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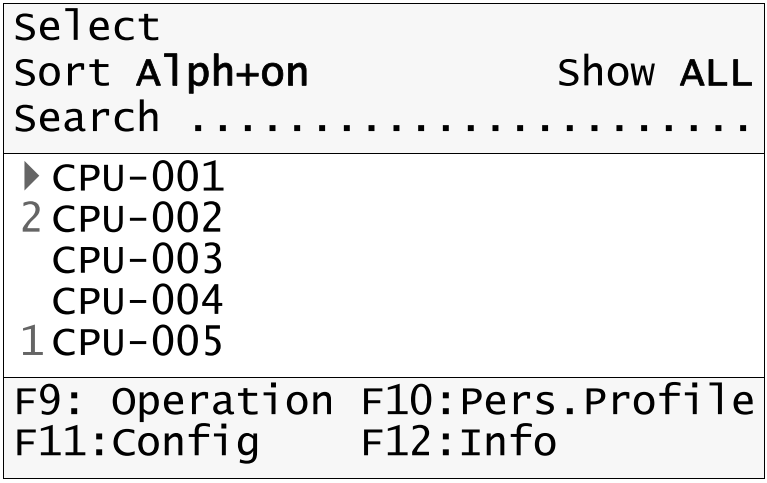
G&D CompactCenter



EN Configuration and Operating Guide

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Contents

The matrix switches of the »CompactCenter« series

Being the central components of a matrix system, the matrix switches of the *CompactCenter* series enable you to operate the connected computers via the consoles that are connected to the system.

The KVM matrix system consists of two main components:

- the matrix switch (*CompactCenter*),
- the target modules (*CATpro2*).

The target modules are connected to the matrix system via category 5 (or better) twisted pair cabling.

By switching analog video, keyboard, mouse, and audio (optional) signals from a target module to a user console, the computer connected to the target module can be operated.

Operation

The following paragraphs provide you with various possibilities to operate the KVM matrix system.

On-screen display

Usually, the KVM matrix system is operated through the system's on-screen display. This display is provided at all user modules by default.

The on-screen display enables you to define additional special select keys. These select keys provide the possibility to quickly change between the different target modules by pressing a key combination on the keyboard of the user module.

NOTE: This manual describes how to operate the matrix switch using the on-screen display of a user module.

Java client or IP console of the IP user module

The *Java client* or the *IP console client* software of the integrated IP user module enable you to call the on-screen display of an IP user module.

Both solutions provide an integrated *control panel* which offers further possibilities to operate the KVM matrix system.

NOTE: Please refer to the »*Java client*« or the »*IP console client*« manual to learn more about these solutions.

Configuration

The KVM matrix system can be configured in many different ways.

On-screen display

If the logged-in user holds the required rights, they can access the matrix system's various configuration settings through the on-screen display of a user module where these settings can also be edited.

NOTE: This manual describes how to configure the matrix switches of the *CompactCenter* series via the on-screen display of a user module.

Java client or IP console of the IP user module

The *Java client* or the *IP-Console* software of the integrated IP user module enable you to call the on-screen display of an IP user module.

Applying these software solutions also requires the necessary configuration rights or the *Superuser* right to edit or view the settings.

NOTE: Please refer to the »*Java client*« or the »*IP console client*« manual to learn more about these solutions.

The »Config Panel« web application

The web application offers a graphical user interface to configure the KVM matrix switches of the *CompactCenter* series. This application can be operated with any web browser.

The web application provides an alternative to configure the matrix switch through the device's on-screen display at the user modules and can be applied independently from the user modules in the network.

Thanks to its enhanced possibilities, the graphical user interface provides the following comfortable features:

- well-arranged user interface
- comfortable operation through drag & drop function
- extensive target administration
- enhanced network functions (netfilter, syslog, …)
- backup and restore function

NOTE: Please refer to the »*Config Panel*« manual to learn more about these solutions.

First steps

This chapter presents information on the basic operation of the KVM matrix system.

NOTE: The following chapters of this manual provide a detailed description of the functions and the configuration settings.

User login at the matrix system

After the user module has been switched on, the KVM matrix system asks you to log in.

IMPORTANT: When the on-screen display is started for the first time, log in as administrator and immediately change the password (see page 4).

These are the access data for the administrator account:

- **Username:** Admin
- **Password:** 4658

How to log in at the KVM matrix system:

1. Enter the following data to the login mask:

Username:	Enter your username.
Password:	Enter your user account password.

2. Press **Enter** to log in and to start the on-screen display.

NOTE: If the *Default Target* function (see page 25) has been activated for the user account, you can directly access the target module that has been selected in the *Personal Profile* after your login.

In this case, restart the on-screen display (see page 7) to call the *Select* menu.

Changing your password

How to change the password of your user account:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Change password** and press **Enter**.
4. Enter the following data into the *Change own password* menu:

New:	Enter your new password.
Repeat:	Repeat your new password.

5. Press **F2** to save your settings.

Accessing a target module via on-screen display

How to access a target module via on-screen display:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Use the **arrow keys** to select the target module to be accessed.

> **ADVICE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

3. Press **Enter**.

> **NOTE:** It is also possible to access a target module with select keys (see page 27 ff.)

Disconnecting the target module

The *Disconnect* function ends the current connection to the target module. After this function has been carried out, the *Select* menu is displayed.

> **NOTE:** After the *Disconnect* function has been carried out, you are still logged in at the matrix system.
>
> Use the *User logout* function to log out of the system.

How to end the connection to a target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **D** or mark the row **D - Disconnect** and press **Enter**.

> **ADVICE:** After the on-screen display has been called, you are enabled to activate the *Disconnect* function by pressing the key combination **Ctrl+D**.

User logout at the KVM matrix system

Use the *User logout* function to log out of the KVM matrix system. If the logout was successful, the *Login* mask appears.

> **IMPORTANT:** Always use the *User logout* function of the matrix system. This way, the user module as well as the KVM matrix system are protected against unauthorised access.

How to log out of the KVM matrix system:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **E** or mark the row **E - User logout** and press **Enter**.

> **ADVICE:** After the on-screen display has been called, you are enabled to activate the *User logout* function by pressing the key combination **Ctrl+E**.

Starting the functions of the »Operation« menu via hotkeys

The *Select* menu is usually displayed after the on-screen display has been called. The functions to operate the system can be activated by pressing **F9** after the *Operation* menu has been called.

As an alternative, the functions of the *Operation* menu can be started within the *Select* menu through the use of hotkeys.

