The IT Laboratory

is dedicated to applications that involve the storage and use of different graphic or numerical processing methods of data collected with the equipment within the REXDAN research infrastructure.

The IT laboratory includes numerous equipment which may be used for:

- data storage and field processing;
- remote handling of drones or equipment;
- data processing in the form of GIS maps;
- creation and maintenance of intelligent databases;
- making spare parts for research equipment;
- development of calculation and data processing algorithms from the field or laboratory;
- creation of materials for the dissemination of the research carried out within REXDAN RI;
- simulation models and prediction of environmental parameters.

REXDAN Research Vessel

The IT Laboratory

Members:

Prof. dr. habil. Murariu Gabriel- https://scholar.google.ro/citations?user=p152f-8AAAAJ&hl=ro&oi=ao

Lect. dr. Adrian ROȘU- https://scholar.google.ro/citations?user=f8WZ4FIAAAAJ&hl=ro

Lect. dr. eng. Maxim ARSENI https://orcid.org/0000-0002-2444-2298

Dr. eng. Daniel Eduard CONSTANTIN https://scholar.google.ro/citations?user=8tXV66IAAAAJ&hl=ro&oi=ao

Equipment:

Waterproof tablet with operating system

Uses:

resistant to extreme conditions, the tablet is used in field monitoring campaigns for the collection and processing of data on the spot. The data processing capacity has performances which allow it to run the most demanding applications and simulation models, as well as statistical and numerical processing of databases.

Technical specifications:

- display 11.6", FHD 1920 x 1080 @60Hz and 1000 NIT;
- Intel Core i5-8365U processor;
- memory 16GB LPDDR3;
- M.2 256GB PCIe NVMe storage drive;
- full-size keyboard with stand. IP-65 certification;
- 5MP front camera;
- 8 MP resolution camera and dual microphone;
- 2 batteries 34 Whr, minimum 2 Lithium Ion cells, hot swap;
- wireless;
- standard 802.11ac;
- Bluetooth 5.0;

Equipment:

Waterproof tablet with operating system

Technical specifications:

- mobile broadband;
- installed Snapdragon X20 LTE;
- dedicated GPS;
- Ports USB 3.1 Type A, USB 3.0 Type-C, Mini Serial RS-232;
- Micro SD and SIM card slot, 1 x Kensington lock slot;
- Operating system Windows 10 PRO;
- Security: fingerprint reader, TPM 2.0, contacted & contactless smartcard reader;
- Military standards MIL-STD-810G, MIL-STD-810H or equivalent;
- IP65.

Equipment:

Waterproof laptop, extreme conditions in the field

Uses:

resistant to extreme conditions, the laptop is used in field monitoring campaigns for the collection and processing of data on the spot. The data processing capacity has performances which allow it to run the most demanding applications and simulation models, as well as statistical and numerical processing of databases.

Technical specifications:

- touch screen display 14", FHD 1920 x 1080, Anti Glare, 16:9;
- processor: Intel Core i5-8350U;
- memory: 16GB RAM, DDR4;
- storage units M.2 1TB PCIe NVMe SSD, SED (self encrypting SSD)
- sealed keyboard , US English layout and backlit, rubberized
- 5 MP IR front camera with privacy shutter
- 2 batteries x 51 Whr, 2 Lithium Ion cells, hot swap
- power supply, 90W rugged AC Adapter, 7.4mm

Equipment:

Waterproof laptop, extreme conditions in the field

Technical specifications:

- wireless;
- standard 802.11ac;
- bluetooth 4.2 ;
- mobile broadband;
- installed Snapdragon X20 LTE;
- GPS;
- 8Gb memory card included;
- ports USB 3.1 Type A, USB 3.0 Type-C, RS-232, RJ-45, HDMI;
- micro SD and SIM card slot;
- operating system Windows 10 PRO;
- security: Fingerprint reader, TPM 2.0, Smart Card Reader;
- standards: MIL-STD-810G, IP-65, ANSI/ISA.12.12.01, MIL-STD-461F.

Equipment:

Uses:

Ultraportable laptop for data processing

- preliminary data processing and storage, dissemination of research results.

Technical specifications:

- processor Intel Core i5-11500H Chipset Intel WM590;
- installed memory 16 GB DDR4;
- dedicated video card. NVIDIA Quadro T600 4GB GDDR6;
- HDD Supported: 2 x M.2 PCIe NVMe;
- SED (self encrypting SSD) support;
- M.2 1Tb PCIe NVMe installed;
- 2 integrated speakers;
- display 15.6" UHD, 16x9, 3840x2160, 400 nits, WVA, LBL, 60Hz;
- camera: FHD RGB + Ir, Proximity sensor, Mic;
- communications Wireless WiFi 802.11ax, Intel AX201;
- bluetooth 5.2 ;
- illuminated keyboard;
- I/O interfaces;
- USB 4.0 Type-C, RJ-45 Ethernet Port, USB 3.2 ; Gen with PowerShare function, HDMI 2.0;
- microSD Card Reader;
- FingerPrint;
- NFC and SmartCard;
- battery 4-cell 64 Whr Lithium Ion ;
- expressCharge Capability, Long Cycle Life;
- type-C power supply, 130W;
- software Windows 10 Pro.