STAM-IRS

INTEGRATED MONITORING RECEIVER WITH MICRO SERVER

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STAM-IRS is a dedicated server to be used with the STAM-2 monitoring station which enables receiving transmissions sent via telephone line, Ethernet network (TCP/IP) or GSM network (SMS and CLIP).

Note: The STAM-2 monitoring station must be registered within 31 days of the server program installation. After expiry of this period of time, the server program will stop working. You can perform the registration on the www.stam2.satel.pl web page. After registration, SATEL will send you a license file to your e-mail address given at registration. Having installed the license file, you will be able to use the server program without any time limit.

1. Features

- Energy-efficient INTEL platform, functioning as a data server and ensuring communication with the event receiver cards.
- Support for up to 17 event receivers:
    - up to 14 cards (telephone or Ethernet), installed in PCI slots;
    - up to 3 GSM modules, connected to COM ports.
- 2 low-power SSD drives.
- 7'' LCD display to facilitate local management of the server.
- Installed WINDOWS 7 Embedded operating system.
- Capability to restore the system from a backup copy.
- Cyclically saving copies of data.
- Enclosure enabling installation in 19" rack cabinets.
- Possibility of connecting a monitor via the DVI standard interface.
- Built-in 13.8 VDC buffer power supply, 7 A output current, with support for external 12 V backup battery.
- Power supply short-circuit and overload protection.
- Monitoring power supply status and reporting troubles.
- Possibility to program and configure the STAM-IRS system and operate the monitoring station by means of the STAM-2 Server and STAM-2 Client programs (installation files and documentation available at www.satel.eu).

2. Description

Note: The type of base receiver card – either telephone or Ethernet – is chosen by the Customer during purchase.

Fig. 1. STAM-IRS system.

Explanations for Fig. 2:

1   -   PS/2 communication port to connect keyboard;

2   -   2 USB 2.0 ports;

3   -   7" TFT LCD display;

4   -   ▲ ▼ buttons for:

   −   navigating through the menu (scrolling through and selecting options),

   −   running selected functions;

5   -   **Menu** button for programming display parameters (brightness level, contrast level, menu language, picture setup, picture synchronization degree, vertical and horizontal picture adjustment, automatic settings);

6   -   **Input** button for selecting suitable controller, compatible with the display (VGA setting is required for the STAM-IRS device);

7   -   ⏻ button to turn the display ON / OFF;

8   -   system power-up button;

9   -   system reset button;

10 -   green LED to indicate device power on status;

