



Hardware-software complex

NOISE AND DUST

Software and hardware complex “Noise and Dust” is a specialized system including software and hardware, which is designed for automated round-the-clock monitoring of environmental quality at production sites.

Purpose of the device

This is a comprehensive solution designed for monitoring, collection, processing and visualization of data from noise and dust concentration sensors.

Main functions

- There is a mobile application;
- Monitoring and data collection from sensors;
- Visualization of information obtained from sensors (readings, graphs, reports, related documentation);
- Data storage;
- Device Configuration;
- Remote software upgrades;
- Report generation.

Hardware:

- 19" 1U enclosure;
- Power supply unit (2pcs):
 - Main (220 AC);
 - Backup (48 DC);
- CPU: 8-core 64-bit ARM processor (4xCortex-A76 and 4xCortex-A55);
- 16GB DDR4;
- SSD drive: 256 GB (NVMe SSD drive into M.2 PCIe2.0 slot);
- HDMI - for monitor connection;
- Switch - 10/100/1000 (6 Ethernet ports).

Optional:

- LTE modem (USB) - for wireless data transmission;

- Data export via API.

Program part

- PostgreSQL - database;
- Network Server (if necessary) - installed and configured to work with devices operating via LoRaWan communication channel.

Scaling

Adding new devices, sensors, users, customization of LoRaWan to meet the customer's requirements.

Number of supported devices

Up to 250 pcs.

Number of supported users

Up to 5.

Delivery set

Standard delivery set:

- Software and hardware complex “Noise and Dust”;
- AC 220 V power cable;
- DC 48 V power cable;
- Passport.

Additional to the standard delivery set (on request):

- Keyboard
- Mouse;
- Monitor;

- 19" rack for the Software and hardware complex “Noise and Dust”.

Technical specifications

Name of characteristic	Value
Power Specifications	(85-265VAC) - main power input (36-72VDC) - redundant power input
Power consumption	max. 50 W
Processor	8-core 64-bit: 4 Cortex A76 cores and 4 Cortex A55 cores
Maximum frequency	2.4 GHz
RAM capacity	at least 8GB of LPDDR4/4x memory
Flash memory for bootloader	16 MB SPI
Primary SSD drive (M.2 PCIe2.0 slot)	256GB - SSD NVME NVME M.2 NETAC
Enclosure	metal 19" (482x250x44mm)
Service life	8 years
Switch	built-in 6-port managed 10/100/1000 Mbps
Monitor connection port	HDMI
USB port	2pcs
Watchdog timer	built-in
Operating system	Pre-installed Linux
IoT platform	Pre-installed Jcom-iot
DBMS	Pre-installed “PostgreSQL”