



**Belarusian State University
of Informatics and Radioelectronics**
R&D Department

Announcement

31 International Exhibition «Vietnam Expo 2022»

April 13–16 2022
Hanoi, Vietnam

About the exhibition:

Vietnam Expo is one of the key trade and economic exhibitions in Southeast Asia and the largest exhibition event in Vietnam, which is held under the auspices of the country's Ministry of Industry and Trade. In 2021, 320 companies from Vietnam, Germany, China, Cuba, Russia, the USA, South Korea, Japan and other countries took part in the exhibition.

Thematic sections of the exhibition:

- machinery;
- food and drinks;
- information technology;
- e-commerce.

At the exhibition, BSUIR will show a wide range of high-tech developments in the field of nanotechnology, computer microelectronic modeling, electromagnetic compatibility, microwave technologies, radar, and information security technologies.

Services for modeling and design of technological processes for the manufacture of microelectronics

Services provided:

1. Development of the manufacturing process and optimization of modeling of performance characteristics of power electronics devices.
2. Development and industrial manufacture of analog, digital, and custom digital mixed integrated circuits.
3. Complex model development for a range of equipment and sensor semiconductor types
4. Quantum-mechanical and molecular-dynamic modeling of the properties of functional materials and nanostructures.

Distinctive features and advantages:

- methods of calibration and verification of parameters of technological processes and charge carriers transfer models;
- dedicated software that allows to adapt the results to the real production conditions;
- advanced experience of practical interaction with electronic industry enterprises.

[About the developer](#)

Technologies and hardware-software complexes for ensuring electromagnetic compatibility (EMC) in on-board and local ground groups of radio-electronic means (ADFTS, EMC-Analyzer, DNA EMC, GIS-RF, VTA)

Designed to analyze and provide EMC in local on-board and ground-based radio-electronic groups, generate specifications for on-board and ground-based radio-electronic systems taking into consideration the EMC requirements, as well as to simulate radio reception in a complex electromagnetic environment.

Distinctive features and advantages:

- products significantly outperform analogues in terms of modeling of non-linear effects in radio receivers when operating in a complex electromagnetic environment;
- the possibility of simultaneous joint analysis of a huge number of parasitic electromagnetic couplings of various nature has been implemented;
- analysis of EMC based on a system criterion that takes into account the combined influence of parasitic electromagnetic couplings of all types in the onboard radioelectronic grouping;
- high speed performance and practical efficiency, a significant increase in quality, and cost reduction for the design of complex objects (aircraft, ships, etc.).

[About the developer](#)

Microwave control and measurement devices and equipment (vector network analyzers, scalar network analyzers, power meters, signal generators, calorimeters)

Designed for maintenance and repair of communication systems and replacement of outdated material and technical base of industrial enterprises.

Distinctive features and advantages:

- metrological support of the design stages and manufacture of equipment,
- remote calibration,
- modification for specific production conditions and customer requirements for metrological characteristics.



Low-altitude radio altimeter for unmanned aerial objects

Designed to measure the flight altitude of an unmanned aerial object with high accuracy in real time.

Distinctive features and advantages:

- millimeter wave length range, high accuracy of altitude measurements (1% error);
- wide measurement range;
- high speed of information update;
- ability to work on high-speed objects;
- modern element base;
- all weather;
- minimal dimensions and weight.

About the developer

Technologies and equipment in the field of information security

“Priboi”

Designed to protect speech information from leakage through acoustic and vibration channels from the premises outside the security zone.

Types of masking signals:

- “white noise”,
- “speech-like signals”,
- “white noise” + “speech-like signals”.

Distinctive features and advantages:

- ensures the closure of channels of speech information leakage;
- the possibility to develop an allophone base in various languages has been implemented.

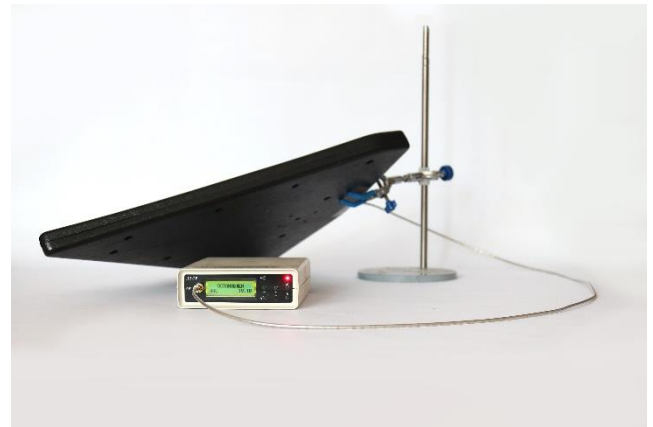
“Locator”

Designed to detect devices of unauthorized information capture by resonant phenomena in their antenna systems and associated filter elements.

Distinctive features and advantages: allows to detect shielded bugs in the set frequency range in real time.



Device “Priboi”



Device “Locator”

Manufacturing technology of energy-saving flat and flexible aluminum heaters with carbon fiber resistive element

The technology allows to manufacture flat and flexible heating elements with any surface shape. This technology is relevant for the automotive industry (for creating comfortable conditions in the cabin and heating the fuel cells of the engine), electric transport (for heating lithium-ion batteries at low air temperatures), as well as for the production and military industry.

The use of carbon string ensures the high electric characteristic stability of the heater, as well as its reliability in constant “heating-cooling” thermo-cycle conditions during work.

Distinctive features and advantages:

- possibility of electric resistance regulation in the range from 60 to 800 Ohm/m;
- maximum operating temperature till 400 °C;
- super thin shape;
- low heat losses.

Technology for obtaining light-absorbing coatings for solar collectors

The technology makes it possible to obtain composite highly selective absorbing coatings in the composition of anodic alumina/amorphous carbon. Coatings are evenly colored and wear-resistant.

Distinctive features and advantages:

- resistance to ionizing radiation;
- high corrosion, heat and light resistance;
- high electrical insulating properties;
- environmentally friendly electrochemical process of coating formation.

Display film manufacturing technology for PC information protection.

The film is designed to protect the confidentiality of information displayed on monitors, displays, and indicator panels. They provide protection of information from unauthorized copy by unauthorized people who are outside the viewing angle of 10 or more degrees.

It is a double-sided optically transparent film developed using the innovative micro-louvre technology. It has an anti-glare effect and reduces light reflection.

Distinctive features and advantages:



- reduces the strain on the user's eyes by creating contrast between small text and images;
- does not alter the information displayed;
- easy to install and remove;
- protects the display from external damages and dust.

[About the developer](#)