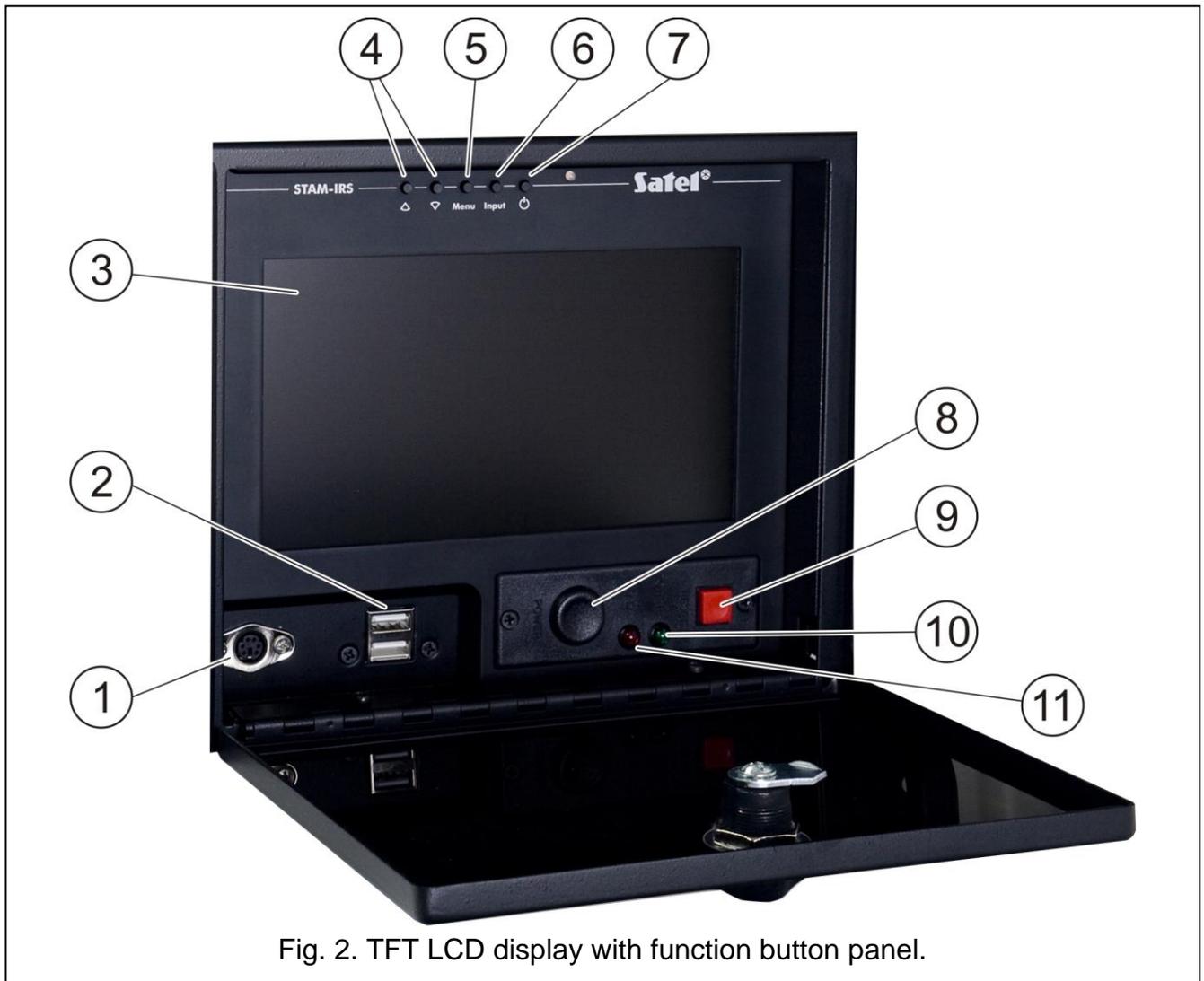11 -   red LED to indicate disk drive running status.
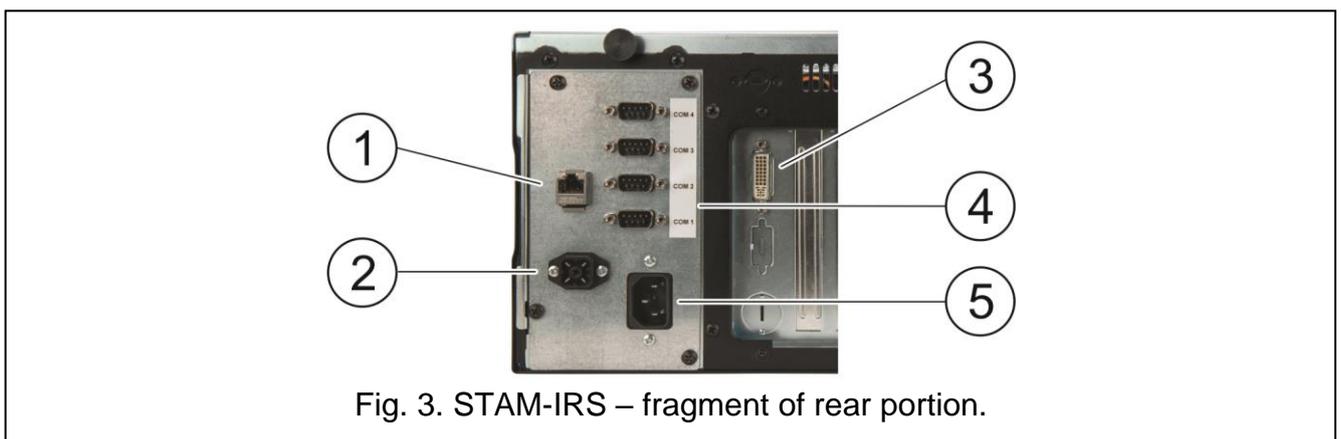
Fig. 2. TFT LCD display with function button panel.

Fig. 3. STAM-IRS – fragment of rear portion.

Explanations for Fig. 3:

1 - port for connecting LAN network;

2 - socket for connecting external 12 V battery;

3 - DVI socket for connecting a monitor (only digital signal is sent);

4 - 4 COM ports:

