<div style="border:1px solid black; padding:10px;">

Roger Access Control System 5v2

Application note no. 026

Document version: Rev. A

</div>

Assets monitoring and management

Note: This document refers to RACS 5 v2.0.8 or higher

Introduction

RACS 5 enables assets monitoring and management including:

- control of assets relocation (e.g. cars, trucks, containers)
- verification of user authorisations for asset dispensing (e.g. keys, tools, cars, weapons)
- tracking of asset current status (available, dispensed, reserved)

The asset tracking functionality offered by the RACS 5 system is mainly intended for the management of keys and other items with significant material value or impact on the safety of the facility's operation. In addition to the main purpose, asset tracking functionality can also be used to manage the flow of assets in warehouses. The solution supports person who manages assets as it records both dispensing and returning by means of asset tracking terminals.

Asset tracking functionality requires installation of MCT88M-IO terminals which are connected via LAN to virtual controller which operates on a server with RogerSVC software. The functionality requires VISO EX management software with purchased license for asset tracking controller.

Preliminary configuration of RACS 5

In order to conduct preliminary configuration of RACS 5:

- Install VISO software and create database according to AN006 application note.
- Install RogerSVC software and select not only Communication Server but also License Server and Virtual Controllers Server. If servers are supposed to be operated on individual computers then install RogerSVC on each computer selecting required servers.

Note: If License Server and Virtual Controllers Server are supposed to be operated on individual computers then during installation of Virtual Controllers Server, the License Server must be deselected. Only in such case it will be possible to indicate external License Server when Virtual Controllers Server is configured.
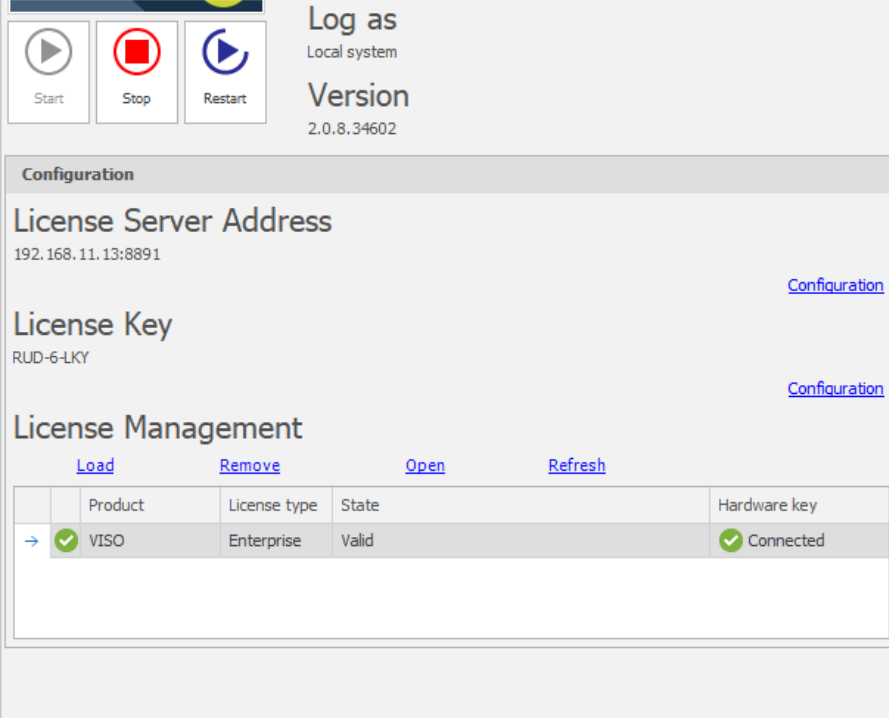

