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FAVORIT

MOBILE MONITORING AND SURVEILLANCE SYSTEMS

For over 10 years, the **«FAVORIT»** group of companies, with its industrial capacities and affiliates, has been carrying out innovation activities in the development and creation of high-tech scientific-technical products in the sphere of state security ensuring.

THE BASIC ACTIVITIES DIRECTIONS ARE:

1 DEVELOPMENT AND PRODUCTION OF:

• automatized territorially-distributed controlling systems and their segments;

• automated, mobile, and stationary remote-control technical surveillance systems;

• electrooptic and radar systems and complexes;

• special applied (functional) software for the automation of various-level control bodies activities.

2 INTRODUCTION OF INNOVATIVE TECHNOLOGIES

3 DEVELOPMENT OF EXISTING SCIENTIFIC SCHOOL AND HR POTENTIAL

4 BASIC AREAS OF THE SPA «FAVORIT» PRODUCTS APPLICATION:

• protection of spreading grounds on the state border; naval and aircraft bases, engineering-technical objects, organization of situation monitoring systems;
• provision of the water and air transport objects and their infrastructure;
• creation of automatized infrastructure safety systems of hydrocarbonic and other mineral deposits; protection of the company resources;
• operations in emergency areas and anti-terroristic threat activities.

MOBILE MONITORING AND SURVEILLANCE SYSTEMS

- surface and ground environment surveillance for actions in outlands;

- data processing and exchange with various-level situational centers and other elements of automated surveillance systems, and also reaction forces control.

«ALBATROS» MOBILE AUTOMATIZED RADIO-TECHNICAL SURVEILLANCE AND MONITORING SYSTEM

PURPOSE

Surface surveillance systems for activities at remote coastal areas; data processing and exchange with situational centers and other elements of automatized situation surveillance and monitoring systems.

COMPOSITION

* an option

- off-road automobile-chassis mounted body container;
- automated workstations;
- satellite navigation and survey control system;
- individual communication means radio-monitoring system;
- communication and data transfer means;
- mobile field-survival kit for the crew;
- “Rapan-M” coastal radar;
- “Fokus-D2” electrooptic module;
- self security system, life-support and self-contained power supply system;
- Driver Night System;
- “ZIP-0” spares and tool kit.

PERFORMANCE SPECIFICATION

CREW:	INDEPENDENCE OF OPERATION:	OPERATING TEMPERATURE:
5 UP TO PERSONS	15 DAYS, NOT LESS	–50° +50° CELCIUM

Object detection				
EOM	7 mi	8 mi	15 mi	20 mi
Radar	3 mi	10 mi	20 mi	30 mi
Object identification				
EOM	3 mi	5 mi	8 mi	10 mi

«ZVEROBOI» MOBILE SURVEILLANCE AND MONITORING SYSTEM

PURPOSE

Surface and ground environment surveillance, data exchange as part of automated monitoring systems.

COMPOSITION

* an option

- off-road dual-purpose vehicle;
- automated workstations;
- satellite navigation and survey control system;
- individual communication means radio-monitoring system; *
- communication and data transfer means;
- mobile surveillance sensor system; *
- «Rosa» radar module;
- «Fokus-D» electrooptic module;
- life-support and self-contained power supply system;
- Driver Night System;
- «ZIP-0» spares and tool kit.

PERFORMANCE SPECIFICATION

CREW:	BATTERY PACK (BP):	DDG:	OPERATING TEMPERATURE:
3 UP TO PERSONS	8 HOURS	24 HOURS	–50° +50° CELCIUM

Object detection			
EOM video-camera	6 km	9 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Radar	8 km	12 km	–
Object identification			
EOM video-camera	5 km	8 km	8 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

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«AMULET» SPECIAL PATROL SURVEILLANCE AND MONITORING SYSTEM

PURPOSE

Surface and ground environment surveillance, data exchange as part of different-level automated systems.

COMPOSITION

* an option

- off-road dual-purpose vehicle;
- automated workstations of the crew;
- satellite navigation and survey control system;
- communication and data transfer system;
- Driver Night System;
- “Fokus-D2” electrooptic module;
- life-support and self-contained power supply system;
- mobile surveillance sensor system; *
- “ZIP-0” spares and tool kit.

