



Advanced Technology
Solutions

Alarm system MATR for controlling access to industry racks

Host & Cloud version

Confidential
info@atsol.rs

ALARM SYSTEM MATR FOR CONTROLLING ACCESS TO INDUSTRY RACKS	1
<hr/>	
MATR SYSTEM	3
<hr/>	
SYSTEM LAYOUT	3
WIRING TECHNOLOGY	3
WIRELESS TECHNOLOGY	3
SYSTEM COMPONENTS	5
RACK'S DOOR OPENING SENSOR	5
CONNECTION VIA COPPER PAIR (RAST)	5
CONNECTING THROUGH THE OPTICAL FIBER (RASF)	5
WIRELESS CONNECTION (RASM)	5
IDENTIFICATION MODULE	5
MODULE UNLOCKING / LOCKING RACK LOCK REMOTELY	6
OPTION "OPEN WITHOUT AN OPERATOR»	6
MODULE "IDENTIFICATION AND CONTROL LOCK"	6
<hr/>	
UPGRADE AND INVESTMENT PROTECTION	7
<hr/>	
ONE SYSTEM	7
<hr/>	
OPERATING TEMPERATURES AND CONDITIONS	7
<hr/>	
PRICE LIST MATR SYSTEM (CIP ITALY)	8
<hr/>	
DOOR SENSORS	8
SENSOR RAST (COOPER CONNECTION)	8
SENSOR RASF (OPTIC CONNECTION)	8
SENSOR RASM (WIRELESS CONNECTION)	8
ELECTRONIC COMPONENTS AMSE	8
IDENTIFICATION MODULE	8
MODULE IAMT (COOPER CONNECTION)	8
MODULE IAMF (OPTIC FIBER CONNECTION)	8
MODULE IAMM (WIRELESS CONNECTION)	9
MODULE UNLOCKING / LOCKING RACK LOCK REMOTELY	9
MODULE RLCT (COOPER CONNECTION)	9
MODULE RLCF (OPTIC FIBER CONNECTION)	9
MODULE RLCM (WIRELESS CONNECTION)	9
OPTION "OPEN WITHOUT AN OPERATOR»	9
MODULE "IDENTIFICATION AND CONTROL LOCK"	9
SOFTWARE ATSOL CLOUD	9
	2

MATR system

MATR system is designed to provide company control for the equipment what are installed in telecommunications and other racks. Racks may contain both electronic and various technological equipment. MATR system, depending on the modules can perform the following tasks

- Racks door opening control (basic version)
- Personnel Identity Module to identify staff
- Module unlocking / locking rack remotely

System layout

Depending on the client's needs system can be built using 2 technologies, wired and wireless. The flexibility of the system allows the use of both technologies.

The sensors are connected directly or through electronic components to ATSol Cloud. This cloud system with fail-safe guarantee 99.999%. The operator consoles are also connected to ATSol Cloud. This mean what client does not need to deploy their own IT-infrastructure

All technical support for the software implemented by ATSol.