How to access a function in the Operation menu by using a hotkey:

1. Press the hotkey **Ctrl + Num** (default) to call the on-screen display.
2. Press one of the hotkeys listed in the table below to call that function:

Ctrl+A:	Automatic switching of all target modules (*Autoscan)*
Ctrl+B:	Automatic switching of all activated target modules (*Autoskip)*
Ctrl+C:	Manual switching of the target modules (*Stepscan)*
Ctrl+D:	Disconnects the target module (*Disconnect*)
Ctrl+E:	*User logout*
Ctrl+F:	Calls the *Mouse utility* function to activate or reset the PS/2 mouse interface of the computer connected to the target module
Ctrl+G:	Accesses the last accessed target module (*Return to last target*)
Ctrl+H:	Shows an additional column in the list field of the *Select* menu (*Target info*) Pressing the key combination enables you to switch between the following options: ▪ **off:** hides additional column ▪ **id:** displays the physical ID of the target modules ▪ **select keys:** displays the select keys of the target modules
Ctrl+I:	Switches the power outlets of a connected and configured power switch (*Target power*) Pressing the key combination enables you to switch between the following options: ▪ **off:** switches off power outlets ▪ **on:** switches on power outlets

The On-Screen Display (OSD)

The on-screen display enables the user to operate and configure the KVM matrix system. By default, it is provided at all user modules.

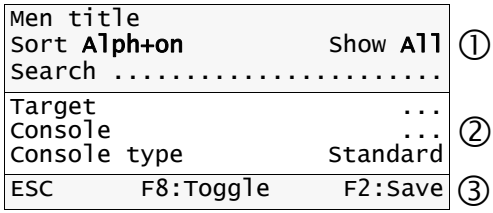
Calling the on-screeen display at a console

The on-screen display can be activated with the configured key combination.

How to start the on-screen display:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.

The general OSD structure



The on-screen display menu mask is divided into three main sections:

Header ①	The header shows the title of the current menu. Some menus additionally provide a *Sort* and a *Search* function as well as a *View filter* (see page 10 ff.). Press the **Tab** key to move the cursor from the list field ② to the header ①.
List field ②	The list field shows all menu entries. The menu entries are divided into two categories: ▪ **Menu items *with* submenu:** These entries are displayed in the right column with three dots (…). Select such an entry with the **arrow keys** and press **Enter** to open the submenu. ▪ **Menu items *without* submenu:** The current setting is displayed behind the menu entry and can be changed directly.
Footer ③	The footer shows the most important keys to operate the menu and, if applicable, further information.

Colour-coded target module names

The list field lists all known target modules. If a computer is connected to the target module, the target module name is displayed in *green*.

If the target module is disconnected from the KVM matrix system or the computer connected to the target module is switched off, the name is displayed in *red*.

Displaying the status condition

The status condition is displayed on the left side of the target module names:

- An *arrow* (▸) marks the target module the user is currently accessing.
- If one or more users are currently accessing the target module, the *number* of accessing users is displayed in the column.

Operating the OSD via keyboard or mouse

Keyboard operation

The on-screen display is mainly operated by keyboard. The table below shows a list of frequently used keys:

Arrow keys:	Press the arrow keys **Up** and **Down** (in some menus also **Left** and **Right**) to move the cursor between the different menu entries.
Enter key:	This key is often used to confirm entries (e. g. in the login mask) or to call a submenu.
Esc:	This key closes the currently displayed menu and shows the superior menu. If entries should be changed but not saved, a respective message appears.
Tab key:	Use this key to move the cursor from one menu entry to the next (or vice versa). In menu masks that contain the sort-and-search function or the view filter, the cursor can be moved to the header by pressing this key.
F2:	Press this key to save your entries. The currently displayed menu mask closes after the data was saved. Afterwards, the superior menu is shown.
F8:	Press this key to switch between the different options of a menu entry.
F9:	Press this key on the top menu level to call the *Operation* menu.
F10:	Press this key on the top menu level to call the *Personal Profile* menu.
F11:	Press this key on the top menu level to call the *Configuration* menu.
F12:	Press this key on the top menu level to call the *Information* menu.

Table 1: Frequently used keys to operate the on-screen display

Mouse operation

As an alternative to operating the on-screen display by keyboard, you can use the mouse to execute the following processes:

Mouse movement »Up«:	This mouse movement moves the cursor *upwards* between the different menu entries in the list field.
Mouse movement »Down«:	This mouse movement moves the cursor *downwards* between the different menu entries in the list field.
Left mouse key:	This key is often used to confirm entries (e. g. in the login mask) or to call a submenu.
Right mouse key:	The currently displayed menu is being closed after the data are saved. Afterwards, the superordinate menu is shown.

Table 2: Mouse operations to operate the on-screen display

NOTE: The on-screen display (OSD) can only be called with the key combination provided for this purpose (**Ctrl+Num**).

If a Microsoft »IntelliMouse Explorer« or another compatible mouse with five keys is connected to the user console, you can call the on-screen display through the keys four and five that are located at the side of such a mouse (see page 19).

OSD functions

Search function

Some menus (e.g. the *Select* menu or the menu to select a *select key set*) provide a search function to enable the user to quickly select the desired entry in the list field.

How to search a particular entry with a known name:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. If necessary, press the **Tab** key to select the list field.
3. Enter the name of the entry you want to search. You can also enter the first letters of the name to enable a clear allocation. The entered characters are displayed in the **Search** field.

> **NOTE:** After *each* entered character, the first entry this character does apply to is marked in the list field.
>
> The usage of placeholders is not supported.

Changing the sort criteria of the list entries

In the default settings, the list entries are sorted alphabetically in ascending order (default: **Alph+**).

Targets are listed according to their operating status whereas the switched-on devices are displayed at first, followed by the switched-off devices. Both groups are sorted in ascending order (default: **Alph+on**).

You are enabled to activate further sort criteria or reverse the sort order.

How to change the sort criteria and/or sort order:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press the **Tab** key to select the **Sort** field in the header.
3. Press **F8** to select the desired sort criteria:

Alph+:	The names of the list entries are sorted alphabetically in *ascending* order.
Alph+on:	At first, the names of all switched-on devices are sorted in *ascending* order. Beneath, the names of all switched-off devices are sorted in ascending order. *This option is only available in the device list.*
Alph-:	The names of the list entries are sorted alphabetically in *descending* order.