  – 1 port for connecting basic card,

  – 3 ports for connecting SATEL GSM modules;
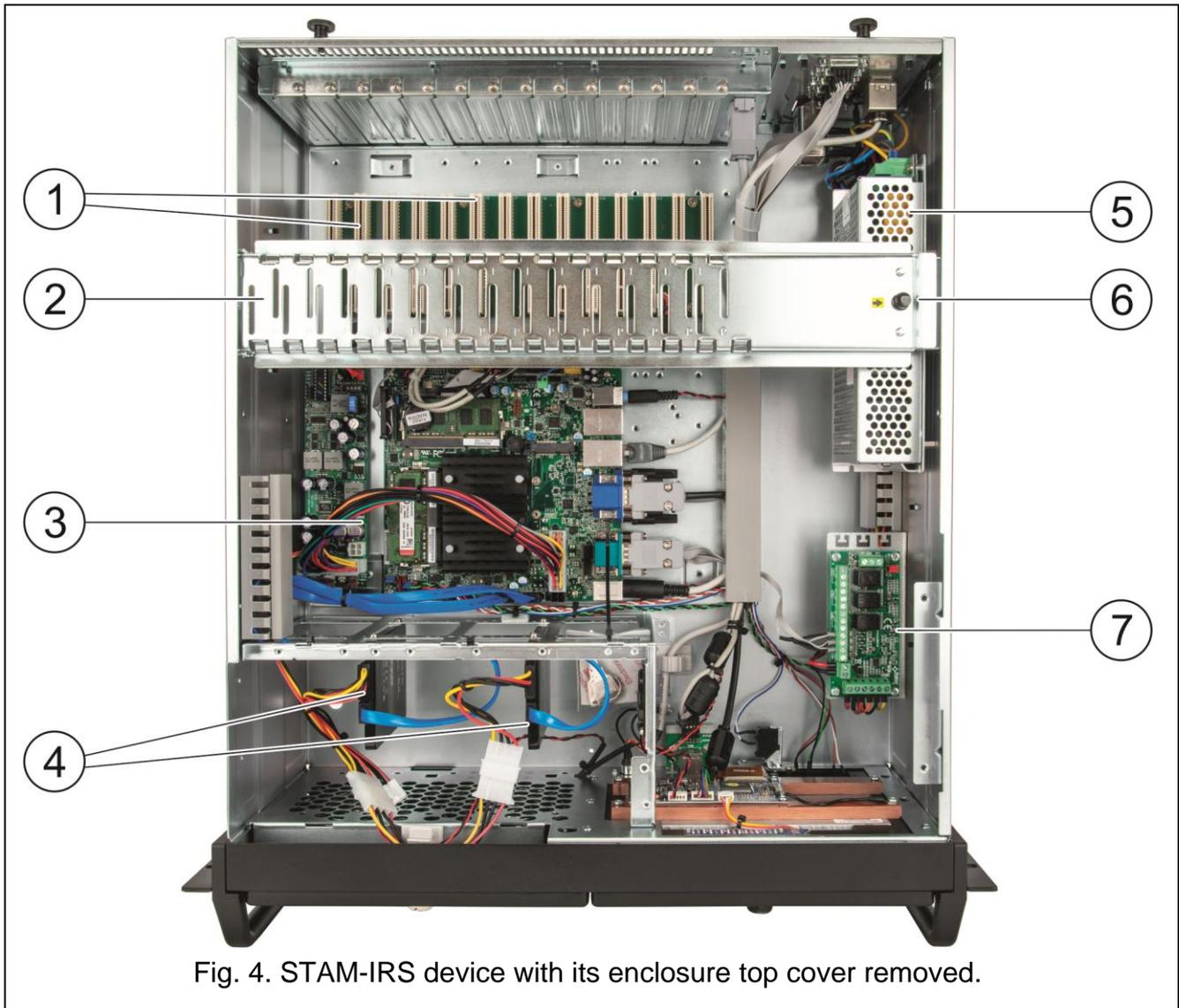
5 - socket for connecting 230 V supply.

Fig. 4. STAM-IRS device with its enclosure top cover removed.

Explanation for Fig. 4:

1 - 14 PCI slots for connecting telephone or Ethernet receiver cards – the system is capable of accepting up to 14 interconnected cards (1 base card and 13 expansion cards of various types);

2 - metal rail to stabilize the cards;

3 - mainboard;

Note: The protection dongle is located on the computer mainboard. Keep in mind that it must remain in the USB port. If the dongle is removed for more than 30 minutes, it will be unregistered and functionality of the monitoring station will be limited. 2 weeks after unregistering the dongle, the monitoring station program will stop working.

4 - 2 SSD type drives:
  − main – installed on rail 1 (SATA 1), intended for current operation of the device,
  − spare – installed on rail 0 (SATA 0), constituting a security copy of the main drive;

5 - 13.8 VDC buffer power supply, 7 A output current;

Note: The power supply installed in the system is already configured and ready for work, so its settings should not be changed.

