

## GSM-VIDEO SURVEILLANCE, ALARM, REMOTE VIDEO MONITORING

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Annotation: This article is about GSM video surveillance services. GSM-video surveillance is the ability to transmit information of such volumes and sizes that any other wireless technology designed for long distances was not allowed to transmit.

Key words: MMS camera for remote control of objects, remote video surveillance system, GSM alarm system.

MMS camera for remote control of objects.

GSM camera properties.

The videophone GSM camera remotely takes pictures and automatically transmits the received color images via the GSM channel. The command for shooting can be a phone call to the camera from the owner's phone, timer recording, or the triggering of security sensors at the shooting object. Pictures are sent as MMS messages or sent by e-mail to the owner's mobile phone or computer. The camera is configured via SMS messages from the owner's phone. The camera is powered by a built-in battery, or by a mains charger with a built-in battery as a backup.

Ability to connect up to three external video cameras and up to three security loops. In addition, the GSM camera provides the owner with a fully functional GPRS modem interface for wireless Internet access.[1]

Scope of the GSM camera.

- detection of "false" alarms of stationary security systems;
- quick deployment of a video surveillance system (traffic conditions, crowds of people, etc.)
- video surveillance of remote objects: house, apartment, office, garage, parking lot, etc.;
- organization of video surveillance on moving objects (car, trailer, special vehicle);
- video surveillance of children, the elderly;
- it is possible to listen to the room where the camera is installed.

Functionality:

- Snapshots can be sent via MMS or email to the owner's mobile phone or computer, no additional software required.
- Settings of the necessary parameters are made by sending SMS messages to the camera from the owner's telephone set.

- The device has a built-in executive relay that allows you to remotely control various devices and turn on an external light for the duration of photography.
- Allows the owner to remotely listen to what is happening around the camera, using a call from his GSM phone.
- Allows remote photography and automatic transmission of color images over a cellular network. The command for shooting can be a phone call or an SMS message to the camera from the owner's telephone, triggering security sensors or a timer.
- Can be powered by built-in battery and mains charger.
- GSM-camera provides the owner with a full-featured GPRS modem interface for wireless Internet access and other purposes.[1]

#### Specifications:

- operating frequencies - GSM 800-900 MHz 1800-1900 MHz;
- transmitter power - class 4 (2W) in the 800/900 MHz bands, class 1 (1W) in the 1800/1900 MHz bands;
- receiver sensitivity - 102 dBm at the antenna input;
- antenna - omnidirectional, built-in, with MMCX-RA connector;
- GPRS - modem (camera with option M) - class 10 (transmission up to 24 kbps, reception up to 48 kbps);
- resolution of photographs - 480x640 VGA;
- High Color (16 bit), JPEG compression (average file size 30Kb);
- working temperature - from -20 to +60 degrees C;
- relative humidity - no more than 80%;
- charging of the built-in battery is allowed at a temperature of 0 .. +46 degrees C;
- power supply - from the built-in battery or from the mains charger included in the kit with or without a built-in battery as a backup (it is allowed to use another DC source with a voltage of 9 ~ 18 V instead of the standard mains charger);
- the maximum power consumed from a network - 4 W;
- operating time from the built-in accumulator - till 36 o'clock;
- battery type - Li-Ion with a capacity of 1400 mAh (battery for Nokia 3310 phone);
- size - 94x87x42 mm (without mounting bracket and mains charger);
- weight - 240 g (without mounting bracket and mains charger).

#### Remote video surveillance system Ladoga V6.

The Ladoga V6 system is designed to organize a remote video surveillance system with the ability to transmit video images via wired and wireless communication channels. [2]

Ladoga V6 can work in client or server modes via any of the available communication channels: Lan, Wi-Fi, ADSL, GSM, GPRS, telephone line. Some communication channels can be used simultaneously through different interfaces (RS-232 and RJ-45). To connect to the Ladoga V6 video recorder via the Internet, it must have a unique (dedicated) IP address. At the same time, it is possible to: view video in on-line mode (speed of 25 frames / s is achieved only when working via a local network or connected to modern 3G modems), viewing a video archive, working with controlled cameras, changing any settings of the device (see Figure 1).