PERFORMANCE SPECIFICATION

CREW: **3** UP TO PERSONS

INDEPENDENT OPERATION TIME DDG: **24** HOURS, NOT LESS

OPERATING TEMPERATURE RANGE: **–50° +50°** CELCIUM

Object detection			
EOM video-camera	9 km	12 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Object identification			
EOM video-camera	7 km	10 km	10 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

«RATNIK» MOBILE AUTOMATED RADIO-TECHNICAL SURVEILLANCE AND MONITORING SYSTEM

PURPOSE

Surface and ground environment surveillance for actions at outlands and remote objects; data processing with situational centers and other elements of automated monitoring systems.

COMPOSITION

* an option

- off-road automobile-chassis mounted body container;
- automated workstations of the crew;
- satellite navigation and survey control system;
- mobile surveillance sensor system; *
- communication and data transfer system;
- Driver Night System;
- “Rosa” radar module;
- “Fokus-D” electrooptic module;
- self security system, life-support and self-contained power supply system;
- “ZIP-0” spares and tool kit.

PERFORMANCE SPECIFICATION

CREW: 5 UP TO PERSONS

INDEPENDENT OPERATION TIME DDG: 10 UP TO DAYS

OPERATING TEMPERATURE RANGE: –50° +50° CELCIUM

Object detection			
EOM video-camera	6 km	10 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Radar station	8 km	12 km	–
Object identification			
EOM video-camera	5 km	8 km	8 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

TOYOTA
ФаворитЪ

«AMULET-A» SPECIAL PATROL SURVEILLANCE AND MONITORING SYSTEM

PURPOSE

Surface and ground environment surveillance, data exchange as part of different-level automated system.

COMPOSITION

* an option

- off-road vehicle;
- automated workstations of the crew;
- satellite navigation and survey control system;
- communication and data transfer system;
- Driver Night System;
- “Rosa” radar module;
- “Fokus-D” electrooptic module;
- self security system, life-support and self-contained power supply system;
- “ZIP-0” spares and tool kit.

PERFORMANCE SPECIFICATION

CREW: 3 UP TO PERSONS

INDEPENDENT OPERATION TIME (DDG + BP): UP TO 24 HOURS, NOT LESS

OPERATING TEMPERATURE RANGE: –50° +50° CELCIUM

Object detection			
EOM video-camera	6 km	9 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Radar station	8 km	12 km	–
Object identification			
EOM video-camera	5 km	8 km	8 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

Фаворитъ

«AMULET-K» PATROL SURVEILLANCE AND MONITORING SYSTEM

PURPOSE

Surface and ground environment surveillance, data exchange as part of different-level automated system, reaction forces control.

COMPOSITION

* an option

- off-road vehicle;
- automated workstations of the crew;
- satellite navigation and survey control system;
- communication and data transfer system;
- Driver Night System;
- “Rosa” radar module;
- “Fokus-D” electrooptic module;
- self security system, life-support and self-contained power supply system;
- “ZIP-0” spares and tool kit.

PERFORMANCE SPECIFICATION

CREW: 3 UP TO PERSONS

INDEPENDENT OPERATION TIME (DDG + BP): UP TO 24 HOURS, NOT LESS

OPERATING TEMPERATURE RANGE: –50° +50° CELCIUM

Object detection			
EOM video-camera	6 km	10 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Radar station	8 km	12 km	–
Object identification			
EOM video-camera	5 km	8 km	8 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

LIGHTING AIDS

- terrain illumination from provisional positions (at hard-to-reach areas) with focused high-intensity light beam to provide for the reaction forces operation as per the situational data in conditions of optical visibility absence (at night);

- illumination of runways (take-off and landing sites) during hours of darkness to provide for the flying objects guiding to the aerodrome area or for a designated location indication;

- functioning as part of automated surveillance and monitoring systems.

«GROZNYI» FIXED SEARCHLIGHT

PURPOSE

Illumination of terrain from organized stationary positions with a focused high-intensity light beam to provide for the reaction forces activities as per the situational data in conditions of optical visibility absence (at night). Used both autonomously and as part of automated surveillance and monitoring systems.

COMPOSITION

- wireless remote-control console;
- searchlight;
- “ZIP-0” spares and tool kit;
- set of attachment elements.