Alph-on:	At first, the names of all switched-on devices are sorted in *descending* order. Beneath, the names of all switched-off devices are sorted in descending order. *This option is only available in the device list.*
ID:	The names of the list entries are sorted in *ascending* order according to the physical device ID. *This option is only available in the lists that contain the target modules.*

Table 3: Available search criteria of the list field

Limiting the entries using the view filter

The **Show** field enables you to limit the list of entries in the list field of some menus:

The *Select* menu lists all target modules by default. The view filter can limit the target module list of a particular view group (marked as *folder* in the web application).

ADVICE: For information on how to administer a view filter see the chapter *Administering view filters* on page 56 ff..

NOTE: If the *Config Panel* web application is used to create and administer groups (folders) for the view filter, any number of folders can be added to the superior folder.

The on-screen display only shows the superior view filter. The herein contained target modules of the inferior locations are automatically listed.

How to change the view filter of the entries to be displayed:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press the **Tab** key to move the cursor to the **Show** field in the menu header.
3. Press **F8** to select the desired view filter.

NOTE: You can select the view filter *All* directly by pressing the key combination **Ctrl+A**.

Showing an additional column in the Select menu

The *Target info* function enables you to display an additional info column in the *Select* menu list field. This column can display the physical ID or the select keys of the target module.

How to display an additional info column in the Select menu:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **H** (repeatedly) or mark the row **H - Target info** and press **F8** (repeatedly) to select between the following options:

off:	hide additional column
id:	display the physical ID of the target modules
select keys:	show the select keys of the target modules

ADVICE: After the on-screen display has been called, activate the *Target info* function in the *Select* menu by pressing the key combination **Ctrl+H**.

Configuration

Many of the on-screen display's basic functions and features can be adjusted to the user's demands.

Among these are, for example, the definition of the hotkey as well as the adjustment of the on-screen display's position and font size.

All adjustable settings are described on the following pages.

Changing the hotkey to call the on-screen display

The hotkey to call the on-screen display (OSD) is used at all user modules within the matrix system. This hotkey enables you to open the on-screen display in order to operate and configure the system.

NOTE: In the default, the hotkey **Ctrl+Num** is preset.

The hotkey consists of at least one hotkey modifier key and an additional hotkey, which you can freely select.

The hotkey modifier key **Ctrl** as well as the hotkey **Num** can be changed by the user.

How to change the hotkey to call the on-screen display:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **Hotkey** and press **Enter**.
5. Select *at least* one of the listed hotkey modifiers in the **Modifier** entry by marking the respective box. Use the **arrow keys** for this purpose. Afterwards press **F8**.

Ctrl:	*Ctrl* key
Alt:	*Alt* key
Alt Gr:	*Alt Gr* key
Win:	*Windows* key
Shift	*Shift* key

6. Select a hotkey in the row **Key** by pressing **F8**. The on-screen display can be called by pressing the hotkey and the selected hotkey modifier(s) at the same time.

Num:	*Num* key
Pause:	*Pause* key
Insert:	*Insert* key
Delete:	*Delete* key
Home:	*Home* key
End:	*End* key
PgUp	*Page Up* key
PgDn	*Page Down* key
Space	*Space* key

7. Press **F2** to save your settings.

Adjusting the information display

When switching to a target module, a temporary information display (5 seconds) appears. This information display provides information about the console name, the name of the currently accessed target module and optionally further information.

The information display can also be displayed permanently or it can be deactivated. The selected setting is now assigned to your user account and stored in your *Personal Profile*.

ADVICE: If the temporary information display is activated, it can be recalled by pressing **Ctrl+Caps Lock**.

How to change the settings of the information display:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Display** and press **F8** (repeatedly) to select between the following options:

temp:	show information display (five seconds)
perm:	permanent information display
off:	switch off information display

4. Press **F2** to save the changes.

Defining a standard view filter

After the user login, the *Select* menu (see page 21) is displayed. The default setting of the *Select* menu displays all target modules. By applying the view filter (see page 15), the displayed target modules can be filtered.

Use the *Default view filter* setting to activate a certain view filter directly after you have accessed the *Select* menu.

NOTE: The preset view filter is applied directly after the on-screen display has been called and after the user has logged in to the matrix system.

By applying the view filter (see page 15) you can change the default and therefore activate another filter.

How to select a standard view filter for the Select menu:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Default location** and press **F8** (repeatedly) to select the desired setting.

All:	All target modules are displayed.
	ADVICE: Use the key combination **Ctrl+A** to select this view filter directly.
Last:	The view filter that was used by the last user is applied when the *Select* menu is called.
Selection of a folder:	The view filter of the selected group is applied when the *Select* menu is called.

4. Press **F2** to save your changes.

IMPORTANT: If the *Last* option has been selected and two users are using one user account at the same time, the view filter of the last active person is stored.

Selecting the mode for OSD synchronisation

If the synchronisation signal and the colour information are transmitted through one cable, the on-screen display is displayed in a changed, palish colour.

In this case you can select several synchronisation modes in the *OSD sync* menu.

How to select a mode for the OSD synchronisation:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **OSD sync** and press **F8** to select the desired mode:

off:	RGB mode for OSD sync is active.
green:	RGsB mode for OSD sync is active.
all:	RsGsBs mode for OSD sync is active.

6. Press **F2** to save your settings.

Changing the display position/font size

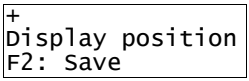
When accessing a target module, the information display of the matrix system gives information about the name of the accessed target module as well as the name of the user module.

By default, the information display is located in the left upper corner at the console monitor. You can adjust the display's position and font size according to your wishes.

The setting you selected is assigned to your user account and stored in your *Personal Profile.*

How to change the display position:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Set display position** and press **Enter**.
4. The menu shown on the right appears at the current display position.
5. Use the **arrow keys** or the mouse to move the menu to the desired position.



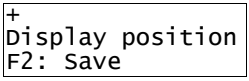
> **NOTE:** Press the hotkey **Ctrl+D** to reset the information display's position and its font size.

6. Press **F2** to save your settings or press **Esc** to cancel.

How to change the display font size:

> **IMPORTANT:** This setting only applies when a target module is accessed *and* for resolutions higher than 640 × 480 pixels.

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Set display position** and press **Enter**.
4. The menu shown on the right appears at the current display position.
5. Use the **Page↑** and **Page↓** keys to minimize or to enlarge the font size.



> **NOTE:** Press the hotkey **Ctrl+D** to reset the information display's position and its font size.

6. Press **F2** to save your settings or press **Esc** to cancel.

Changing the OSD position/font size

By default, the on-screen display of the matrix system is located in the centre of the console monitor. You can adjust the display's position and font size according to your wishes.

The selected setting is assigned to your user account and stored in your *Personal Profile.*

How to change the OSD position:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Set menu position** and press **Enter**.
4. Use the **arrow keys** or the mouse to move the menu to the desired position.