Wiring technology

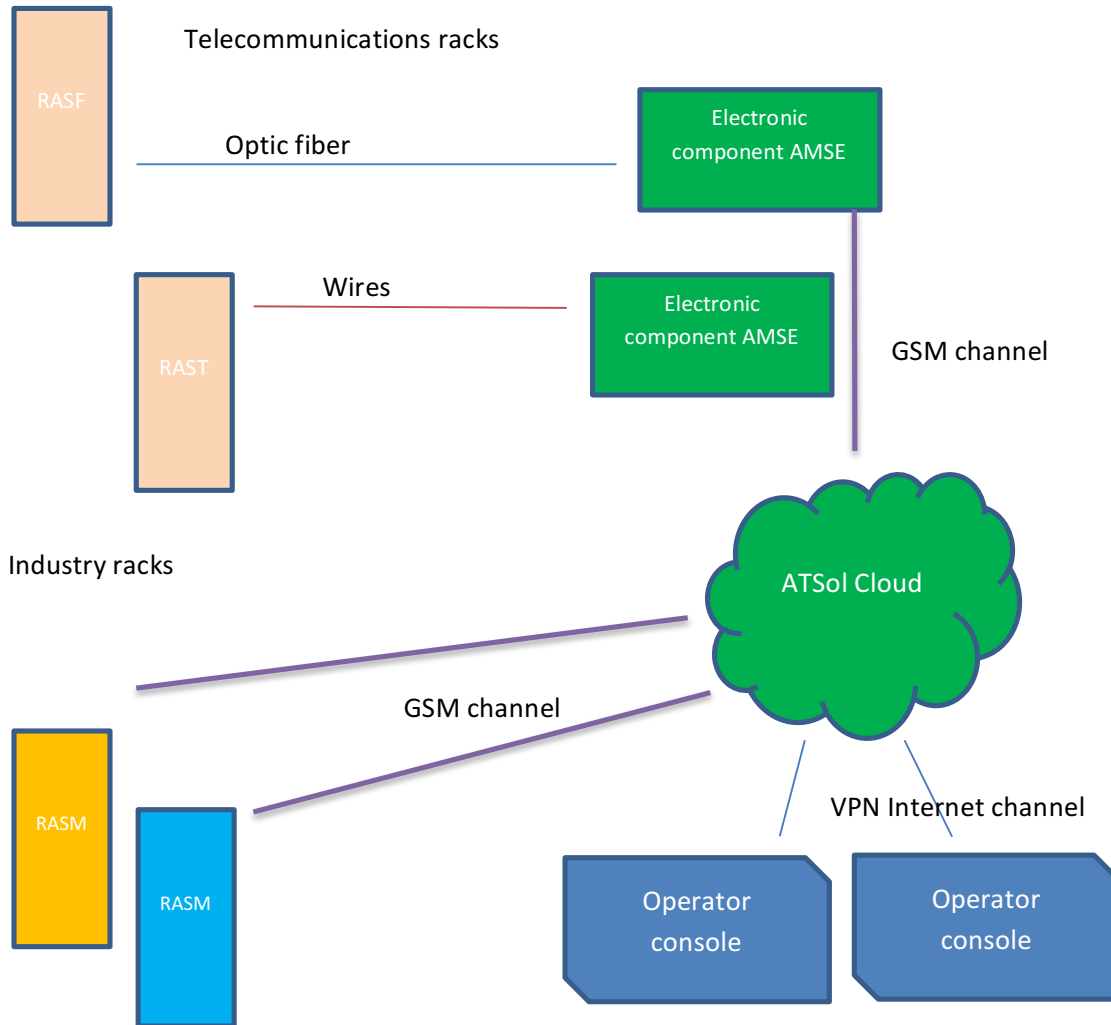
Using this technology means that there is a link between the equipment in the rack and the equipment on the telephone station (PBX). It can be telephone cables or optics. Hardware (sensors) are installed in the rack. Control components mounted on the telephone station (PBX) to which connected the present rack.

Wireless technology

In this case, the system messaging and work takes place via the GSM channels. Used SMS protocols, CLIP, GPRS

Electronic components mounted on the PBX are connected by GSM channel to ATSol Cloud.

System layout with all kind of connections



System Components

Rack's door opening sensor

Designed to control doors of communication racks. Due to the spring-used construction sensor design, the quality of its work does not depend from the door's mounted quality, and not needed door closer. When rack's door is opened, sensor switch on and control system informs operator

Connection via copper pair (RAST)

If had a telephone pairs connected to PBX, the opening sensor is connected to a free pair. On the side of the PBX installed electronic unit AMSE via a GSM interface module connects the MATR system.