PERFORMANCE SPECIFICATION

Beam travel in azimuth	angle - + 180°
	velocity 1 to 18°\s
Beam travel in elevation	angle - +25°
	velocity – 2, 8°\s
Operating temperature range	-50°C to +50°C
Beam luminance	130 000 lumens, not less
Beam effective range	10 km (at 1 lux)
Operating supply voltage	220 V
Consumed power	3000 W

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«GELIOS» MOBILE SEARCHLIGHT SYSTEM

PURPOSE

Illumination of terrain with high-intensity focused light beam from provisional positions. Used both autonomously and as part of automated surveillance and situation monitoring system.

COMPOSITION

* an option

- off-road auto-truck;
- commander workstation (CWS);
- secondary power supply source;
- wireless remote-control console;
- searchlight;
- “ZIP-0” spares and tool kit.

• remote control of searchlight beam via radio-channel at distance of 200 m

PERFORMANCE SPECIFICATION

Beam travel in azimuth	angle - + 180º velocity 1 to 18º\s
Beam travel in elevation	angle - +25º velocity – 2, 8º\s
Operating temperature range	-50ºC to +50ºC
Beam luminance	130 000 lumens, not less
Beam effective range	10 km (at 1 lux)
Operating supply voltage	220 V
Consumed power	3000 W

Фаворитъ

«GELIOS» MOBILE SEARCHLIGHT SYSTEM

PURPOSE

Illumination of terrain with high-intensity focused light beam from provisional positions (at hard-to-reach areas) to provide for the reaction forces activities as per the situational data in conditions of optical visibility absence (at night). Functioning as part of automated surveillance and situation monitoring system.

COMPOSITION

* an option

- dual-role off-road light vehicle;
- commander workstation (CWS);
- self-contained power supply system;
- wireless remote-control console;
- searchlight;
- Driver Night System;
- “ZIP-0” spares and tool kit.

PERFORMANCE SPECIFICATION

Beam luminance	130 000 lumens, not less
Beam effective range	10 km (at 1 lux)
Operating supply voltage	220 V
Operating temperature range	-50ºC to +50ºC

- remote control of searchlight beam via radio-channel at a distance of 200 m

MSS cover-up (camouflaging) by means of a vehicle-cover
Road cross-section determination at a distance of 250 m

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«GELIOS-B» MOBILE SEARCHLIGHT SYSTEM

PURPOSE

Illumination of runways (take-ff and landing sites) during hours of darkness to provide for the flying objects guiding to the aerodrome area or for a designated location indication. Used both autonomously and as part of automated surveillance and situation monitoring systems.

COMPOSITION

* an option

- off-road auto-truck;
- commander workstation (CWS);
- secondary power supply source;
- wireless remote-control console;
- searchlight;
- “ZIP-0” spares and tool kit.

- remote control of searchlight beam via radio-channel at a distance of 200 m
- MSS cover-up (camouflaging) by means of a vehicle-cover
- Road cross-section determination at a distance of 250 m

PERFORMANCE SPECIFICATION

Beam travel in azimuth	angle - + 180°
	velocity 1 to 18°\s
Beam travel in elevation	angle - +25°
	velocity – 2, 8°\s
Operating temperature range	-50°C to +50°C
Beam luminance	130 000 lumens, not less
Beam effective range	2,5 km (at 1 lux)
Operating supply voltage	220 V
Consumed power	6000 W

- display of the MSS location on the digital terrain map by means of satellite navigation system.

ELECTROOPTIC MEANS

- objects surveillance at various ranges; identification of objects detected by signaling and radar devices;

- round-the-clock monitoring, detection, identification of ground, surface, stationary and moving objects;

- used both autonomously and as part of mobile (transportable), automated, and stationary surveillance and situation monitoring systems.

«FOKUS-S» ELECTROOPTIC MODULE

PURPOSE

Round-the-clock monitoring, detection, identification of ground, surface, stationary and moving objects. Used both autonomously and as part of mobile (transportable), automated, and stationary surveillance and situation monitoring systems.

PERFORMANCE SPECIFICATION

Run time	not limited
Time for functioning preparation	
of day-time channel (video-camera)	1 min, not more
of night-time channel (thermal imaging device)	8 min, not more
Visual axis repositioning	in azimuth-n X 360°
within	in elevation +\- 35°
Operating temperature range	-50°C to +50°C

Object detection			
EOM video-camera	4 km	6 km	15 mi
EOM thermal imaging device	> 3 km	4 km	3 mi
Object identification			
EOM video-camera	5 km	8 km	8 mi
EOM thermal imaging device	2 km	3 km	2 mi

COMPOSITION

- video-camera;
- thermal imaging device;
- tripod;
- operator's workstation;
- power supply source;
- supporting and turning arrangement;
- "ZIP-0" spares and tool kit.