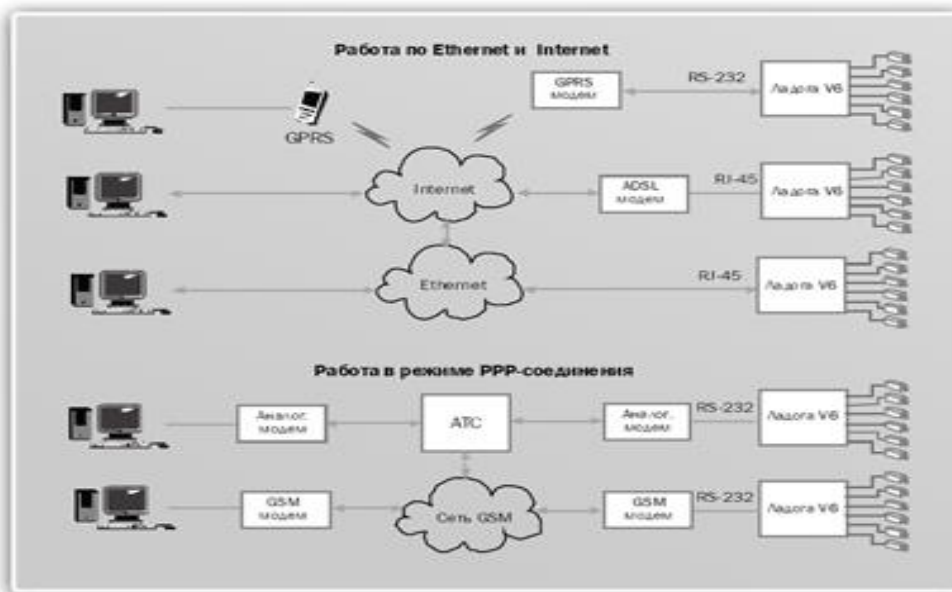


Figure 1 - System configuration.

#### GSM alarm. Advantages

GSM-alarm system can be installed in cottages, country houses and car garages located in areas where there is no wired telephone connection.

Usually, in addition to the security functions, GSM alarms can perform various functions, for example: turn on the heating boiler, start the irrigation system, measure the ambient temperature, listen to the room.

GSM alarm can be integrated with other security and life support systems.

In the event of a fire, the fire and security alarm system can perform the following actions in the alarm zone:

- shutdown of ventilation;
- switching on the smoke exhaust system;
- switching on emergency lighting and light indication of ways and exits for evacuation of people;
- unblocking emergency exits during evacuation;
- disconnection of power supply in a dangerous area;
- exit from the disturbing zone of elevators.

GSM-alarm system may be necessary only to control the premises. You want to know what movements, for example, your housekeeper makes in your absence around the apartment or cottage. Properly installed motion sensors and other sensors will perform this task, and the control panel with a GSM module will inform about all activities in the house via SMS or other communication. Signals can be transmitted over the Internet, namely to an e-mail box - it all depends on the equipment. GSM-alarm systems are equipped with an external microphone. By calling the SIM card number, which is installed on the facility equipment, and entering the password, you can listen to the room. In addition to listening to the room, this function can be used to control the alarm. [3]

#### Disadvantages of GSM-alarm system

As long as the signal is transmitted to you or your authorized representatives and you have time to react to it (call the police, fire department, etc.), the attacker may have time to take out

all the most valuable things from your apartment. In turn, reacting to the alarm yourself can be dangerous.

False positives.

GSM alarm: composition and capabilities

A GSM alarm system is an alarm system that has all the functions of a conventional fire and security alarm, but uses a GSM modem as a transmitting module or, in older systems, a cellular phone. This type of security systems can transmit alarm messages to the central monitoring station (CMS) or to the owner's phone. The main purpose of GSM security systems is to detect the intrusion of strangers into the protected premises and protect against emergencies, such as fire, gas leakage, leaks in water supply or heating pipes, malfunctions of heating installations, as well as other undesirable situations.[4]

Remote wireless monitoring

GSM-constructor "Coordinator", which is a multifunctional GSM-modem, the main scope of which is security systems for residential and office premises, as well as various devices of an interactive communication and entertainment complex, mobile monitoring and control, "mobile office" systems.

Applications of the device

The "coordinator" itself is a "mobile office" or means of communication with SMS, MMS and fax functions, as well as Internet access via GPRS. If you connect the "Coordinator", a USB video camera and a microphone to the computer, then using the video detector function, such a system will allow remote audio-video monitoring of any objects. An office safe, family heirlooms or country utensils will be monitored.[5]

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