

Roger Access Control System

Integration of RACS 4 and
INTEGRA (SATEL) intruder alarm system

Document version: Rev. C



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1. INTRODUCTION

This manual contains minimum information that is necessary to configure software integration of RACS 4 system with alarm control panels of INTEGRA series made by SATEL company. Full functional description of RACS 4 system, PR Master software and CPR32-NET network controller is specified in following documents, which are available at www.roger.pl:

- Functional description of PRxx2 series controllers
- Functional description of PRxx1 series controllers
- PR Master User manual
- CPR32-NET User manual

The integration concerns all available models of controllers and readers made by Roger if at least single CPR32-NET network controller is also installed.

The configuration of INTEGRA alarm system is described in producer's instructions.

Note: The integration of RACS 4 and INTEGRA alarm systems requires PR Master software in version 4.5.4 or newer.

2. SCENARIO OF OPERATION

In general perspective, the integration with INTEGRA alarm system consists in concurrent arming and disarming of alarm zones both in INTEGRA system and in RACS 4 system. Alarm zones can be associated with each and their arming can be based on administrator defined schedule. Arming and disarming of alarm zones can be executed both from RACS 4 system and INTEGRA system but it also assumed that INTEGRA is superior in regard of arming and disarming. General diagram of RACS 4 and INTEGRA connection is shown in fig. 1. Moreover, RACS 4 system can collect critical events from alarm system and display them in its log so the operator of both systems could limit monitoring to single system with common log.

The integration of RACS 4 and INTEGRA alarm system requires installation of CPR32-NET network controller. Both, UT-2 communication interface and INT-RS converter act as intermediary devices between CPR32-NET and INTEGRA alarm control panel. Single INTEGRA control panel can operate with single CPR32-NET network controller or with many CPR32-NET network controllers. Multiple INTEGRA control panels can operate with multiple CPR32-NET units but the number of INTEGRA panels cannot exceed the number of CPR32-NET units.

Note: Default and free of charge licence enables operation with two alarm zones of INTEGRA system in RACS 4 system. In order to integrate more alarm zones it is necessary to purchase license from Roger company and the maximal number of integrated alarm zones in RACS 4 system is 32.

Integration procedure:

- Configure INTEGRA system according to end user requirements, Satel's manuals and section 4 of present manual.
- Connect CPR32-NET network controller, UT-2 communication interface, INT-RS converter and INTEGRA series alarm control panel according to fig. 2.
- Select the operating mode for INT-RS converter according to fig. 3.
- Configure RACS 4 Access Control System according to end user requirements, Roger's manuals and section 5 of present manual.
- Configure the connection of RACS 4 system with INTEGRA alarm control panel by means of PR Master software in accordance with section 5.3 of present manual.
- After successful configuration, the integration can be used in accordance with section 6 of present manual.