   NOTE: Press the hotkey **Ctrl+D** to reset the on-screen display's position and its font size.

5. Press **F2** to save your settings or press **Esc** to cancel.

How to change the OSD font size:

IMPORTANT: This setting only applies when a target module is accessed *and* for resolutions higher than 640 × 480 pixels.

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Set menu position** and press **Enter**.
4. Use the **Page↑** and **Page↓** keys to minimize or enlarge the font size of the information display.

   NOTE: Press the hotkey **Ctrl+D** to reset the on-screen display's position and its font size.

5. Press **F2** to save your settings or press **Esc** to cancel.

Selecting a keyboard layout for on-screen display entries

How to select the keyboard layout for the user module keyboard:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings you want to change and press **F5**.

5. Mark the row **OSD key. layout** and press **F8** to select one of the listed options:

German:	Germany
English US:	USA
English UK:	Great Britain
French:	France
Spanish:	Spain
Lat. American:	Latin America
Portuguese:	Portugal

6. Press **F2** to save your settings.

Operating the on-screen display by mouse

In the default settings of the matrix system, the on-screen display (OSD) can only be called with the key combination provided for this purpose.

If a Microsoft »IntelliMouse Explorer« or another compatible mouse with five keys is connected to the user console, you can call the on-screen display through the keys four and five that are located at the side of such a mouse.

How to (de)activate the mouse support to operate the on-screen display:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings you want to change and press **F5**.
5. Mark the row **OSD by mouse** and press **F8** to select one of the following options:

yes:	calls the OSD via mouse keys 4 and 5 of a compatible mouse
no:	deactivates the possibility to call the OSD by mouse

6. Press **F2** to save your settings.

(De)activating the on-screen display

NOTE: The *OSD blocked* setting of a user module only applies when the *Open Access* or the *Video* operating mode has been selected (see *Operating modes of user modules* on page 72).

The on-screen display is always available in the *Standard* operating mode.

This function defines if the users at the user module are enabled to activate the on-screen display or if they are only allowed to switch via select keys.

How to (de)activate the on-screen display at the user module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the user module you want to (de)activate and press **F5**.
4. Mark the row **OSD blocked** and press **F8** to select one of the following options:

yes:	on-screen display blocked
no:	on-screen display available

5. Press **F2** to save your settings.

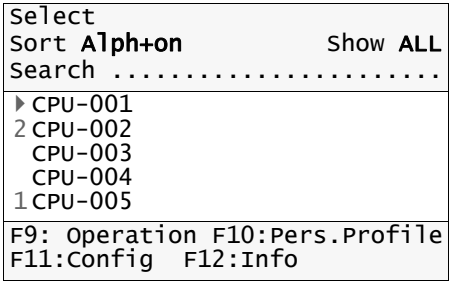
Overview of the menus and functions

The following pages show the main menus of the on-screen display.

Select menu

The *Select* menu is usually displayed after the on-screen display has been called.

Here, the target modules known to the matrix system are displayed:



The chapter *Accessing target modules (basic functions)* on page 24 ff. describes how to access the user module with a target module.

Both the *Search* and *Sort* function as well as the view filter can be used to limit the displayed target modules. Further information regarding these functions can be found on page 10 ff.

Operation menu

The *Operation* menu can be opened by pressing **F9** after the on-screen display has been called. This menu lists all functions of the KVM matrix system that can be carried out directly by the user:

Function	Description
A – Autoscan	page 33
B – Autoskip	page 34
C – Stepscan	page 36
D – Disconnect	page 5
E – User logout	page 5
F – Mouse utility	page 70
G – Return to last target	page 24
H – Target info	page 12
I – Target power	page 86

Personal Profile menu

After the on-screen display has been called, the *Personal Profile* menu can be opened by pressing **F10**. The menu settings only apply for the user whose name is displayed in the right corner.

This menu lists the settings of the matrix system, which can be individually defined for every user:

Function	Description
Display	page 14
Scantime	page 34
Stepkeys	page 37
Multiuser display	page 68
Default location	page 15
Default target	page 26
Scanmode set	page 37
Selectkey set	page 29
Set display position	page 16
Set menu position	page 17
Change password	page 44

Configuration menu

The Configuration menu can be opened by pressing F11 after the on-screen display has been called. This menu enables the user to configure all settings of the devices connected to KVM the matrix system as well as all user settings.

Function	Description
User	page 43
User group	page 48
Target	page 59
Target group	page 54
Def. view filter	page 57
Video tuning (IVT)	page 83
Console	page 73
System	page 92
Power switch	page 86
Network	page 92

Information menu

After the on-screen display has been called, the *Information* menu can be opened by pressing **F12**. This menu provides information on the different devices and versions of the KVM matrix system.

Function	Description
Firmware information	page 97
Hotkey information	page 97
Hardware infomation	page 98
Console status	page 80

Accessing target modules (basic functions)

By switching the signals analog video, keyboard, mouse, and audio to a user module. This way, the user is enabled to operate the computer connected to the target module.

This chapter describes how to access the target modules by using the on-screen display. Information on how to access the target modules via select keys can be found on page 27 ff.

Accessing a target module via on-screen display

You are enabled to access a target module with a user module via the on-screen display of the matrix system.

How to access a target module via on-screen display:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Use the **arrow** keys to select the target module you want to access.

> **ADVICE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

3. Press **Enter**.

> **NOTE:** A target module can also be accessed with *select keys.* Further information regarding this topic can be found on page 27.

Returning to the last accessed target module

When using the *Return to last target* function, you are enabled to switch from the currently accessed target module to the last accessed target module.

> **NOTE:** This function does not apply if you have only worked on the currently accessing target module since your login.

How to return to the last accessed target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **G** or mark the row **G - Return to last target** and press **Enter**.

> **ADVICE:** After the on-screen display has been called, you are enabled to activate the *Return to last target function* in the *Select* menu by pressing the key combination **Ctrl+G**.

Disconnecting the target module

The *Disconnect* function ends the current connection to the target module. After this function has been carried out, the *Select* menu is displayed.

> **NOTE:** After the *Disconnect* function has been carried out, you are still logged in at the matrix system.
>
> Use the *User logout* function described on page 5 to log out of the system.

How to end the connection to a target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **D** or mark the row **D - Disconnect** and press **Enter**.

> **ADVICE:** After the on-screen display has been called, you are enabled to activate the *Disconnect* function by pressing the key combination **Ctrl+D**.

