Universal extendable platform ExtLab

Plug-in boards set:

- **NTC-01 ExtLab «Electrical circuits, electrical engineering and basic electronics».**
- **NTC-02 ExtLab «Electronics, circuitry, computer and microprocessor engineering».**
- **NTC-03 ExtLab «Radio engineering, telecommunications and optic fiber communication».**
- **NTC-04 ExtLab «Power and converting equipment».**
- **NTC-06 ExtLab «Electrical machinery».**
- **NTC-07 ExtLab «Electric drive and power converting equipment».**
- **NTC-15 ExtLab «Automotive and tractor electronics».**

Software ExtLab_Soft

Performs the following functions:

- Recognition of interchangeable panels.
- Training (provides theoretical material on the selected topic).
- Control and knowledge assessment at various stages of the work.
- Setting experiment parameters (voltage levels, measurement ranges of instruments).
- Indication of measured values.
- Automatic filling of tables, calculations, graph plotting, recording intermediate observations, saving oscillograms, and knowledge testing during the experiment process.
- Generation of a report on the completed work.

Additionally, the program allows for editing or creating tests:

- For self-assessment of students on the chosen topic.
- For granting permission to perform the experiment.
- For knowledge verification before creating a report based on the results of the work.

Technical Specifications of ExtLab Platform

- Power supply: 1~220 V, 50 Hz
- Power consumption: 100 W
- Dimensions, not exceeding: 550 x 340 x 70 mm
- Weight, not exceeding: 7 kg

Additional Equipment:
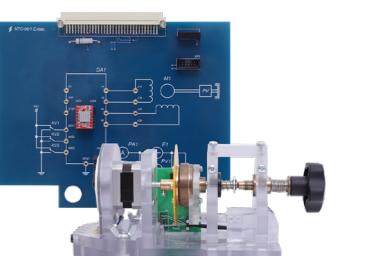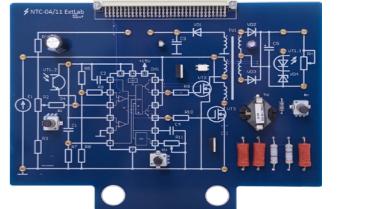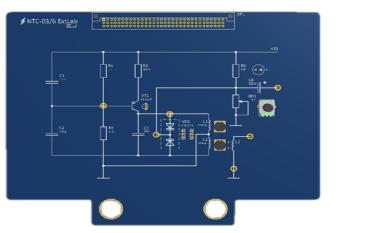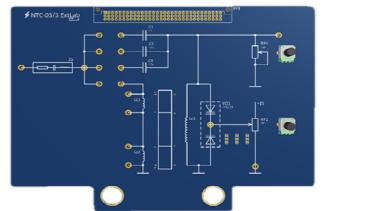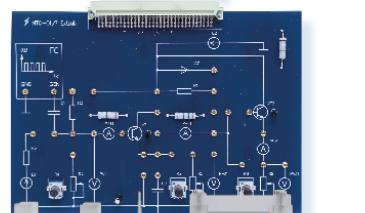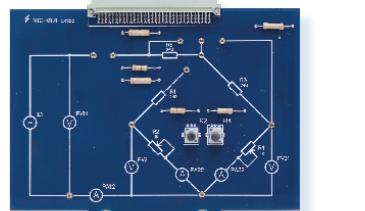- Personal computer or laptop

Universal extendable platform ExtLab

› Execution of laboratory work across a wide range of electrical engineering disciplines.

› Does not require placement in a specially equipped laboratory; ergonomic and safe.

› Easy to use.

› Controlled via PC through a USB bus.

› Continuous data exchange during experiment execution.

› No preparatory steps before starting work.

› Assembly of research circuit diagrams using standardized jumpers, allowing visual representation of the circuit and preventing false assemblies.

› Recognition of interchangeable panels.

› Automatic software setup of experiment parameters.

› Digital measurement system connected to a personal computer via USB. Consists of three galvanically isolated multi-channel ADCs and a microprocessor measurement module, enabling multi-channel measurements in all three phases with display of measured current, voltage, and power values on the PC screen.

› Four-channel power supply with adjustable voltage type (AC/DC), frequency, amplitude, and phase shift.

› Built-in 2-channel oscilloscope and functional generator.

› Comprehensive methodological support, including theoretical background, knowledge testing, and detailed instructions for performing experiments on each board.