- When RogerSVC is launched then its icon is displayed in Windows tray. Click the icon ⚙. The RogerSVC icon in tray can also be launched from Windows menu *Start-> Roger-> RogerSVC.*
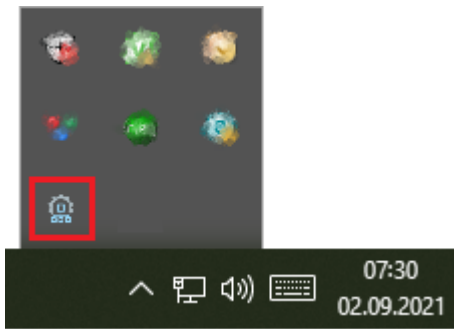
- In the RogerSVC window select *Database Connection* tile and then *Configuration* to indicate previously created RACS 5 database. Return to the main window.
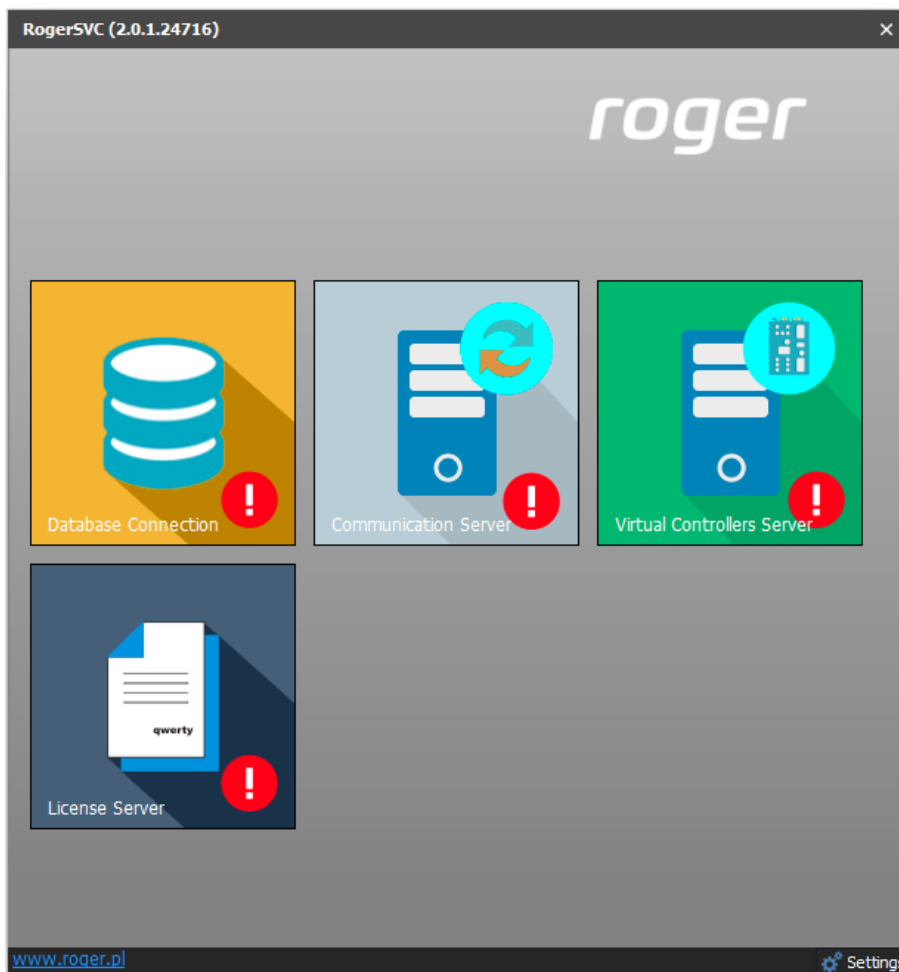
- In the RogerSVC window select *Communication Server*, click *Configuration,* enter IP address of the computer with the server installed e.g. 192.168.11.13 and define port (8890 by default).
- Select *Start* and return to the main window. The server will be started and operated in the background whenever the computer is switched on even if RogerSVC window is closed.
- Connect RUD-6-LKY hardware key to USB port of computer with License Server installed or connect RLK-1 hardware key to LAN and enter its IP address.
- In the RogerSVC window select *License Server* tile, click *Configuration,* enter IP address of the computer with the server installed e.g. 192.168.11.13 and define port (8891 by default).
- Select *Load license file* and indicate purchased license file for the hardware key.
- Select *Start* and return to the main window. The server will be started and operated in the background whenever the computer is switched on even if RogerSVC window is closed.

