1. Name

"Murom" Fast-Deployment Autonomous Mobile Video Surveillance and Thermal Imaging System

2. Image

3. Purpose

"Murom" Fast-Deployment Autonomous Mobile Video Surveillance and Thermal Imaging System (FDAMVSTIS) (hereinafter referred to as the system) is intended for 24/7 remote video and thermal imaging surveillance, monitoring and protection of open areas, approaches, perimeters and routes to facilities.

The system performs functions of determining (clarifying) the place of secured area violation with issuing "Alarm" command (signal) and real-time displaying the information on the station part's monitor and archiving events.

The system allows for scanning secured space in manual and video detection mode.

The distinctive features of the system are the possibility of its rapid deployment and long-term operation in standalone mode. The mobility of the system is provided by quick-connect/disconnect design of the article components.

The system can be deployed in secured area within 2 hours with a team of 3 persons. Special cases are used for packaging and transporting the system components.

The system solves the following tasks:

- intellectual video surveillance of large open spaces in real time mode;
- arrangement of communication channel with remote monitoring station;
- intruder detection by means of security alarm equipment and transmission of alarms for processing information to the monitoring post with automatic video confirmation of targets at points of security detectors' actuation (if used together with "Mongoose" system);
- autonomous power supply of the system based on the energy of the sun or gasoline power generator.

The system runs under "Murom" SSW. SSW has an option to display and control detectors (if "Mongoose" system is available) with their linking to the terrain map. In case of detector alarm,

sound and visual notification of the operator actuates, the pan/tilt unit of the video thermal imaging module is automatically pointed to the alarm section.

The system internal security can be provided by STS-102P security detectors from "Mongoose" system, which is not included in the delivery set.

Scope of Delivery

Name	Q-ty	Purpose in Brief
STS-10901 mast, pcs.	1	It is intended to accommodate video thermal imaging module with mount on the vehicle roof.
STS-10903 mast, pcs.	1	Pneumatic telescopic mast designed to accommodate a video thermal imaging module and communication controller
SDP-881 Pan/Tilt Unit, pcs.	1	SDP-8083 long range video camera and SDP-8615M thermal imaging camera installed on SDP-881 pan/tilt unit are intended to arrange video surveillance in the visible and IR ranges. The pan/tilt unit provides for remote control with a variable speed and position in two coordinates, as well as for changing the video and thermal imaging camera view angle and focus.
SDP-8083 Long Range Video Camera, pcs.	1	
SDP-8615M Thermal Imaging Camera, pcs.	1	
BPM24 12V/24V Power Source, pcs.	1	It is intended for power supply of the system equipment from onboard electric system.
STS-507 Communication Controller, pcs.	2	It is intended to arrange a high-throughput wireless communication channel between two points.
Battery Unit, pcs.	2	It is intended for energy storage from solar modules (STL-725), gasoline power generator (STL-724) and providing power supply of the system. One battery unit is enough for the system operation.
Charger, pcs.	1	It is intended to recharge the batteries from the battery unit, as well as to control the gasoline power generator in automatic mode.
BRDM Unit, pcs.	1	It is intended to receive and process alarms from security detectors and broadcast them to the secure laptop using the pan/tilt unit. It allows for arranging the radio network within the range of 433 MHz according to the digital handshake protocol.
Set of secure laptop with installed "Murom" SSW, pcs.	1	It is intended to manage, configure and arrange a single information space of the system; it allows for saving and displaying the information received from long range video camera and thermal imaging camera.
Packaging, set	1	Lightweight aluminum cases for packaging the system components.
Set of connecting cables, set.	1	It is intended for quick and error-free connection of the system equipment.
STL-725 autonomous power supply kit, set.	1	It is intended to power the system and charge the battery bank from solar energy.
STL-724 autonomous power supply kit, set.	1	It is intended to power the system and charge the battery bank from gasoline power generator.

4. Scope of Application

The system allows for monitoring of large open spaces and long-distance facilities, as well as enforcing fire control in daytime and at night, in the absence of lighting, in a wide range of weather conditions.

5. Specifications

Parameter	Value
Target detection range by video camera, m – - of "human" type – - of "vehicle" type	 up to 10,000 up to 10,000
Target detection range by thermal imaging camera, m – - of "human" type – - of "vehicle" type	 up to 4000 up to 7900
Video image resolution at 25 fps, pixels. – of thermal imaging camera – of long range video camera	 640x480 2592x1944
Pan/tilt unit angle of view, deg. – horizontally – vertically	 360 ±45
Range of radio-relay communication channel, up to, km	8
Height of mast with equipment, m	5.2
Power of solar modules, W	400
Battery unit total capacity, Ah	200
Remote power management for all devices to efficiently use batteries – intelligent power saving functions	Yes
Remote SB voltage monitoring	Yes
Automatic scan mode of set control points	up to 30 points
Data transmission rate in the radio channel, min., Mbit/s	40
Radio-relay communications frequency band, GHz	5
DC power voltage, V	24 ± 10%
AC power voltage, V/Hz	220/50
Storage battery service life, min., years	3
Average time of the system deployment by group of 3 persons, h	2
Time to recover the operation mode, min	5
Temperature conditions of the system equipment operation, °C*	from - 40 to + 50
* - Operating temperature conditions of the gasoline power generator from STL-725 autonomous power supply kit, °C	from - 20 to + 50

6. Schematic Diagram of the System