6 - locking element for metal rail (to unlock the rail, pull the element up);

7 - power supply supervising module. The LEDs indications have the following meaning:
- – LED above FAC terminals – lit up red when AC power supply is present;
- – LED above FPS terminal – lit up green when DC power supply is present;
- – LED above FLB terminal – lit up green when the battery voltage is higher than 11.5 V.

The STAM-IRS device is delivered complete with:
- keys for closing the display door to prevent unauthorized access,
- a set of cables, including: device power cable, battery connection cables and RS port connection cable. Connection cables for base and expansion cards are delivered with the cards and are not included with the STAM-IRS system.

3. First start-up of the system

Prior to the first start-up of the system, carry out the following operations:
1. Connect the base receiver card DB-9 connector to the COM port, using the cable included in the delivery set.
2. Depending on the type of installed base receiver card, connect the telephone line or network cable to the card socket.
3. Connect the keyboard to the PS/2 communication port or USB port.
4. Connect the mouse to the USB port.
5. Connect the network cable to the LAN connection port.
6. Connect the external battery, using the delivered cables.
7. Connect the STAM-IRS device to power source, using the delivered cable.
8. Download and install the STAM-2 Server and STAM-2 Client programs available on the www.satel.eu website. For detailed information on the programs and their configuration, refer to the manual delivered with the STAM-2 monitoring station.

4. Installation of additional modules and cards

Prior to installation of additional modules and cards, make sure that the system is deenergized.

If it is necessary to connect expansion cards and GSM modules, the following installation procedure is recommended:
1. Turn off the system power supply.
2. Set addresses of the cards to be additionally installed.
3. Remove the top cover of the device.
4. Unlock the metal rail (shown as item 2 in Fig. 4) and remove it.
5. Install the cards in PCI slots.
6. Using the cables delivered with the expansion card, connect the new card to the one already installed.
7. Depending on the type of installed card, connect the telephone line or network cable or, optionally, synoptic board to the card socket.
8. Install GSM modules (see manuals delivered with particular modules).

9. Using suitable cables, connect the GSM modules to the other COM ports. The connection can be made with the USB-RS converter available in SATEL's product range.

10. Put back the metal rail and lock it.

11. Turn on the system power supply.

5. Copying the database

The STAM-2 Client program, "Configuration" window, "Settings" tab, allows you to activate creating a backup copy of the database. To do so, select the "Active" box, create a suitable folder where the backup copy is to be saved, enter the access paths to the source folder (STAM-2 main database) and the target folder (backup copy of database on the spare drive), and then define the data backup schedule. Thus a backup copy of the database will be automatically created at a specific time (which can be everyday at a set time or on selected days at an assigned time). In case of a main drive failure, or loss of the database, the backup copy will be used as a source for database restore.

6. System recovery

6.1 Operating system failure

In case of the operating system failure, you should proceed as follows:

1. Using a suitable button, switch the device off and then switch it on again.

Note: To be able to perform further operations, you must use the keyboard connected to STAM-IRS.

2. Using the keyboard arrow keys, select the "System Recovery" option on the system screen that will be displayed. Further stages of the system restore procedure will be shown on the screen.

3. When the "Recovery login" appears, type in "root" and press ENTER.

4. Type in "12345" in the "Password" field and press ENTER. It will start the system restore procedure, which can take about 30 minutes.

5. When the system is restored, the computer will restart.

As the system will be restored with its factory settings, you will have to install the STAM-2 Server and STAM-2 Client programs, configure the server and monitoring station, as well as the receivers connected to it. You must also restore the station database, using the database backup copy.

6.2 Main drive failure

If a failure of the main drive (SATA 1) occurs, do the following:

1. Switch off the device power supply.

2. Remove the top cover of the enclosure and disconnect the defective drive.

3. Install a new disk drive in its place.

4. Switch on the device.

5. Proceed further in the same way as during a failure of the operating system (see "Operating system failure").

Note: In case of failure of the spare drive, it is recommended to contact the installer.

7. Specifications

Supply voltage ....230 VAC
Current consumption from 230 V mains (with 1 card connected) ....0.17 A
Current consumption from battery in emergency power mode (with 1 card connected) ..2.45 A
Recommended battery capacity ....40 Ah
PCI slots for cards 14
COM ports 4
USB 2.0 ports 2
Operating system..Microsoft Windows 7 Embedded
SSD drives (main and spare)..60 / 64 GB
Display...TFT LCD with support for 800 x 600 resolution
Working temperature range .... 0°C…+35°C
Maximum humidity..90 %
Enclosure dimensions..55 x 48 x 17.7 cm
Weight (without cards) .... 14.5 kg

The declaration of conformity may be consulted at www.satel.eu/ce