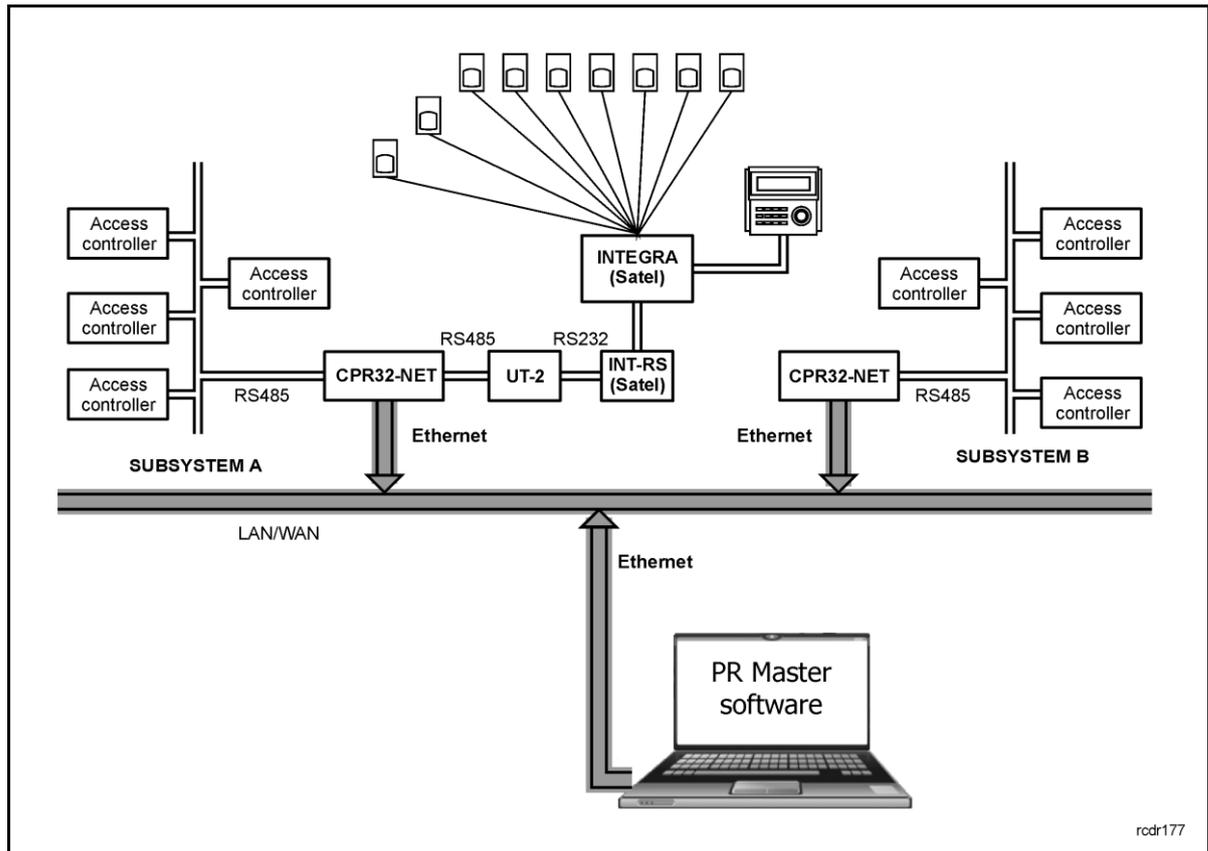


Fig. 1 General diagram of RACS 4 and INTEGRA alarm control panel integration

3. INSTALLATION

The installation consists in connection of CPR32-NET network controller, UT-2 communication interface, INT-RS converter and INTEGRA series alarm control panel in accordance with fig. 2. CPR32-NET network controller is equipped with two separate RS-485 buses. The first one is used for communication with access controllers within RACS 4 system, while the second one can be used for communication with INTEGRA series alarm control panel.

Maximal distance between CPR32-NET and UT-2 equals to 1200m, between UT-2 and INT-RS equals to 15 m while between INT-RS and INTEGRA alarm control panel equals to 300m (according to producer manual).

According to SATEL instructions, the address of INT-RS converter to be connected to the keypad bus in the INTEGRA 24 and INTEGRA 32 alarm control panels must be in range 0 - 3 (up to 4 keypads/other devices can be connected) and in case of INTEGRA 64, INTEGRA 128 and INTEGRA 128-WRL alarm control panels the address of INT-RS converter must be in range 0 – 7. Each keypad /device to be connected to the keypad bus must have its own individual address (addresses cannot be duplicated). Dip switches are used for address configuration. The integration with RACS 4 system requires selection of operating mode i.e. dip switch no. 5 must be on. The configuration of INT-RS converter with exemplary address is shown in fig. 3.

The INTEGRA control panel requires 18VAC power supply, the interface and the converter require 12VDC power supply, while CPR32-NET can be supplied both with 18VAC and 12VDC. INTEGRA and CPR32-NET are equipped with 12VDC outputs, which can be used for providing power supply to the interface and converter. Detailed specification of terminals for all mentioned devices is given in their respective manuals.

