Satel®

STAM-IRS

Integrated monitoring station
with micro server

$C\,E$

IMPORTANT

The device should be installed by qualified personnel.

Prior to installation, please read carefully this manual in order to avoid mistakes that can lead to malfunction or even damage to the equipment.

Disconnect power before making any electrical connections.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

SATEL aims to continually improve the quality of its products, which may result in changes in their technical specifications and software. Current information about the changes being introduced is available on our website.
Please visit us:
https://support.satel.pl

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

The following symbols may be used in this manual:

i - note,

⚠ - caution.

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).

i *Register the STAM-2 monitoring station within 31 days since you installed the STAM-2 Server program. After this time, the program will stop working. Register the monitoring station in the SATEL license management service. For instructions on how to do it, go to the STAM-2 monitoring station manual.*

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, 12 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.pl).

2. Description

Fig. 1. STAM-IRS system.

i | *The type of base receiver card – either telephone or Ethernet – is chosen by the Customer during purchase.*
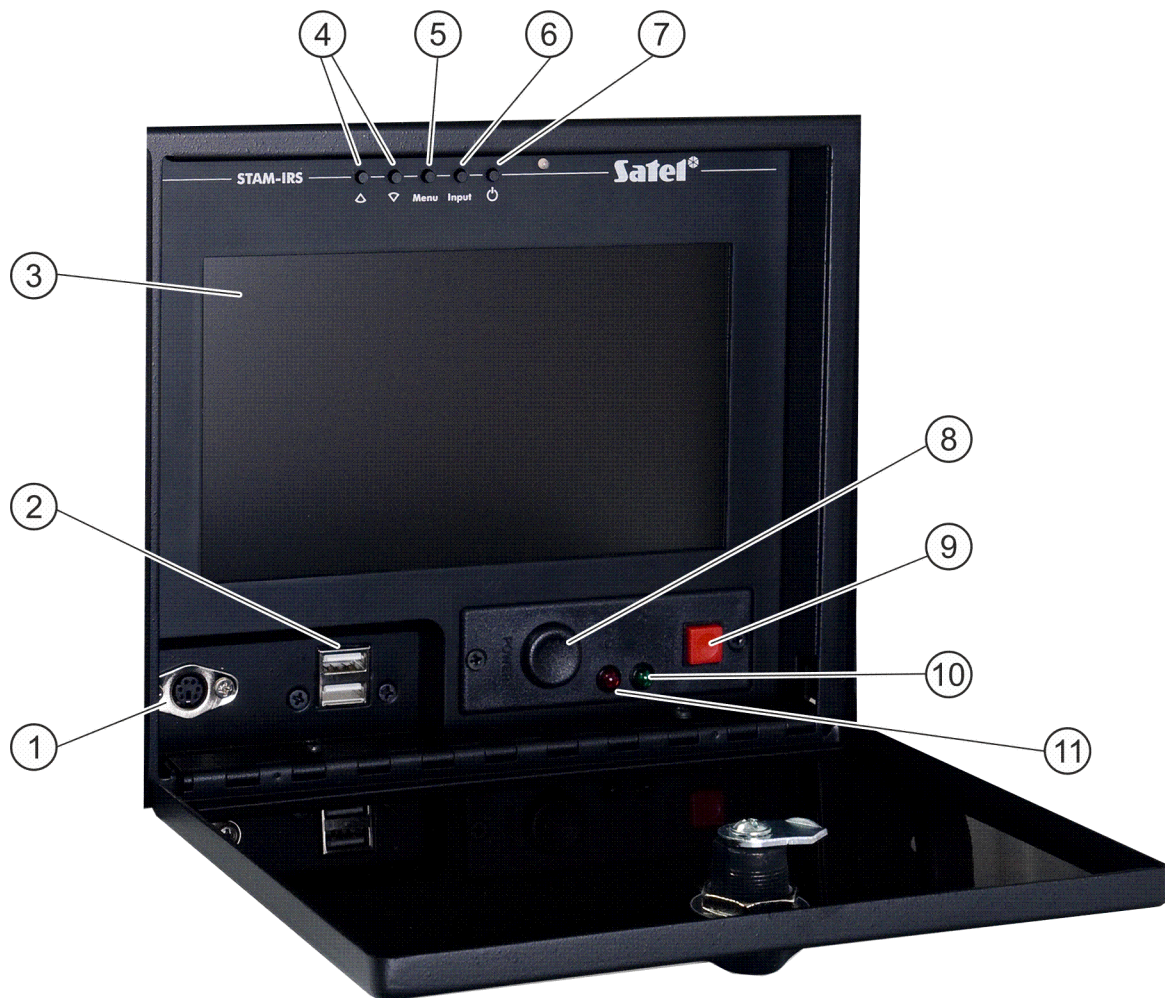

Fig. 2. TFT LCD display with function button panel.