roger

- In the RogerSVC window select *Virtual Controllers Server* tile, click *Configuration*, enter IP address of the computer with the server installed (e.g. 192.168.11.13) and define port (8895 by default).
- If contrary to previously presented configuration steps, the License Server is installed on a computer with exemplary 192.168.11.23 address while Virtual Controllers Server is installed on computer with exemplary 192.168.11.13 address then it is possible to indicate external License Server for virtual controllers as below.
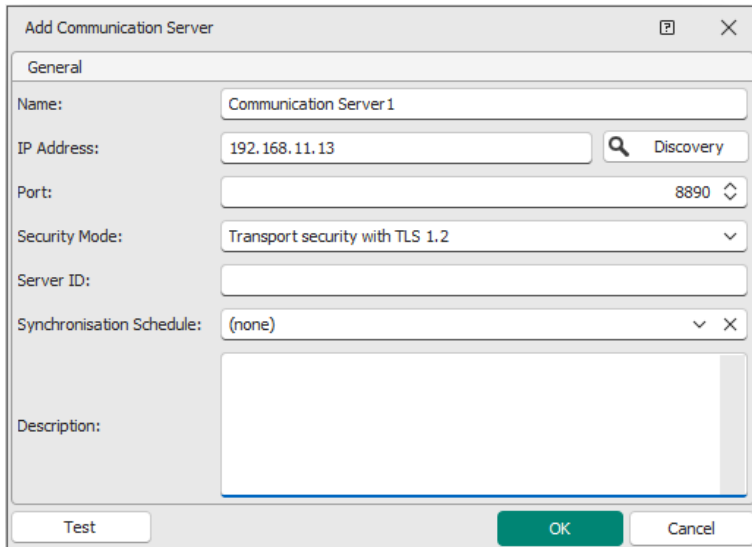
roger
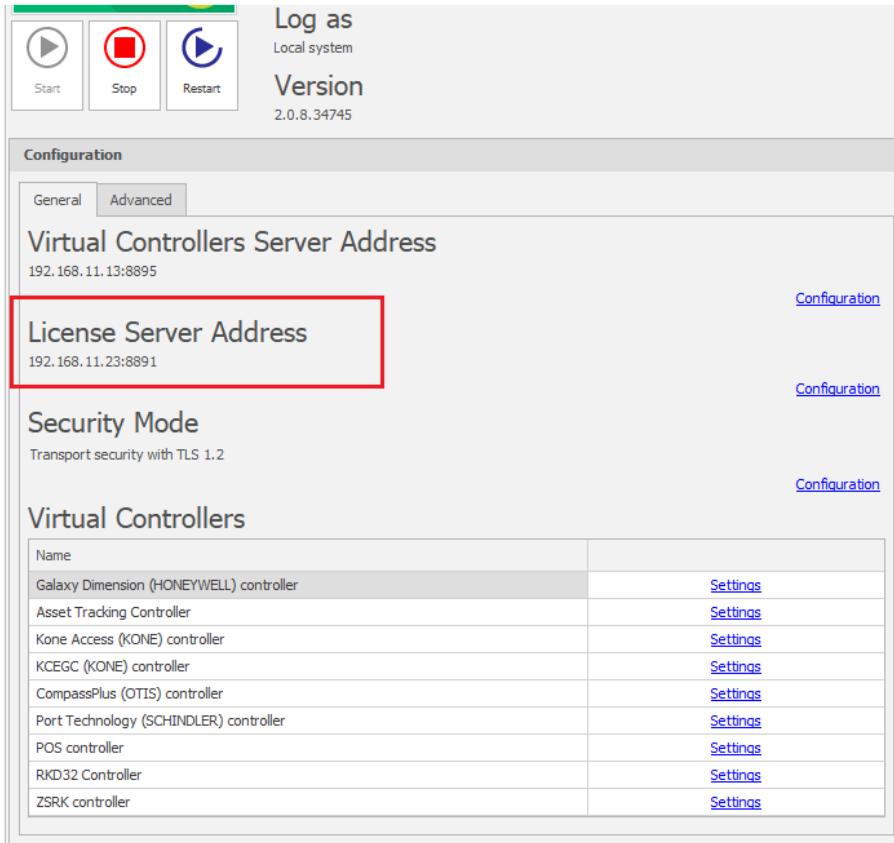
Note: If there are two network adapters on the server with virtual controller installed e.g. one for communication with MC16 controllers and another one for communication with
Asset Terminals then two communication channels can be applied. In such case the IP address specified with *Configuration* defines the IP address of network adapter used for communication with MC16 controllers while selecting *Settings* for Asset Tracking Controller it is possible to select network adapter for communication of virtual controller with MCT88M-IO terminals.

- Select *Start* and return to the main window. The server will be started and operated in the background whenever the computer is switched on even if RogerSVC window is closed.
- Start VISO software, in the top menu select *System*, then *Select License Server* and indicate previously defined License Server from RogerSVC software in order to start the VISO program in licensed version.

Virtual controller

In order to configure the virtual controller:

- If Communication Server is not already configured in VISO software then in the navigation tree of VISO software right click *Networks* and select *Add Communication Server*.
- In the opened window enter parameters of Communication Server previously configured in RogerSVC program and close the window with *OK* button. It is recommended to apply TLS 1.2 mode to encrypt the communication.

roger

- In the navigation tree right click *Virtual Controllers Server* and select *Add Server*. In the opened window enter parameters of Virtual Controllers Server previously configured in RogerSVC program and click *OK*. It is recommended to apply TLS 1.2 mode to encrypt the communication.
- In the navigation tree right click the server and select *Add Virtual Controller*. In the section *Access Control Extensions* select *Asset Tracking Controller*. If the controller is not on the list then most probably there is license error on the level of VISO software or RogerSVC software. Close the window with *OK* button.

Terminals

MCT88M-IO low level configuration

The low level configuration of MCT88M-IO terminal operated as Asset Terminal must be conducted with RogerVDM software after connection of the terminal to computer via RUD-1 interface and then Ethernet interface instead of default RS485 interface must be selected. Additionally such parameters as *IP address*, *Subnet mask*, *UDP port* and *Ethernet encryption key* must be defined.