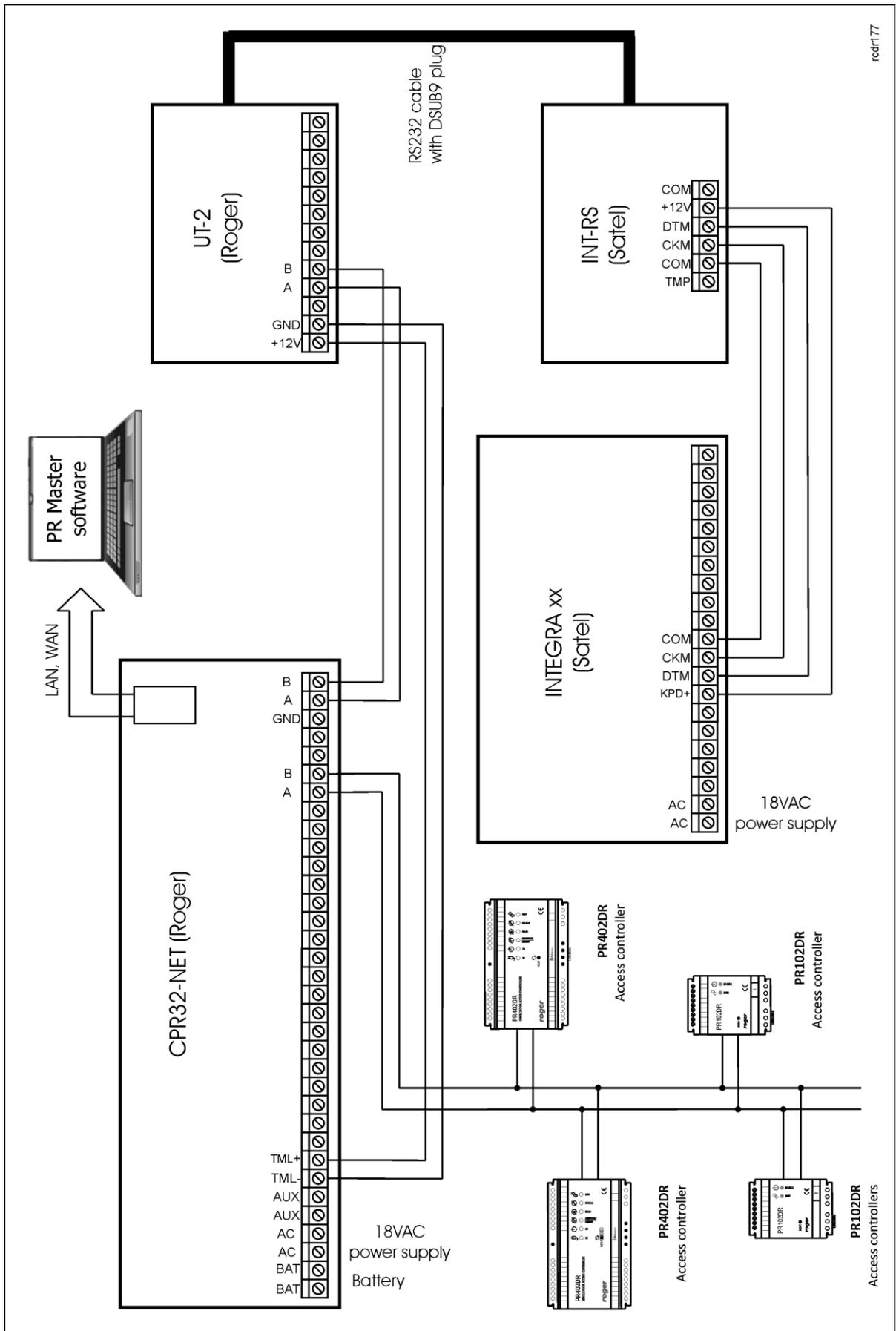


Fig. 2 Typical connection diagram for the integration

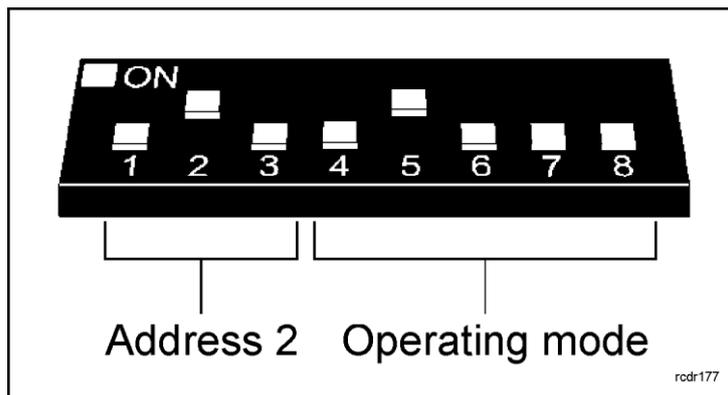


Fig. 3 INT-RS dip switch setting with exemplary address

4. CONFIGURATION OF INTEGRA ALARM SYSTEM

The configuration of whole INTEGRA alarm system is not the subject of present manual. It is assumed that the installer can configure alarm zones and users based on the information given in INTEGRA manuals. It is also necessary to indicate that INTEGRA and RACS 4 systems do not synchronize automatically their settings. Therefore it is possible to enter contradictory settings in both systems. It is responsibility of installer to configure both systems in accordance with good practice and present manual.

In this section there are mentioned only guidelines concerning integration of RACS 4 and INTEGRA alarm system.

Note: When configuring INTEGRA alarm control panel by means of DLOADX software select the option **Data->Options->Times** and in the new window enter **0** for the option **No armed indication after:**

5. CONFIGURATION OF RACS 4 SYSTEM

5.1 Configuration of CPR32-NET by web browser

The configuration of communication parameters for CPR32-NET is conducted by means of web browser and it requires entering of CPR32-NET IP address. Default CPR32-NET parameters are as follows:

IP address=192.168.0.80

Subnet mask=255.255.255.0

Default gateway=192.168.0.1

Administrator login: admin

Administrator password: admin

UDP port = 3544

Events recorded in internal flash memory

Encrypted communication with default password