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;
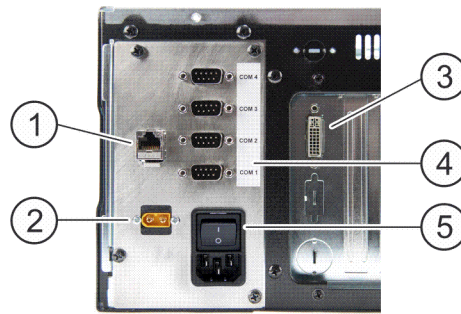
11 - red LED to indicate disk drive running status.

Fig. 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 with a switch for connecting 230 V supply.
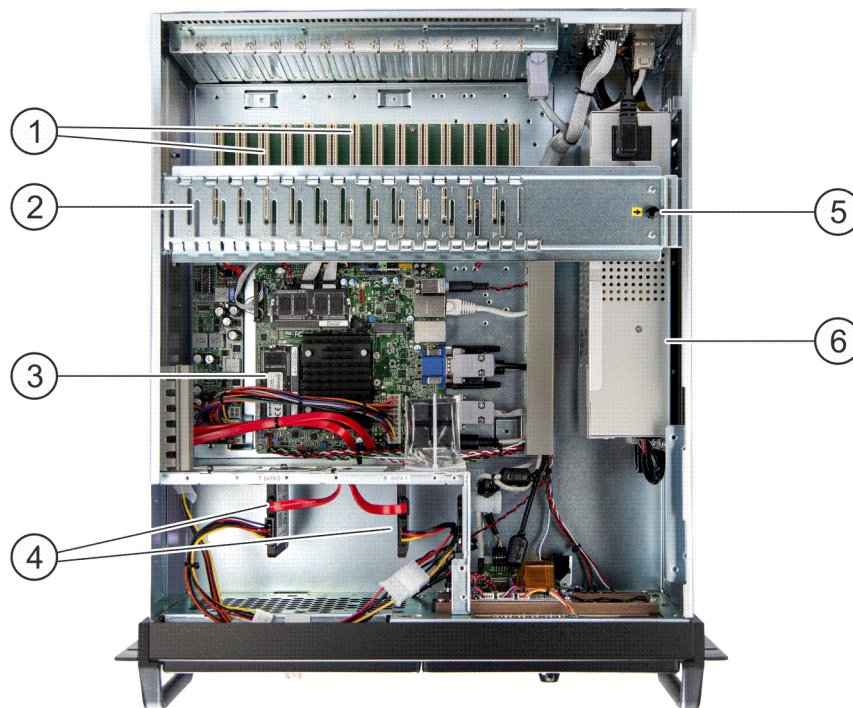
Fig. 4. STAM-IRS device with its enclosure top cover removed.

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

6 - SATEL's APS-1412 13.8 VDC power supply, 12 A output current.

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

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.pl website. For detailed information on the programs and their configuration, refer to the manual delivered with the STAM-2 monitoring station.

i | *To install the STAM-2 Server program you will need the protection dongle. Remember that it must remain in the USB port after the program is installed. If the dongle is removed for more than 30 minutes, it will be unregistered. The program's functionality will also be limited (see: STAM-2 monitoring station manual). 2 weeks after the dongle is unregistered, the program will stop working.*

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 database can be automatically backed up. You can define the rules of the backup. In case of a main drive failure, or loss of the database, the backup copy will be used as a source for database restore. To enable the database backup, go to the STAM-2 Client program, "Configuration" window, "Settings" tab, and proceed as follows:

1. Enable the "Active" option.
2. In the "Source folder" field, enter the access path to the folder in which the STAM-2 database is to be saved (by default: C:\Program Files\Satel\STAM-2\Server for 32-bit operating systems and C:\Program Files (x86)\Satel\STAM-2\Server for 64-bit operating systems).
3. In the "Direct folder" field, enter the access path to the folder in which the database backup copy is to be saved (by default: D:/Backup STAM-2).

i *Remember that the direct folder must be located on a different drive than the STAM-2 database.*

4. In the "Scheduler" window, define when you want the database backup copy to be made. The backup copy will then be automatically made at a specific time (which can be every day at a set time or on selected days at a set time).

6. System recovery

6.1 Operating system failure

In case of the operating system failure:

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

i *To perform further operations, 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 displayed on the screen.
3. When the "Recovery login" is displayed, 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.

i *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:

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").

i *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) ....15.3 kg