Note: Low level configuration of MCT88M-IO terminal in this scenario cannot be conducted in VISO v2 program as it may be made only with RogerVDM program.
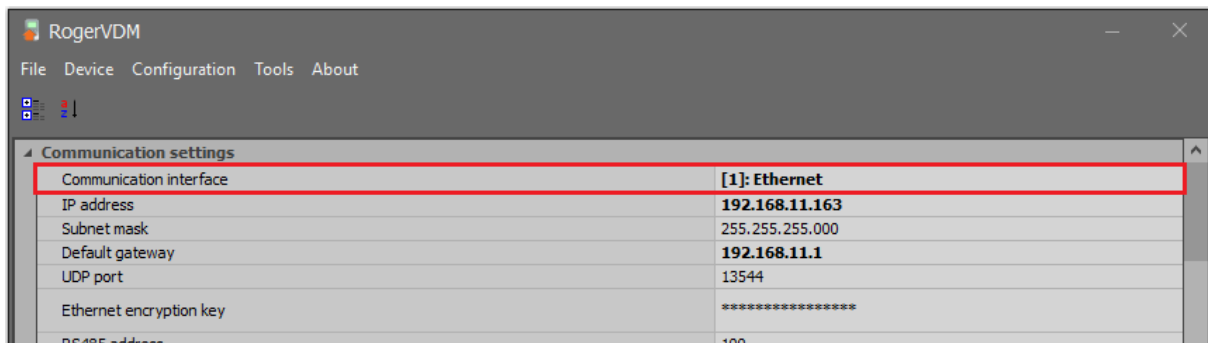
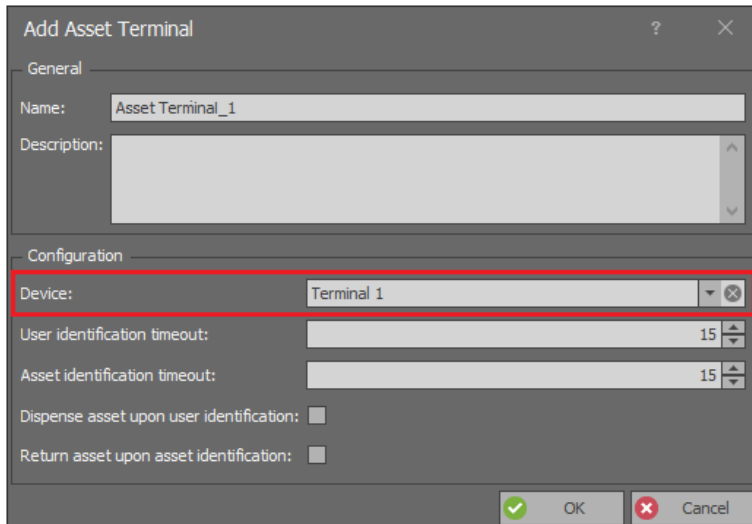### Asset Terminals

In order to configure Asset Terminal:

roger

- In the navigation tree of VISO software expand previously created virtual controller and double click *Hardware Resources*.
- In the opened window select *Add* and in the next window enter network parameters of MCT88M-IO terminal.
- Close the window with *OK* button.
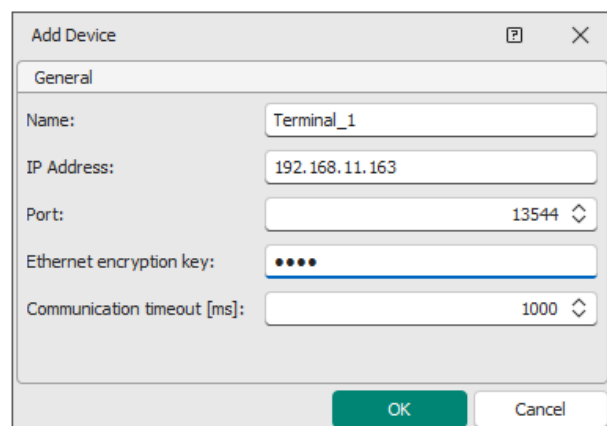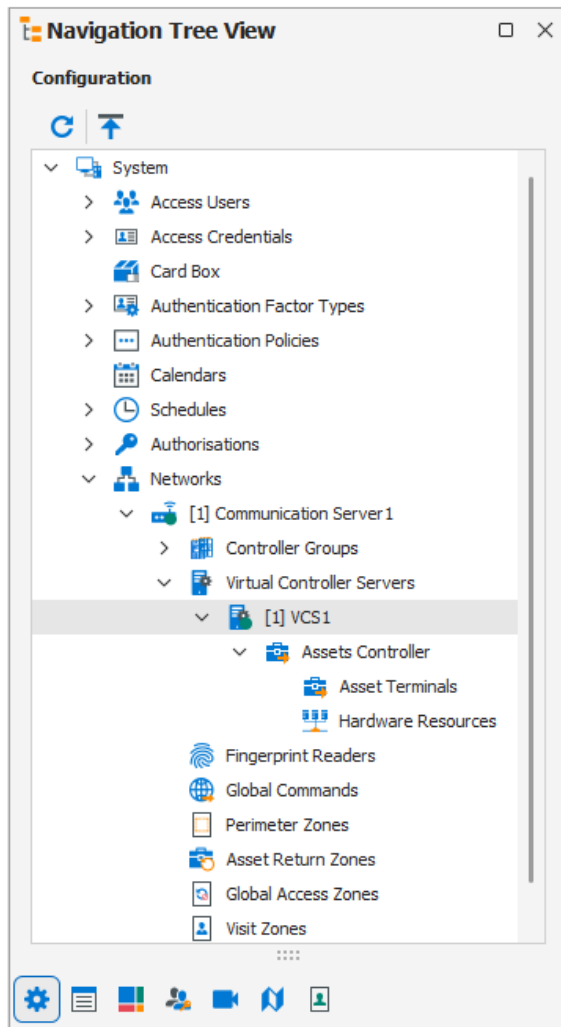
- In the top menu select *Device Discovery* and in the opened window select *Run*. Close the window.
- In the navigation tree double click *Asset Terminals* and in the opened window select *Add*.
- In the next window select previously created *Terminal 1* and define other parameters as needed.

roger

Note: In case of MCT88M-IO terminals connected to Asset Tracking Controller there is no need to synchronise settings manually as all settings are uploaded automatically in the background.