It is assumed that mentioned above parameters will be changed in particular access control installation, specifically IP address and administrator password. These parameters can be modified by means of CPR32-NET webpage started with web browser e.g. Internet Explorer.

Note: In order to connect with CPR32-NET in local area network (LAN), the computer must be in the same subnet. In case of CPR32-NET with default IP address, the IP address of computer should be 192.168.0.xxx.

Note: More information on CPR32-NET settings is given in its manual.

5.2 Configuration of subsystem in PR Master software

The integration with INTEGRA system requires the installation of CPR32-NET unit. After the connection in accordance with diagram shown in fig. 2 it is necessary to download and install PR Master software, which is available at www.roger.pl. System setup requires following steps:

- creating subsystem
- enabling the integration in CPR32-NET properties
- defining and associating of alarm zones in both systems

Procedure for system setup:

1. Select the option **Networks** and then click the button **Add Network**
2. In the opened window (see fig. 4), select the option **Communication port** and then select **CPR32-NET**.
3. By means of the option **Interface** select if CPR32-NET operates in LAN – **CPR32-NET UDP LAN** or in WAN – **CPR32-NET UDP WAN**.
4. In the field **Server IP** enter IP address of your CPR32-NET (default address is 192.168.0.80)
5. In the field **Server port** enter UDP port of your CPR32-NET (default port is 3455).
6. Close the window by means of **OK** button.

Note: In case of operation in the same LAN subnet, IP address and port of CPR32-NET can be automatically detected by PR Master software in window shown in fig. 4.