«FOKUS-D2» ELECTROOPTIC MODULE

PURPOSE

Round-the-clock monitoring, detection, identification of ground, surface, stationary and moving objects. Used both autonomously and as part of mobile (transportable), automated, and stationary surveillance and situation monitoring systems.

COMPOSITION

- video-camera;
- thermal imaging device;
- tripod;
- operator's workstation;
- secondary power supply source;
- supporting and turning arrangement;
- "ZIP-0" spares and tool kit.

PERFORMANCE SPECIFICATION

Object detection			
EOM video-camera	9 km	12 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Object identification			
EOM video-camera	7 km	10 km	10 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

Run time – not limited
Time for functioning preparation of day-time channel *(video-camera)* – 1 min, not more
of night-time channel *(thermal imaging)* – 8 min, not more
Operating temperature range – -50°C to +50°C

«FOKUS-D» ELECTROOPTIC MODULE

PURPOSE

Round-the-clock monitoring, detection, identification of ground, surface, stationary and moving objects. Used both autonomously and as part of mobile (transportable), automated, and stationary surveillance and situation monitoring systems.

PERFORMANCE SPECIFICATION

Run time	not limited
Time for functioning preparation	
of day-time channel (video-camera)	1 min, not more
of night-time channel (thermal imaging device)	8 min, not more
Visual axis repositioning	in azimuth-n X 360°
within	in elevation +\- 35°
Operating temperature range	-50°C to +50°C

Object detection			
EOM video-camera	6 km	9 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Object identification			
EOM video-camera	5 km	8 km	8 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

COMPOSITION

* an option

- video-camera;
- thermal imaging device;
- tripod;
- operator's workstation;
- power supply source;
- supporting and turning arrangement;
- "ZIP-0" spares and tool kit.

«REDUT» TRANSPORTABLE SURVEILLANCE AND SITUATION MONITORING SYSTEM

PURPOSE

Surveillance and situation monitoring at land, sea, river and lake areas by means of detection, identification, and tracking of objects; information data processing and exchange with situational centers and other elements of automated monitoring systems. Functions without operation personnel in deployment location.

COMPOSITION

* an option

- automobile trailer;
- communications and data transfer means system;
- ”Fokus-D2” electrooptic module;
- “Rosa” radar module; *
- guaranteed power supply system;
- “ZIP-0” spares and tool kit;
- automated workstation.

PERFORMANCE SPECIFICATION

Object detection			
EOM video-camera	9 km	12 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Object identification			
EOM video-camera	7 km	10 km	10 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

RADAR STATIONS

«Rosa» – series ground moving objects monitoring radar stations

• detection and tracking of ground moving objects in adverse hydrometeorological conditions.

«Rapan» – series surface surveillance shore radar stations

• surface situation monitoring, automatic detection and tracking of various types of surface moving objects with their coordinates and motion parameters estimation.

Produced in mobile, stationary, and portable versions.

«ROSA» RADAR STATION

PURPOSE

Detection and tracking of ground moving objects in adverse hydrometeorological conditions.

COMPOSITION

* an option

- radar module;
- operator's workstation (based on industrial notebook in protected version);
- supporting and turning arrangement (STA);
- in-built satellite navigation system;
- tripod;
- power supply unit.

Object detection			
EOM	8 km	12 km	15 km

PERFORMANCE SPECIFICATION

Resolution as per the pinpoint target position (coordinates):	
in azimuth	6°, not more
in range	15 m, not more
Position determination error:	
in azimuth	1°, not more
in range	5 min., not more
Deployment time:	5 min., not more
Frequency range:	9440 – 9470 MHz
Power consumed:	200 W
Operating temperature range:	-50°C to +50°C
Run time with BP set:	
at temperature above 0°C	8 hours, not less
at temperature minus 30°C	4 hours, not less

- automatic detection and tracking of not less than 50 moving objects;
- automatic space survey in azimuth plane in assigned sector;
- moving objects selection system;
- display of radar and system information in real time on terrain digital map;
- forming of enhanced responsibility zones with alarm signal setting off.

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«RAPAN» SHORE RADAR STATION

PURPOSE

Surface situation monitoring, automatic detection and tracking of various types of moving surface objects with their position and motion parameters determination, both autonomously and as part of automated systems.