Function keys and inputs

Asset dispense and return functions can be initiated with function keys on terminal panel or with inputs of the terminal. Such inputs can be for example connected to external buttons. In order to define F1 function key for dispense function:

- In the navigation tree of VISO software double click *Asset Terminals* and for selected terminal in the bottom select *Function keys* tab and then *Add* button.
- In the opened window select F1 key and then the function *[70000]: Asset Dispense Request.*
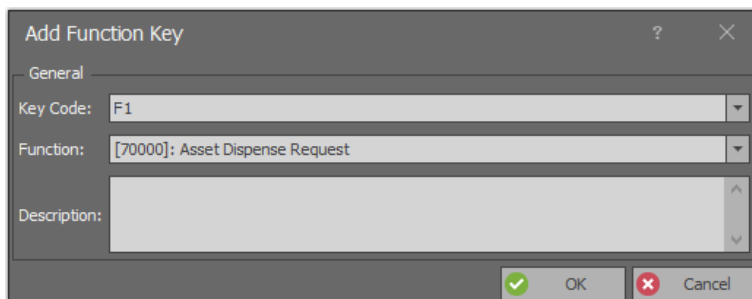
Input are configured similarly in *Inputs* tab.

Input functions

No.	Name	Description
70000	Asset Dispense Request	The function initiates asset dispensing.
70001	Asset Emergency Dispense Request	The function initiates asset emergency dispensing. In such case, user Authorisations and asset status (dispensed, reserved) are not verified at the terminal and asset is dispensed unconditionally.
70002	Asset Return Request	The function initiates asset returning.

roger

Outputs

Outputs of the terminal can be used for various signalizations related to asset tracking including asset dispense granting. Output with such function can be connected to lock mechanism, which will be released when dispense is granted for authorised user. In order to define REL 1 relay output to signal asset dispense granting:

- In the navigation tree of VISO software double click *Asset Terminals* and for selected terminal in the bottom select *Outputs* tab and *Add* button.
- In the opened window select REL1 output and then the function *[65537]: Asset Dispense Request Granted*.

Output functions

No.	Name	Description
65537	Asset Dispense Request Granted	The output is activated when asset dispense is granted at the terminal after verification of user Authorisation and asset status.
65538	Asset Dispense Request Denied	The output is activated when asset dispense is denied at the terminal after verification of user Authorisation and asset status.
65539	Asset Emergency Dispense Request Granted	The output is activated when asset emergency dispense is granted at the terminal.
65540	Asset Return Request Granted	The output is activated when asset return is granted at the terminal after verification of user Authorisations.
65541	Asset Return Request Denied	The output is activated when asset return is denied at the terminal after verification of user Authorisations.
65542	Asset Identification	The output is activated when asset identification is requested at the terminal both for asset dispense and return.
65543	User Identification	The output is activated when user identification is requested at the terminal both for asset dispense and return.

Many functions can be assigned to the same output at the same time. When the function is assigned then it is possible to define priority and modulation of output signal. This can be used to distinguish individual functions when activated at the output. Output lines of the terminal include transistor outputs, relay, LED indicators and internal buzzer.

roger

Assets

In order to apply asset tracking functionality it is necessary to define Assets i.e. objects which will be dispensed and returned. Assets are identified in the system by means of assigned Authentication Factors which are usually Mifare proximity cards or fobs. In order to define an Asset:

- In the navigation tree of VISO software double click *Access Credentials* and then select *Add* button.
- In the opened window name the credential and close the window with *OK* button.
- In the bottom select *Authentication Factors* tab and then *Add* button.
- In the opened window define card number. It can be read with *Read from Reader* button if administrator reader (e.g. RUD-3-DES) is connected to computer's USB port. Close the window with *OK* button.
- In the top menu select *Configuration* and then *Assets*.
- In the opened window select *Add* button, name the asset select *Virtual Controller Asset* type and close the window with *OK* button.
- In the bottom select *Access Credentials* tab and assign previously created credential with proximity card.
- Repeat the same steps for remaining assets.

Optionally, Asset Types can be defined in the VISO software and particular Assets can be assigned to them. This may be useful in filtering, sorting and grouping of all Assets in the system.