7. Click the button **CPR** in the window shown in fig. 5.
8. In the new window select the option **Configuration** and then **Integra**.
9. In the next window (see fig. 6) activate the option **Enable Integra control** and enter the password of INTEGRA administrator user in the field **Enter Integra administrator password** and in the field **Retype Integra administrator password**. There is also option which enables time synchronization between CPR32-NET and INTEGRA panel in both ways i.e. CPR32-NET -> INTEGRA or INTEGRA -> CPR32-NET.
10. Click the button **OK** and then send your settings to CPR32-NET by clicking the button **Configure**.
11. In window shown in fig. 5 press the button **Controllers**.
12. In the newly opened window click the button **Add**
13. PR Master shall search for Roger controllers in range of 0-99 addresses. When controllers are detected then they shall be shown in PR Master software.
14. Close the window and return to the main window of PR Master software.

Fig. 4 Configuration of communication channel

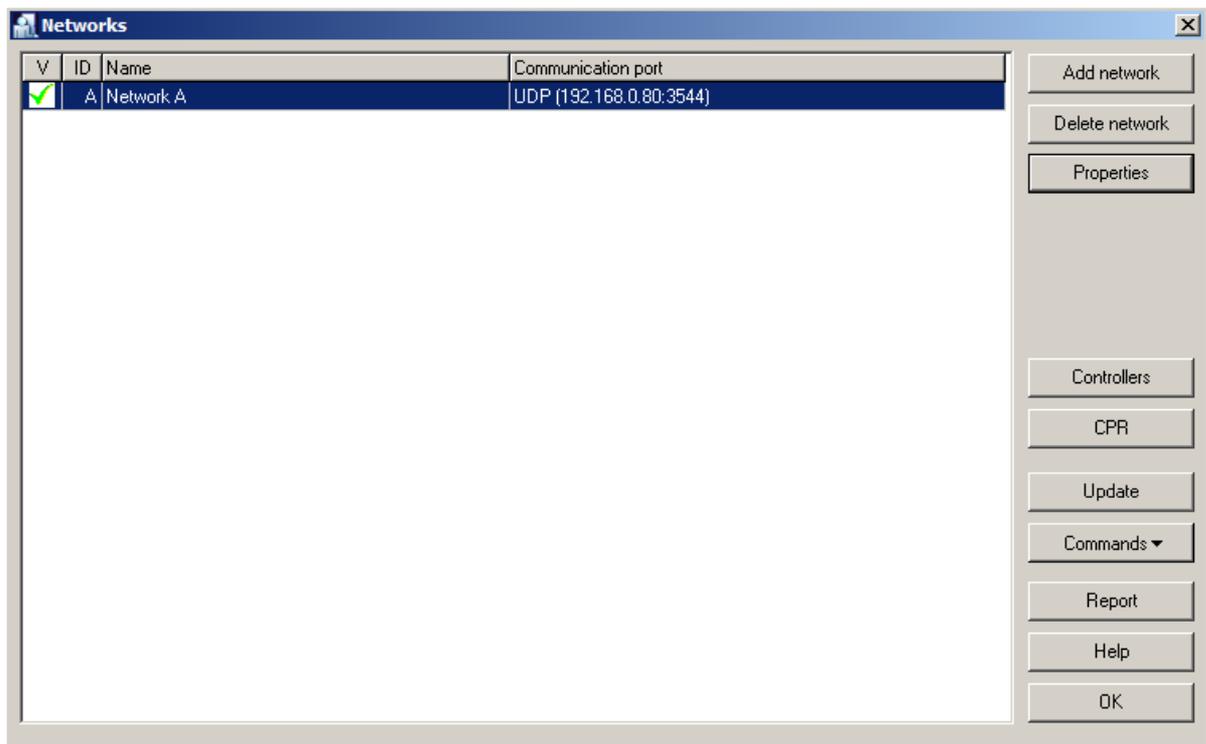


Fig. 5 Networks window

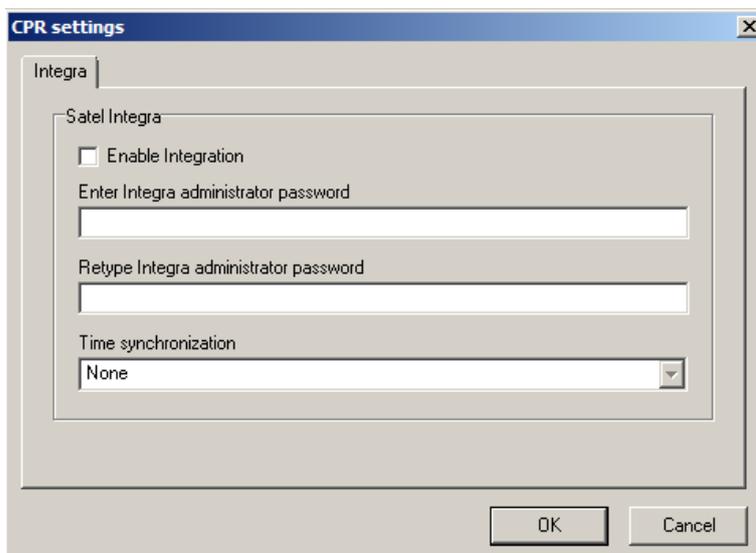


Fig. 6 INTEGRA window in PR Master

5.3 Definition and association of alarm zones

The primary advantage of the integration is concurrent arming and disarming of alarm zones in both systems i.e. INTEGRA and RACS 4. Such arming and disarming requires definition and association of alarm zones. Therefore, configure alarm zones in INTEGRA system according to producer's manuals. In the main window of PR Master software select the option **Alarm Zones**. In the newly opened window use the button **Add** and in the window shown in fig. 7 create new alarm zone in RACS 4 system.

Fig. 7 Add new Alarm Zone window

The option **Arm/Disarm schedule** can be used for assigning previously defined schedule to the alarm zone and the schedule can be defined by means of the option **Schedules** in the main window of PR Master software. The option **Assign Integra zone** can be used for connecting INTEGRA alarm zone with RACS 4 alarm zone.