COMPOSITION

* an option

- radar station;
- operator's workstation;
- automatic system identification (ASI) module;
- "ZIP-0" spares and tool kit.

Object detection	3 mi	10 mi	20 mi	30 mi
Radar				

PERFORMANCE SPECIFICATION

Radiated pattern:	
in azimuth	0,8°
in elevation	20°
Antenna rate	24 r/min
Radiation carrier frequency:	(9410+\- 30) MHz
Probing pulse duration:	0,07 / 0,2 / 0,4 0,8 / 1,0 / 1.2 microsec.
Pulse radiation power:	25 kW
Operating temperature range:	-50°C to +50°C
Automatic detection, tracking, and calculation of objects motion parameters:	up to 200
Consumed power:	700 W, not more

STATIONARY AUTOMATED SITUATION MONITORING SYSTEMS

- High-tech automated round-the-clock monitoring systems of land, sea, lake, and river situation with the aim of detection, identification, and tracking of various types of objects, information data processing and exchange with other elements of automated monitoring systems.

- The systems can function without technical personnel involvement at their locations.

«GAVAN» AUTOMATED RADIO-TECHNICAL SITUATION MONITORING SYSTEM

PURPOSE

High-tech automated surface surveillance system with the aim of detection, definition, and tracking of various types of objects, information data processing and exchange with other elements of automated monitoring systems.

PERFORMANCE SPECIFICATION

Object detection				
EOM	7 mi	8 mi	15 mi	20 mi
SRS	3 mi	10 mi	20 mi	30 mi
Object identification				
EOM	3 mi	5 mi	8 mi	10 mi

OPERATING TEMPERATURE RANGE: –50° +50° CELCIUM

COMPOSITION

* an option

- “Rapan” shore radar station;
- “Fokus-D2” electrooptic module;
- communication and data transfer system;
- automatic identification system (AIS);
- guaranteed power supply system;
- burglar alarm and fire-extinguisher system;
- radiocommunication and personal satellite communication users detection system;
- self-security provision system;
- meteorological complex;
- technical condition automatic control system;
- “ZIP-0” spares and tool kit.

«FORVARD» AUTOMATED SITUATION MONITORING SYSTEM

PURPOSE

High-tech automated system of ground (with EOM – surface) situation monitoring with the aim of detection, definition, and tracking of various types of objects, information data processing and exchange with other elements of automated monitoring systems.

PERFORMANCE SPECIFICATION

Object detection			
EOM video-camera	9 km	12 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Radar	8 km	12 km	–
Object identification			
EOM video-camera	7 km	10 km	10 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

COMPOSITION

* an option

- “Rosa” radar module;
- “Fokus-D2” electrooptic module;
- communication and data transmission system;
- radiocommunication remote-control system;
- radiocommunication and personal satellite communication users detection system; *
- technical condition automatic control system;
- self-security provision system;
- meteorological complex;
- “ZIP-0” spares and tool kit;
- guaranteed power supply system;
- burglar alarm and fire-extinguisher system.

OPERATING TEMPERATURE RANGE: –50° +50° CELCIUM

«FORVARD-O» AUTOMATED SITUATION MONITORING SYSTEM

PURPOSE

High-tech automated system of ground and surface situation monitoring with the aim of detection, definition, and tracking of various types of objects, information data processing and exchange with other elements of automated monitoring systems.

PERFORMANCE SPECIFICATION

Object detection			
EOM video-camera	9 km	12 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Object identification			
EOM video-camera	7 km	10 km	10 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

COMPOSITION

* an option

- “Fokus-D2” electrooptic module;
- communication and data transmission system;
- radiocommunication remote-control system;
- burglar alarm and fire-extinguisher system;
- radiocommunication and personal satellite communication users detection system; *
- technical condition automatic control system;
- self-security provision system;
- guaranteed power supply system;
- meteorological complex;
- “ZIP-0” spares and tool kit.

OPERATING TEMPERATURE RANGE: −50° +50° CELCIUM

«PEREKHVAT» STATIONARY SITUATION MONITORING SYSTEM

PURPOSE

High-tech automated system of ground (with EOM – surface) situation monitoring with the aim of detection, definition, and tracking of various types of objects, information data processing and exchange with other elements of automated monitoring systems.