Enhanced functions

Automatically accessing a target module

The *Default Target* setting enables the selection of a target module, which the user automatically accesses after logging in to the matrix system.

How to select a target module for automatic access:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Default target** and press **Enter**.

   Now, the *Default target* menu opens. If already defined, the footer displays the currently selected target module (*Current*).
4. Mark the target module to be accessed directly after the login.

> **ADVICE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Press **F8** to activate the selection. Now, the target module is marked with an arrow (▶).
6. Press **F2** to save your changes.

How to cancel the automatic access to a target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Default target** and press **Enter**.

   Now, the **Default target** menu opens. The currently activated target module is highlighted in the list field.
4. Press **F8** to cancel the selection. The target module is no longer marked with an arrow (▸).
5. Press **F2** to save your changes.

Messages when accessing a target module

»No free route to target«

For each time a user module simultaneously accesses a target module connected to the slave matrix switch, a data link is established from the master to the slave matrix switch.

> **IMPORTANT:** The number of possible data links to the slave matrix switch depends on how many *CPU* ports of the master matrix switch are connected to the *Console* ports of the slave matrix switch.

In case all available data links are occupied, the message »No free route to target« appears when you try to access the target module. As soon as a data link is available, the desired connection can be established.

»No route to target known« or »Unknown route to target«

This message appears when you try to access a target module connected to a slave matrix switch to which no connection can be established.

Check if the slave matrix switch is switched on and properly connected to the master matrix switch.

»Target not available«

This message appears when the target module to which the target computer was connected has been removed from the system.

Ask the administrator of the matrix system if the desired target computer has been connected to another target module or if it has been removed from the system.

Accessing target modules with select keys

After the select key modifier(s) and a select key set have been adjusted and a select key set has been activated in the user account, the target module can be accessed with key combinations.

Accessing a target module with select keys

When accessing the target module with select keys, the on-screen display does not have to be called. The target module can be accessed faster when using the select keys.

How to access a target module with select keys:

1. Press the select key modifier(s) that have been adjusted in the matrix system and the select keys assigned to the target module.

   EXAMPLE:

   - Select key modifiers: **Alt Gr+Shift**
   - Select keys for target module: **S**

   Press **Alt Gr+Shift** while pressing the select key **S**. As soon as you release the keys, the switching to the target module is carried out.

Further information:

- *Changing the select key modifier and the valid keys* on page 27
- *Administering select key sets* on page 28
- *Assigning a select key set to a user account* on page 31

Changing the select key modifier and the valid keys

The select keys enable you to quickly access a particular target computer by pressing a key combination. For this, select key sets can be created in the matrix system.

In combination with the select key modifier, a select key set defines the key combination to be pressed to access a particular target computer.

You are furthermore enabled to define valid keys for the select keys.

How to change the select key modifier or the valid keys:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **Select key** and press **Enter**.
5. Select *at least* one of the listed select key modifiers in the **Modifier** entry by marking the respective box with the **arrow keys**. Afterwards, press **F8**.

Ctrl:	*Ctrl* key
Alt:	*Alt* key
Alt Gr:	*Alt Gr* key
Win:	*Windows* key
Shift	*Shift* key

6. Select the row **Valid keys** and press **F8** to select one of the following options:

Num:	*only numerical keys* are interpreted as select keys when pressed in combination with the select key modifier
Alph:	*only alphabetic keys* are interpreted as select keys when pressed in combination with the select key modifier
AlphNum:	*alphabetical and numerical keys* are interpreted as select keys when pressed in combination with the select key modifier

IMPORTANT: The selected valid keys as well as the selected select key modifier are *no longer* provided as key combinations to the operating system and the applications on the target computer.

7. Press **F2** to save your settings.

Administering select key sets

In the KVM matrix system, the user is enabled to create 20 global select key sets or ten individual select key sets for each user.

Within the select key sets, you can define the select key sets for the target modules you wish to access.

NOTE: The global select key sets are displayed in the *Personal Profile* menu of all users of the matrix system.

Creating a select key set

How to create a select key set:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Select key set** and press **Enter**.
4. Press **F3** and collect the following data in the **Add select key Set** menu:

Name:	Enter the new select key set name and press **Enter**.
Global:	Select **yes** by pressing **F8** if you want the select key set in the personal profile to be available for all users of the system. default: **no**

> **NOTE:** This option can only be activated by users that hold the *Superuser* right (see page 51).

5. Press **F2** to save your inputs and to create the select key sets.

Changing the name and the global allocation of a select key set

How to change the name and/or the *Global* setting of a select key set:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Select key set** and press **Enter**.
4. Mark the select key set whose setting you want to change.
5. Press **F5** to change the following data in the *Edit select key Set* menu:

Name:	Enter the new name of the select key set and press **Enter**.
Global:	Select **yes** by pressing **F8** if you want the select key set in the personal profile to be available for all users of the system. default: **no**

6. Press **F2** to save your settings.

Defining select keys for the target modules

NOTE: Global select key sets can only be edited by users with activated *Superuser* right (see page 51).

Without this right, only the select keys that are assigned to the target modules can be viewed.

How to define the select keys for target modules:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Select key set** and press **Enter**.
4. Mark a select key set and press **F5**.
5. Mark the row **Members** and press **Enter**.

   The *Assign select key Set* dialogue opens. The left column displays the name of the target module whereas the right column shows the assigned select key(s).
6. Mark the target module you want to assign a select key to or whose select key you want to change.

   ADVICE: Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.
7. Press **F5** and enter the desired select key.

   NOTE: The chapter *Changing the select key modifiers and the valid keys* provides information on how to use valid keys as select key set.
8. If you want to create or change the select keys for further target modules, repeat steps 6 and 7.
9. Press **F2** to save your settings.

Assigning a select key set to a user account

By assigning a select key set to a user account, the select keys defined in a set are interpreted and the particular target module is being accessed.

How to assign a select key set to a user account or cancel the existing assignment:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Select key set** and press **Enter**.
4. Select the desired select key set.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Press **F8** to (de)activate the assignment.

> **NOTE:** An assigned select key set is marked with an arrow (▸).

6. Press **F2** to save your settings.

Deleting a select key set

> **NOTE:** Only users with the *Superuser* right (see page 51) are allowed to delete a global select key set.

How to delete a select key set:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Select key set** and press **Enter**.
4. Mark the select key set you want to delete and press **F4**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Automatically or manually switching the target modules

Automatically scanning all target modules (Autoscan)

The *Autoscan* function successively accesses all target modules that are mentioned in the active scancode set and are released to the user.

The *Scantime* setting (see page 33) enables you to define how long each target module is to be accessed.