When RACS 4 alarm zone is created then it is necessary to assign access controllers to zones. Such assignment can be done in the properties of particular controller by means of option, which is available in **Arming** tab (PRxx2 series controllers) or **Advanced** tab (PRxx1 series controllers).

Note: More information on options listed in **Arming** tab of controller properties is given in the document Functional description of PRxx2 series controllers which is available at www.roger.pl.

6. USE OF RACS 4 AND INTEGRA ALARM SYSTEM INTEGRATION

After proper connection of RACS 4 and INTEGRA alarm control panel according to section 3 and adequate configuration of both systems according to sections 4 and 5, the user can proceed to apply it in practical applications.

As a result of RACS4 and INTEGRA alarm control panel integration, which in general perspective consists in concurrent arming and disarming of alarm zones, both from access control and alarm systems, the new monitor is added in Online monitoring mode – see fig. 8. The exemplary view of INTEGRA status monitor is shown in fig. 9. The monitor can be used for real time displaying of armed/disarmed modes and alarms. The window of monitor is patterned upon the respective Partitions State window within DLOADX software for configuration of INTEGRA alarm control panel (Satel). Size of the window depends on the number of alarm zones created in INTEGRA panel and detected by CPR32-NET. The maximal displayed number of zones is 32. The green indicator INTEGRA status signifies correct communication between CPR32-NET and INTEGRA alarm control panel.

As a result of the integration some new events are added in PR Master software. These new alarm events enable signalling of alarm and fire detection, arming problems and communication status.