Authorisations

RACS 5 system enables to define Authorisations related to asset dispensing and returning. Authorisations are assigned to users equipped with Authentication Factors (cards, PINs). In order to define Basic Authorisation for both input functions (*[70000]* and *[70002]*) at once:

- In the navigation tree of VISO software expand *Authorisations*, double click *Basic Authorisations* and in the opened window select *Add* button.
- In the next window select *Asset Control* in *Type* field. In the bottom select Assets which can be dispensed and returned by user with this Authorisation. If the Authorisation is to be limited in

roger

time then create schedule(s) selecting *Schedules* in the navigation tree and such schedules will be displayed on the list. Close the window with *OK* button.

In order to define Advanced Authorisation for the input function *[70000]*:

- In the navigation tree of VISO software expand *Authorisations*, double click *Advanced Authorisations* and in the opened window select *Add* button.
- In the next window name the Authorisation, select the function *[70000]* and close the window with *OK* button.

roger

- In the bottom select *Positive Rules* tab and then *Add* button.
- In the opened window it is possible to select Asset for the Authorisation and limit the Authorisation in time with a schedule which can be created with *Schedules* in the navigation tree of VISO software. Authorisation may include multiple Positive and Negative Rules.
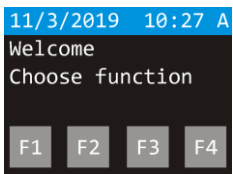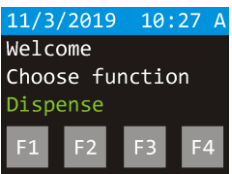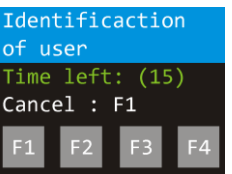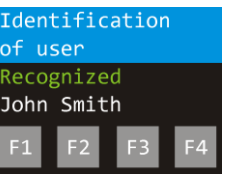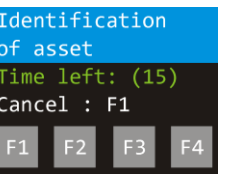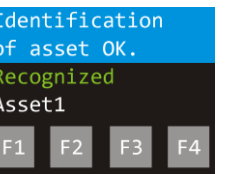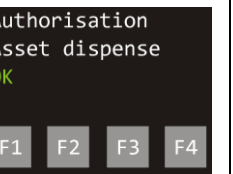
Users

Users can be enrolled in the system with wizard which is available after selection of *Wizards* in the top menu of VISO software. New user can be defined with *Add Person Online* wizard which is described in AN006 Application note. The wizard enables assignment of Basic and Advanced Authorisations as well as assignment of such Authentication factors as cards and PINs to enable user identification in the system.
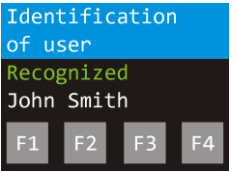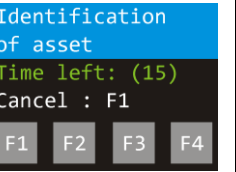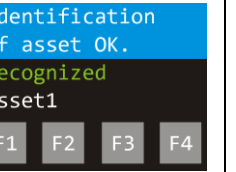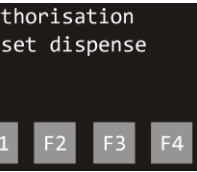
Asset tracking
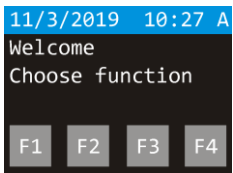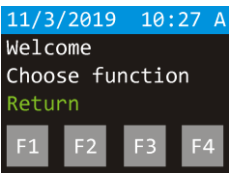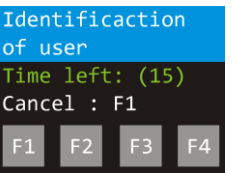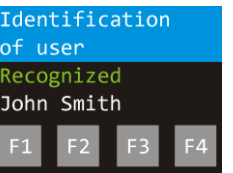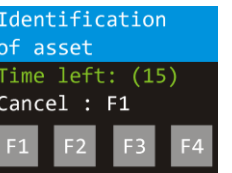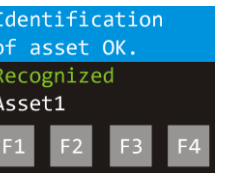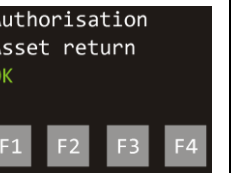
Dispense

Asset dispensing is possible at MCT88M-IO Asset Terminals. When dispense is granted then the output with function *[65537]* is activated and when dispense is denied due to insufficient Authorisation(s) or due to asset status (dispensed, reserved) then the output with function *[65538]* is activated.

