all relevant parameters for each network technology;

Items Supplied with the Product

- ✓ 01 omnidirectional antennas;
- ✓ 01 GPS antenna;
- ✓ 01 touch-screen pen;
- ✓ 02 battery chargers (for bench and vehicle);
- ✓ 01 USB cable for data transfer;
- ✓ Hardcase for equipment and accessories transport and storage;



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