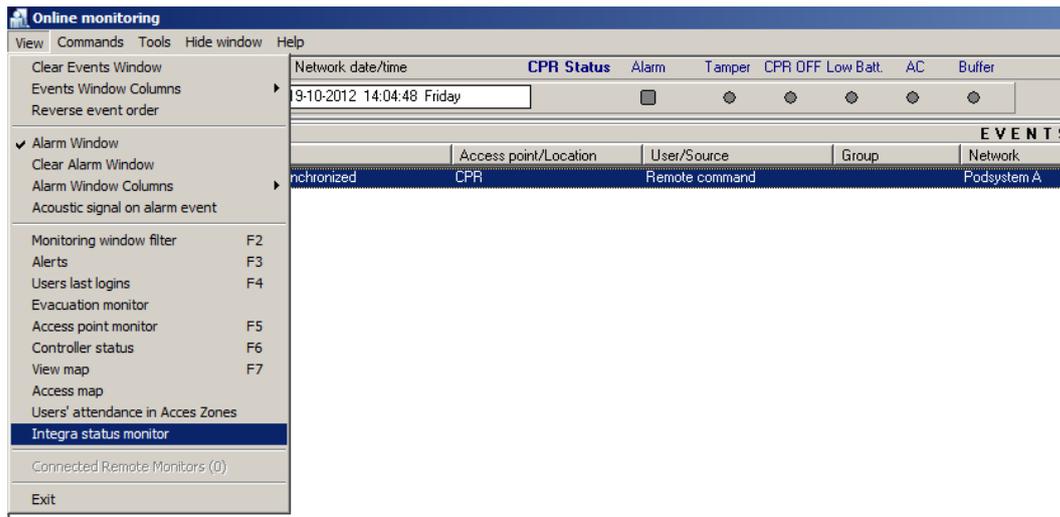


Fig. 8 INTEGRA status monitor in Online monitoring mode

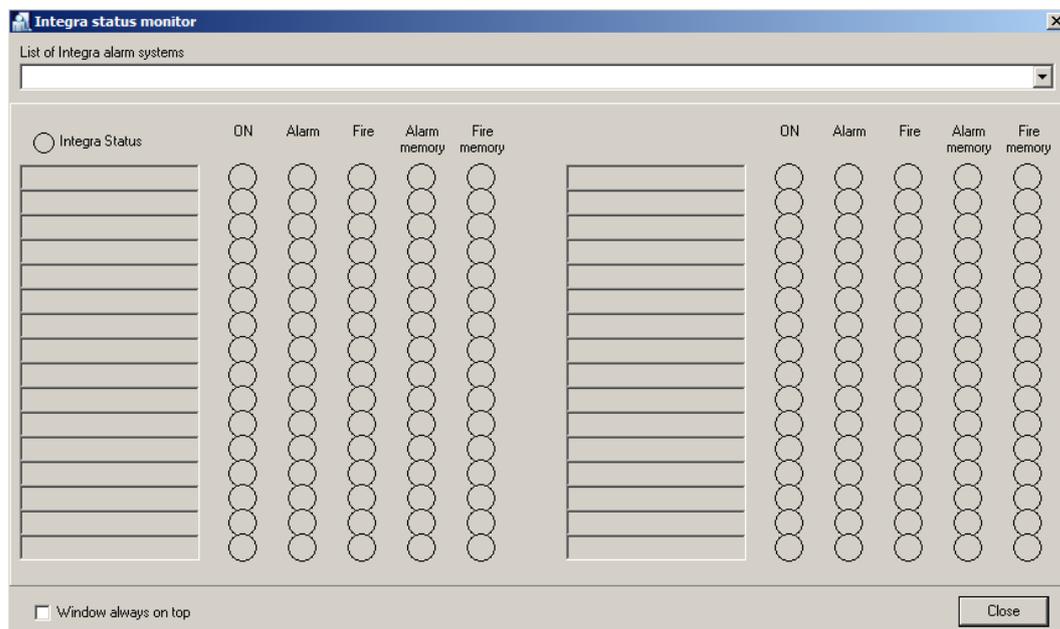


Fig. 9 INTEGRA status monitor

Contact:
Roger sp.j.
82-400 Sztum
Gościszewo 59
Tel.: +48 55 272 0132
Fax: +48 55 272 0133
Tech. support: +48 55 267 0126
E-mail: biuro@roger.pl
Web: www.roger.pl

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