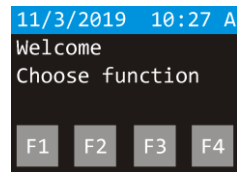| Step	1	2	3	4	5	6	7
Terminal display	11/3/2019 10:27 A Welcome Choose function F1 F2 F3 F4	11/3/2019 10:27 A Welcome Choose function Dispense F1 F2 F3 F4	Identificaction of user Time left: (15) Cancel : F1 F1 F2 F3 F4	Identification of user Recognized John Smith F1 F2 F3 F4	Identification of asset Time left: (15) Cancel : F1 F1 F2 F3 F4	Identification of asset OK. Recognized Asset1 F1 F2 F3 F4	Authorisation Asset dispense OK F1 F2 F3 F4
Descrip-tion	Start screen.	Selection of dispense function e.g. with F1 key.	User identification with card or PIN.		Asset identification with card or fob.		Verification of user authorisations and asset status.
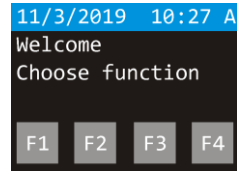
Return

Asset returning is possible at MCT88M-IO Asset Terminals. When dispense is granted then the output with function *[65540]* is activated and when dispense is denied due to insufficient Authorisation(s) then the output with function *[65541]* is activated.

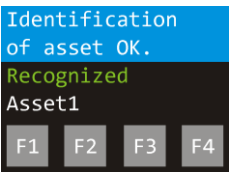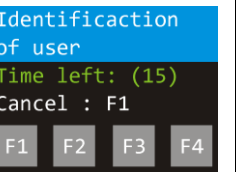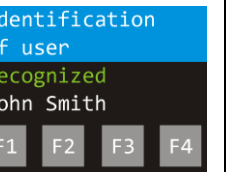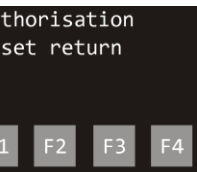| Step	1	2	3	4	5	6	7
Terminal display	11/3/2019 10:27 A Welcome Choose function F1 F2 F3 F4	11/3/2019 10:27 A Welcome Choose function Return F1 F2 F3 F4	Identificaction of user Time left: (15) Cancel : F1 F1 F2 F3 F4	Identification of user Recognized John Smith F1 F2 F3 F4	Identification of asset Time left: (15) Cancel : F1 F1 F2 F3 F4	Identification of asset OK. Recognized Asset1 F1 F2 F3 F4	Authorisation Asset return OK F1 F2 F3 F4
Descrip-tion	Start screen.	Selection of return function e.g. with F2 key.	User identification with card or PIN.		Asset identification with card or fob.		Verification of user authorisations.

Quick dispense

Quick dispense of assets can be used if the option *Dispense asset upon user identification* is enabled when Asset Terminal is configured. In such case a user does not have to select the function with function key or input. The user can identify with card or PIN in the first step and then proceed as in case of regular dispense.

12/16

roger

Step	1	2	3	4	5
Terminal display	11/3/2019 10:27 A Welcome Choose function F1 F2 F3 F4	Identification of user Recognized John Smith F1 F2 F3 F4	Identification of asset Time left: (15) Cancel : F1 F1 F2 F3 F4	Identification of asset OK. Recognized Asset1 F1 F2 F3 F4	Authorisation Asset dispense OK F1 F2 F3 F4
Descrip-tion	Start screen.	User identification with card or PIN.	Asset identification with card or fob.		Verification of user authorisations.

Quick return

Quick return of assets can be used if the option *Return asset upon asset identification* is enabled when Asset Terminal is configured. Similarly as in case of quick return it is not necessary to select any function with function key or input.

Step	1	2	3	4	5
Terminal display	11/3/2019 10:27 A Welcome Choose function F1 F2 F3 F4	Identification of asset OK. Recognized Asset1 F1 F2 F3 F4	Identificaction of user Time left: (15) Cancel : F1 F1 F2 F3 F4	Identification of user Recognized John Smith F1 F2 F3 F4	Authorisation Asset return OK F1 F2 F3 F4
Descrip-tion	Start screen.	Asset identification with card or fob.	User identification with card or PIN.		Verification of user authorisations.

Emergency dispense
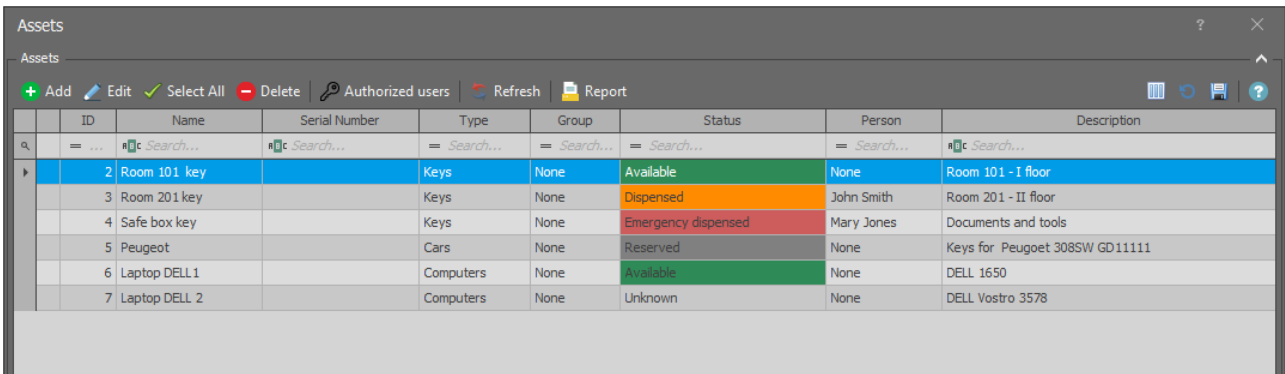
Emergency dispense is started with input function *[70001]*. In case of emergency dispense, user Authorisation(s) and asset status (i.e. dispensed, reserved) are not verified at the terminal. When dispense is granted then the output with function *[65539]* is activated.