When accessing the target modules, the workplace name, the name of the currently accessed target module as well as a note regarding the *Autoscan* function are displayed.

NOTE: If the *Autoscan* function is activated, the keyboard and mouse inputs are transmitted to the currently accessed target module.

During your inputs, the *Autoscan* function stops and continues after you have finished your inputs.

Applying the *Autoscan* function

Requirements to use the *Autoscan* function:

- *Creating a scanmode set* on page 36
- *Assigning a scanmode set to a user account* on page 39

How to start the *Autoscan* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **A** or mark the **A - Autoscan** row and press **Enter**.

ADVICE: After the on-screen display has been called, you are enabled to activate the *Autoscan* function in the *Select* menu by pressing the key combination **Ctrl+A**.

How to stop the *Autoscan* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.

   This causes the *Autoscan* function to stop.

Configuring the scantime of the Autoscan function

By default, each switching is held for five seconds. After that, the target module is disconnected and the next target module is accessed.

Select a time span between 1 and 99 seconds to define how long the target module is to be accessed.

How to change the scantime:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Move the cursor to the row **Scantime** and enter a time span between **1** and **99** seconds.
4. Press **F2** to save your settings.

Automatically scanning switched-on target modules (Autoskip)

The *Autoskip* function successively accesses all target modules that are mentioned in the active scancode set and are released to the user.

The connected computer must be switched on to carry out this function.

The *Scantime* setting (see page 33) enables you to define how long each target module is to be accessed.

When accessing the target modules, the workplace name, the name of the currently accessed target module as well as a note regarding the *Autoskip* function are displayed.

NOTE: If the *Autoskip* function is activated, the keyboard and mouse inputs are transmitted to the currently accessed target module.

During the inputs, the *Autoskip* function stops and continues after you have finished your inputs.

Applying the Autoskip function

Requirements to use the *Autoskip* function:

- *Creating a scanmode set* on page 36
- *Assigning a scanmode set to a user account* on page 39

How to start the *Autoskip* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **B** or mark the row **B - Autoskip** and press **Enter**.

> **ADVICE:** After the on-screen display has been called, you are enabled to activate the *Autoskip* function in the *Select* menu by pressing the key combination **Ctrl+B**.

How to stop the *Autoskip* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.

   This causes the *Autoskip* function to stop.

Configuring the scantime of the *Autoskip* function

By default, each switching is held for five seconds. After that, the target module is disconnected and the next target module is accessed.

Select a time span between 1 and 99 seconds to define how long the target module is to be accessed.

How to change the scantime:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Move the cursor to the row **Scantime** and enter a time span between **1** and **99** seconds.
4. Press **F2** to save your settings.

Manually scanning the target modules (Stepscan)

By keypress, the *Stepscan* function successively accesses all target modules indicated in the scanmode set and released to the user.

When accessing the target modules, the workplace name, the name of the currently accessed target module as well as a note regarding the *Stepscan* function are displayed.

Starting and stopping the *Stepscan* function

Requirements to use this function:

- *Creating a scanmode set* on page 36
- *Configuring keys to manually scan the targets* on page 36
- *Assigning a scanmode set to a user account* on page 39

How to start the *Stepscan* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **C** or mark the row **C - Stepscan** and press **Enter**.

ADVICE: After the on-screen display has been called, you are enabled to activate the *Stepscan* function in the *Select* menu by pressing the key combination **Ctrl+C**.

How to stop the *Stepscan* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.

   This causes the *Stepscan* function to stop.

Switching between the target modules

How to switch between target modules when the *Stepscan* function is activated:

1. Press the stepkey **Up** (default) to access the next target module or the stepkey **Down** (default) to access the last target module.

Configuring keys to manually scan the targets

By keypress, the *Stepscan* function successively switches to all target modules approved to the user.

You are enabled to select different keys to access the next (default **Up**) or the last (default **Down**) target module.

How to select the keys for using the *Stepscan* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Stepkeys** and press **F8** (repeatedly) to select between the following options:

Up/Down:	arrow keys *Up* and *Down*
PgUp/PgDn:	*Page↑* and *Page↓* keys
Num Up/Down:	arrow keys *Up* and *Down* of the numeric keypad
Num PgUp/PgDn:	*Page↑* and *Page↓* keys of the numeric keypad
Num +/-	*plus* and *minus* keys of the numeric keypad

4. Press **F2** to save your changes.

Administering scanmode sets

In the matrix system, the user is enabled to create 20 global select key sets or ten further, individual scanmode sets for each user.

Within the select key sets, you can define the computers to be accessed when performing the *Autoscan*, *Autoskip* or *Stepscan* function.

NOTE: The global scanmode sets are displayed in the *Personal Profile* menu of all users of the matrix system.

Creating a scanmode set

How to create a scanmode set:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Scanmode set** and press **Enter**.

4. Press **F3** and collect the following data in the *Add Scanmode Set* menu:

Name:	Enter the desired scanmode set name and press **Enter**.
Global:	Select **yes** by pressing **F8** if you want the scanmode set in the personal profile to be available for all users of the system. default: **no**

NOTE: This option can only be activated by users that hold the *Superuser* right (see page 51).

5. Press **F2** to save your settings.

Changing the name and the global allocation of a scanmode set

How to change the name and/or the *Global* setting of a scanmode set:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Scanmode set** and press **Enter**.
4. Mark the scanmode set whose setting you want to change.
5. Press **F5** to change the following data in the **Edit Scanmode Set** menu:

Name:	Enter the desired scanmode set name and press **Enter**.
Global:	Select **yes** by pressing **F8** if you want the scanmode set in the personal profile to be available for all users of the system. default: **no**

NOTE: This option can only be activated by users that hold the *Superuser* right (see page 51).

6. Press **F2** to save your settings.

Assigning the target modules to a scanmode set

NOTE: Global scanmode sets can only be edited by users with activated *Superuser* right (see page 51).

Without this right, only the assigned target modules can be viewed.

How to assign target modules to a scanmode set or cancel the existing assignment:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Scanmode set** and press **Enter**.
4. Press **F5** to edit the selected scanmode set.
5. Mark the row **Members** and press **Enter**.

   The *Scanmode Set Members* menu opens. This menu lists all known target modules within the matrix system that you are allowed to access.
6. Mark a target module to be assigned to the scanmode set or whose assignment is to be cancelled.

   ADVICE: Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.
7. Press **F8** to (de)activate the selection.

   NOTE: The target module that has been assigned to the scanmode set is marked with an arrow (▶).
8. If you want to assign further target modules to the scanmode set, repeat steps 6 and 7.
9. Press **F2** to save your settings.