PERFORMANCE SPECIFICATION

Object detection			
EOM video-camera	9 km	12 km	15 mi
EOM thermal imaging device	10 km	13 km	15 mi
Radar	8 km	12 km	–
Object identification			
EOM video-camera	7 km	10 km	10 mi
EOM thermal imaging device	8,5 km	10 km	8 mi

COMPOSITION

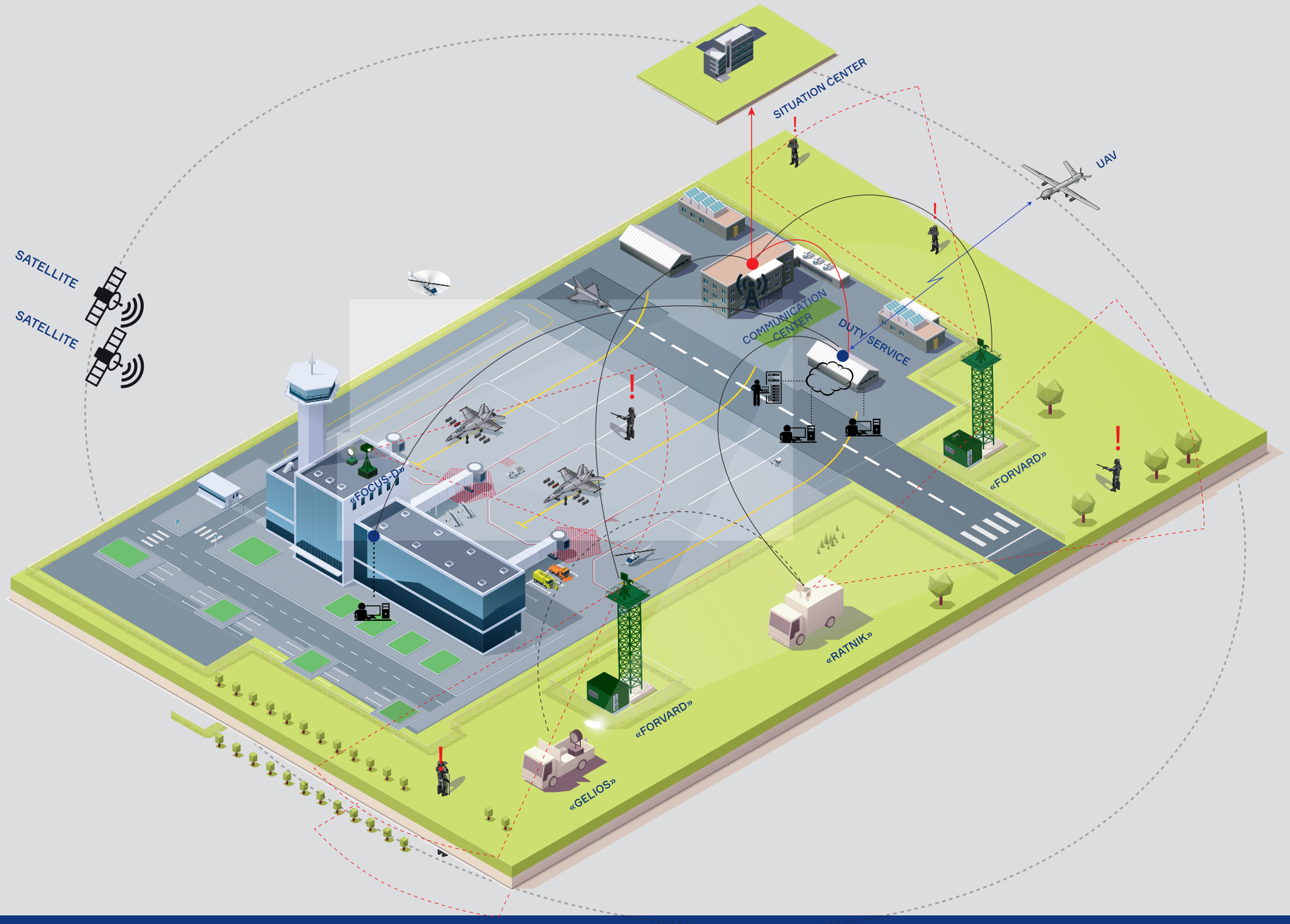
* an option

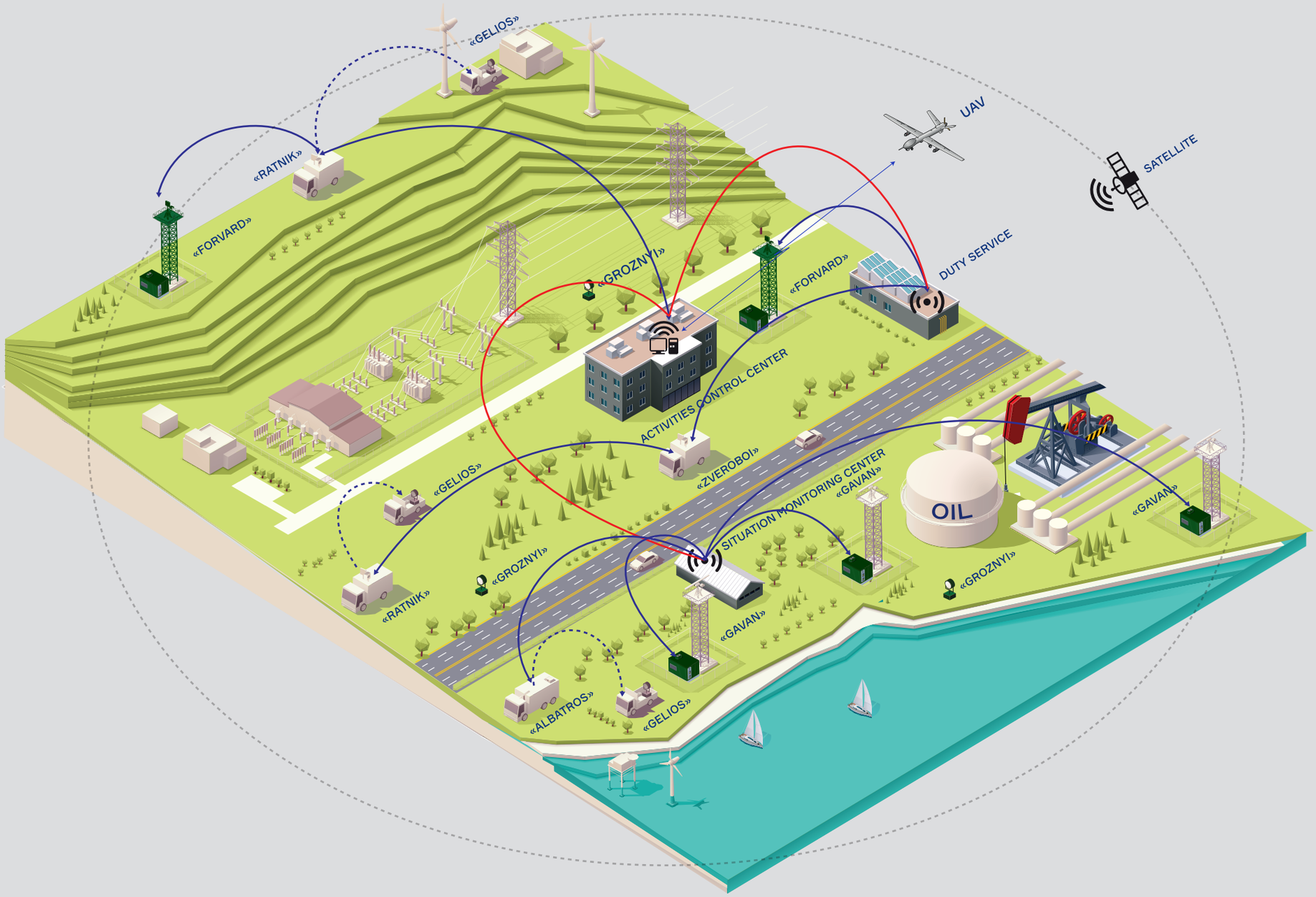
- “Rosa” radar module;
- “Fokus-D2” electrooptic module;
- communication and data transmission system;
- technical condition automatic control system;
- “ZIP-0” spares and tool kit.

OPERATING TEMPERATURE RANGE: –50° +50° CELCIUM

SYSTEMS AND COMPLEXES

- automated surveillance and situation monitoring systems in the interests of providing for special-importance object security;
- automated security systems of oil-and-gas fields infrastructure;
- automated security systems of river and sea transport objects;
- creating information security systems of situation monitoring control.


SITUATION CENTER
UAV
SATELLITE
SATELLITE
COMMUNICATION CENTER
DUTY SERVICE
«FOCUS-D»
«FORVARD»
«RATNIK»
«FORVARD»
«GELIOS»


«GELIOS»
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