roger

Asset tracking monitor
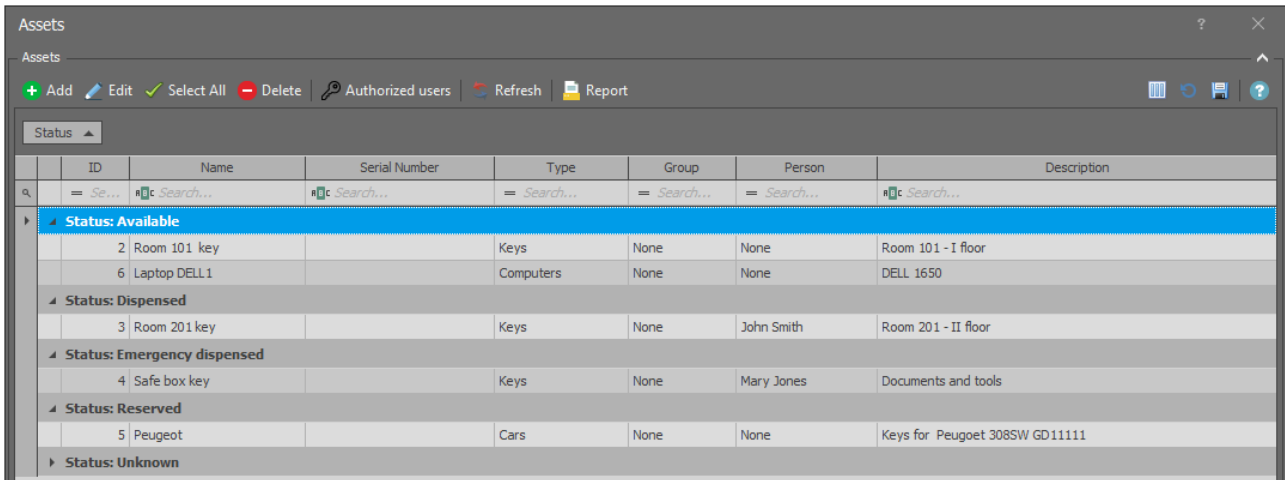
Asset tracking monitor is operated within the list of assets displayed after selection of *Configuration* in the top menu of VISO software and then *Assets* icon. The monitor enables to get information on current status of assets. The status is updated automatically when asset is dispensed or returned by a user at any terminal.

The status can also be changed manually by VISO operator by right clicking *Status* column and then selecting *Set status*. All operator actions are registered and they can be viewed selecting *Administration* in the top menu of VISO software and then *Log* icon.
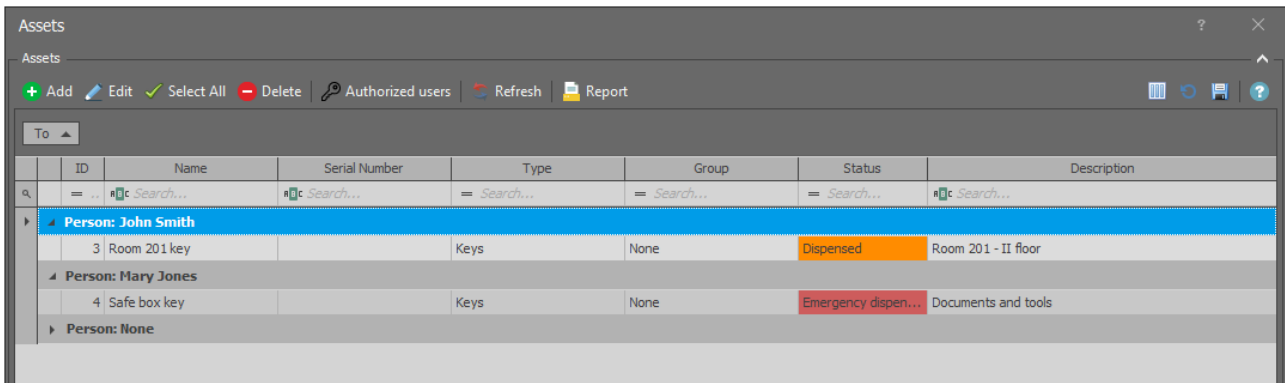
Assets can be sorted, filtered and grouped as in examples below by right clicking column label and selecting required command. Custom layout of the window can be saved with the button 💾 for automatic display whenever assets window is started in VISO. Default layout can be restored with the button 🔄.

roger

Asset reservation

VISO operator can set Reserved status for any asset. Dispensing of reserved asset is denied at every terminal.

roger

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

roger