Assigning a scanmode set to a user account

A scanmode set defines the targets to be accessed when the *Autoscan*, *Autoskip* or *Step-scan* function is carried out.

How to assign a scanmode set to the user account or cancel the existing assignment:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Scanmode set** and press **Enter**.
4. Mark the desired scanmode set in the list field.

> **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Press **F8** to (de)activate the selection.

> **NOTE:** An assigned scanmode set is marked with an arrow (▸).

6. Press **F2** to save your settings.

Deleting a scanmode set

> **NOTE:** Only users with activated *Superuser* right (see page 51) are enabled to delete a global scanmode set.

How to delete a scanmode set:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Scanmode set** and press **Enter**.
4. Mark the scanmode set you want to delete and press **F4**.

> **ADVICE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Users and Groups

Efficient rights administration

The matrix system administers a maximum of 256 user accounts as well as the same amount of user groups. Each user within the system can be a member of up to 20 groups.

A user account as well as a user group can be provided with different rights within the system.

> **ADVICE:** The rights administration can almost completely be carried out through user groups. Therefore, the user groups as well as the assigned rights have to be adequately planned and implemented.
>
> This way, the user rights can be quickly and efficiently changed.

The effective right

The effective right determines the right for a particular operation.

> **IMPORTANT:** The effective right is the maximum right that consists of the user account's individual right and the rights of the assigned group(s).

Example: The user *JDoe* is member of the groups *Office* and *TargetConfig*.

The following table shows the user account rights, the rights of the assigned groups and the resulting effective right:

Right	User *JDoe*	Group *Office*	Group *TargetConfig*	Effective right
Target config	No	No	**Yes**	**Yes**
Change own password	No	**Yes**	No	**Yes**
Target access	**Full**	View	No	**Full**

The settings of the *Target config* and *Change own password* rights result from the rights assigned to the user groups. The *Target access* right which, in this case, enables full access to a target module, was given directly in the user account.

Efficient user group administration

User groups enable the creation of a shared right profile for several users with identical competencies. Furthermore, the user accounts contained in the member list can be added to the group. The rights of these user accounts therefore no longer have to be individually configured. This way, the rights administration within the matrix system is made easier.

If the rights are administered through user groups, the user profile only stores general data as well as user-related settings (key combinations, language settings, …).

When initiating the matrix system, it is recommended to create different groups for users with different competencies (e. g. »*Office*« and »*IT*«) and to assign the respective user accounts to these groups.

EXAMPLE: If the user competencies are to be further divided, more groups can be created. If, for example, some users of the »*Office*« group are to be provided with the *multi-access* right, this possibility can be implemented by creating user groups:

- Create a user group (e. g. »*Office_MultiAccess*«) with identical settings for the »*Office*« group. The *multi-access* right is set to *full*. Assign the respective user accounts to this group.
- Create a user group (e. g. »*MultiAccess*«) and only set the *multi-access* right to *Yes*. In addition to the »*Office*« group, also assign the respective user accounts to this group.

In both cases, the user is provided with the *full* effective right for *multi-access*.

ADVICE: The user profile offers the possibility to provide extended rights to a group member.

Administering user accounts

Creating a new user account

Up to 256 user accounts can be created within the matrix system.

Each owner of a user account is provided with individual login data, rights and user-related settings for the system.

How to create a new user account:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User** and press **Enter**.
4. Press **F3** and collect the following data in the *Add User* menu:

Name:	username of the new account
Password:	password of the new account
Repeat:	repeat new password

5. Press **F2** to save your inputs and to create a user account.

IMPORTANT: The recently created user group is neither provided with rights to configure nor with rights to access the target modules.

Before the account can be used, it has to be added to an existing user group or provided with individual rights.

Renaming the user account

How to rename a user account:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User** and press **Enter**.
4. Mark the user account you want to rename and press **F5**.
5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.
7. Press **F2** to save your settings.

Changing the user account password

NOTE: The personal password can be changed in the *Personal Profile* menu (see page 22) if the user account is provided with the *Personal Profile* or the *Change own password* right.

How to change the user account password:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User** and press **Enter**.
4. Mark the user account whose password you want to change and press **F5**.
5. Mark the row **Password** and press **Enter**.
6. Enter the following data into the *Change Password* menu:

New:	Enter the new password.
Repeat:	Repeat the new password.

7. Press **F2** to save your settings.

Changing the user account rights

Each user account can be assigned with different rights.

The following table lists the different rights. Further information regarding these rights are provided on the indicated pages.

Name	Right	Page
Change own password	Change own password	page 52
Mouse reset	Reset or reactivate PS/2 mouse	page 61
Multi access	Access mode when a target computer is simoultaneously accessed	page 60
Personal profile	Change personal user settings	page 51
Superuser right	Unrestricted access to the configuration of the system	page 51
Target access rights	Access to a target module	page 58
Target config	Configuration of target modules	page 60
Target group access rights	Access to a target group	page 59
Target power group rights	Switch power outlets of a target group	page 87
Target power rights	Switch power outlets of a target module	page 86
Video config	Configuration of video profiles	page 84
WebIf login	Login to the *Config Panel* web application	page 97

Table 4: Configurable rights within the system

Changing a user account's group membership

NOTE: Each user within the matrix system can be a member of up to 20 user groups.

How to change a user account's group membership:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User** and press **Enter**.
4. Mark the user account whose group membership you want to change and press **F5**.
5. Mark the row **Group membership**.
6. Mark the user group to which you want to add a user account or from which you want to delete a user account.

   ADVICE: Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

7. Press **F8** to add the user account to or delete it from the selected user group.

   NOTE: User groups to which the user account is assigned to are marked with an arrow (▸).

8. Repeat steps 6 and 7 to edit the group membership for further accounts.
9. Press **F2** to save your settings.

(De)activating a user account

How to (de)activate a user account:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the user account you want to (de)activate and press **F5**.
4. Mark the row **Enable** and press **F8** to select one of the following options:

yes:	user account activated
no:	user account deactivated

5. Press **F2** to save your settings.

Deleting a user account

How to delete a user account:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User** and press **Enter**.
4. Mark user account you want to delete and press **F4**.
5. Mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Administering user groups

Creating a new user group

The user is enabled to create up to 256 user groups within the matrix system.

How to create a new user group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User group** and press **Enter**.
4. Press **F3** and collect the user group name.
5. Press **F2** to save your inputs and to create a user group.

> **IMPORTANT:** The recently created user group is neither provided with rights to configure nor to access the target modules.