Connecting through the optical fiber (RASF)

When connecting to the PBX rack only through fiber optic cables, sensor is complemented by a small electronic unit for optical cable connection and electronic unit AMSE on the side of PBX. Power supply module from the format batteries D, which simplifies maintenance. In standby mode, the module does not consume power. When door opening, it is switched on telecommunication electronic module and system control MATR informing the operator of the fact of opening

Wireless connection (RASM)

In this case, the sensor is powered by the battery D. In standby mode module does not consume power. As part of the module there is a unit for testing batteries. If the battery level falls below 25 percent, the sensor sends a message to the MATR system to replace batteries

Identification module

Designed to control the opening of communication rack's doors with person identification. In this case, the sensor is complemented by card reader, a battery power supply module and a device ID transmission, the choice depending on the customer's needs and the availability of communications:

- for telephone lines IAMT
- optic lines IAMF
- wireless module IAMM

The electronic elements are mounted inside the rack that protects against vandalism / theft and

from the weather. Power supply by the battery size D, which simplifies maintenance. In standby mode, does not consume power. When rack's door opening, a signal is sent to operator, turning on reader and transmit device ID. If person who are open the door during the preset time interval (1-2 minutes) does not provide right card to card reader, the control system is not received within the specified time interval ID and notify the operator about unauthorized access. If person provide card, the reader through a transmission device ID sends ID to the access control system. If the card is valid and the employee has the right to access to the rack, the access control system informs the operator about the fact the door is opened and who opened it.

Module unlocking / locking rack lock remotely

This module allows company to lock the doors of the telecommunication racks using electromechanical lock. The module is possible to be installed in racks with telephone pairs (powered by the telephone line), as well as in other racks there is power in the rack. The doors are locked by special electromechanical lock. Its design allows to put it into any existing rack, design features allow it to be insensitive to backlash doors and sagging. Backup power provided by battery size D. If needed to open door, the employee call to operator, and say the rack code (applied to the rack door). Operator via the access system send command to electronics unit for opening the lock. In standby mode, the lock does not consume power. For situations where the connection with a lock is not possible (damage to communication lines, the lack of power) is possible to open the lock key mechanically, but operator will have notified of the fact opening of the door. When power fail, can open lock by the key. Rack doors automatically locking when the door is closed. In wireless connection communications provide via GSM channel.

Option "open without an operator»

As an option for this module provides a self-service mode. In this case, it does not require the presence of the operator. His role is performed by the SMS-module. To open the door, the employee sends an SMS with the rack number (applied to the door). If his phone number is on the list of authorized access, the SMS-module gives the command to open the lock.

Identification is performed by the employee's phone number

Module "identification and control lock"

When using modules to identify and lock control module may supplement them with external reader. In this case, the employee can open the lock by applying an access card to the reader, installed on the outside of the rack's door. If an employee has access, the system will open the lock, notifying the operator of the fact opening and who opened it. In standby mode, the lock does not consume power. For situations where the connection with a lock is not possible (damage to communication lines, the lack of power) is possible to open the lock key mechanically, while the

operator is notified of the opening of the door. When power is disabled the lock does not open, you can open the key. Rack doors automatically locking when the door is closed. In wireless connection communications provide via GSM channel. Requires power supply (or power from the telephone lines), redundant power supply is realized from the size D batteries

Upgrade and investment protection

Using standardized protocols and sensors, you can start development of the sensor system with the basic scheme and, where necessary, to upgrade it in future. Replacement of already installed equipment is not required, new installed will extend the functionality of already installed. This allows you to start with a small investment and protects the investment during the life of the project.

One system

All modules work with a single system MATR, can make combination in different variants, depending on the object, and the budget requirements. MATR also integrated with the CMACS system to control telecommunication mine's hatches, providing a single control system of technological objects. MATR control system can be integrated with a system of organization's locks and turnstiles, control system staff work time visits, integration with the HR system. In this case, when new staff applying for a job, the system can automatically grant access to racks and hatches to employer. In the case of the dismissal of an employee, or go on vacation, the system automatically locks the card and its accesses.

The result of the introduction of such a system, company will receive a single key access system to the building, objects, racks and mine. Company employees will get a centralized control system actions, information staff work time visits for jobs and access to the company's facilities (rooms, mines)

Operating temperatures and conditions

- Sensor systems operate at temperatures from -25 to +55, 0-90% humidity, the level of protection IP67
- Identification module operates in temperatures from -25 to +55, 0-90% humidity, the level of protection IP67
- The module locking / unlocking control operates at temperatures from -25 to +55, 0-90% humidity, the level of protection IP67
- The electronic components AMSE operate at temperatures from +5 to +55, 0-80% humidity, non-condensing