Renaming a user group

How to rename a user group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User group** and press **Enter**.
4. Mark the user group you want to rename and press **F5**.

   > **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.
7. Press **F2** to save your settings.

Changing the user group rights

Name	Right	Page
Change own password	Change own password	page 52
Mouse reset	Reset or reactivate PS/2 mouse	page 61
Multi access	Access mode when a target computer is simoultaneously accessed	page 60
Personal profile	Change personal user settings	page 51
Superuser right	Unrestricted access to the configuration of the system	page 51
Target access rights	Access to a target module	page 58
Target config	Configuration of target modules	page 60
Target group access rights	Access to a target group	page 59
Target power group rights	Switch power outlets of a target group	page 87
Target power rights	Switch power outlets of a target module	page 86
Video config	Configuration of video profiles	page 84
WebIf login	Login to the *Config Panel* web application	page 97

Table 5: Configurable rights within the system

Administering user group members

How to administer user group members:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User group** and press **Enter**.
4. Mark the user group whose members you want to administer and press **F5**.
5. Mark the row **Member management** and press **Enter**.
6. Mark the user account you want to add to or delete from the user group.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

7. Press **F8** to add the user account to the selected user group or to delete it from this group.

> User accounts that are assigned to the user group are marked with an arrow (▶).

8. Repeat steps 6 and 7 to change the group membership for further accounts.
9. Press **F2** to save your settings.

(De)activating a user group

How to (de)activate a user group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User group** and press **Enter**.
4. Mark the user group whose status you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row Enable and press **F8** to select one of the following options:

yes:	activate user group
no:	deactivate user group

> **IMPORTANT:** If the user group is deactivated, the group rights do *not* apply to the assigned members.

6. Press **F2** to save your settings.

Deleting a user group

How to delete a user group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **User group** and press **Enter**.
4. Mark the user group you want to delete and press **F4**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Rights regarding the user account

The »Superuser« right

The *Superuser* right enables you to fully access and configure the matrix system.

NOTE: The information on the user rights that have been assigned before are still stored when the *Superuser* right is activated. After the *Superuser* right has been withdrawn, the saved rights do apply again.

How to change the *Superuser* right of a user account:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right for a user account, mark the row **User**.
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose *Superuser* rights you want to change and press **F5**.
6. Mark the row **Superuser right** and press **F8** to select one of the following options:

yes:	full access to KVM matrix system
no:	access authorisation according to user and group rights

7. Press **F2** to save your settings.

Changing the »Personal Profile« menu

How to change a user account's operation rights:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right for a user account, mark the row **User**.
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose config rights you want to change and press **F5**.
6. Mark the row **Operation rights** and press **Enter**.

7. Mark the row Personal Profiel and press **F8** to select one of the following options:

yes:	allows to view and edit the personal profile
no:	denies to view and edit the personal profile

8. Press **F2** to save your settings.

Changing own password

How to change a user account's operation rights:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right for a user account, mark the row **User**.
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose config rights you want to change and press **F5**.
6. Mark the menu entry you want to change and press **F8** to select one of the following options:

Mouse reset:	Allow (**yes**) or deny (**no**) the reset or reactivation of the PS/2 mouse interface of a target computer.
Personal profile:	Allow (**yes**) or deny (**no**) to view or edit the own user profile.
Multi access:	Define an access type for a target computer that is currently accessed by another user: ▪ **no:** denied ▪ **view:** view mode ▪ **full:** full access **ADVICE:** The *View* mode enables you to view the screen content of the target computer. Inputs, however, are not possible.
Change own password:	Allow (**yes**) or deny (**no**) to change the user account password.

7. Repeat step 6 to change further menu settings.
8. Press **F2** to save your settings.

Target groups and view filters

Difference between target groups and view filters

The target modules of the matrix system can be arranged in target groups and view filters.

Intended use of target groups

The creation of target groups enables the administrator to quickly assign the rights of a user or a user group for all target modules within a group.

NOTE: The different target modules can be members of *several* target groups.

Intended use of view filters

View filters enable the users of a matrix system to organise the various target modules into view groups. Especially in large matrix systems, the creation of view groups gives you the possibility to keep a better overview over the system.

You can group the target modules according to their view filter (e.g. the server room) or to any other features (e.g. to the operating system of the connected computer).

Administering target groups

The »New Targets« target group

By default, the target group *New Targets* is created in the matrix system. This group automatically contains all target modules as soon as they are connected to the system. For this, the computer connected to the module also has to be switched on.

If you want to provide a user or a user group with particular rights to all recently connected target modules, change the device group rights of either the user account or the user group.

Creating a new target group

How to create a new target group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target group** and press **Enter**.
4. Press **F3** and collect the target group name.
5. Press **F2** to save your inputs and to create a target group.

NOTE: The rights for this target group can be assigned when access rights to a target group (see page 59) of either the user account or the user group are changed.

Renaming a target group

How to rename a target group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target group** and press **Enter**.
4. Mark the target group you want to rename and press **F5**.
5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.
7. Press **F2** to save your settings.

Administering target group members

NOTE: You can assign up to 20 target modules to each target group within the matrix system.

How to administer the members of a target group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target group** and press **Enter**.
4. Mark the target group whose members you want to administer and press **F5**.
5. Mark the row **Members** and press **Enter**.

6. Mark the target module you want to add to or delete from the target group.

> **NOTE:** The special *MEMBERS* and *NONMEMBERS* options of this menu's view filter (see page 11) enable you to only list the target modules that are or are not assigned to this group.
>
> You can also use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

7. Press **F8** to add the target module to the selected target group or to delete it from this group.

> **NOTE:** The target modules that are assigned to a target group are marked with an arrow (▶).

8. Repeat steps 6 and 7 to edit the group membership of further target modules.

Deleting a target group

How to delete a target group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target group** and press **Enter**.
4. Mark the target group you want to delete and press **F4**.
5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Administering view filters

Creating a new view filter

How to create a new view filter:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **View filter** and press **Enter**.
4. Press **F3** and enter the view filter name.
5. Press **F2** to save your inputs and to create a view filter.

Assigning a target module to a view filter

How to assign a view filter to a target module or cancel the existing assignment:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **View filter** and press **Enter**.
4. Mark the view filter to assign a target module to or whose assignment you want to cancel and press **F5**.
5. Mark the row **Members** and press **Enter**.

   The *Assign View Filter* menu opens. This menu contains a list of all known target modules within the matrix system.
6. Mark a target module to assign to the view filter or whose assignment you want to cancel.

   ADVICE: Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.
7. Press **F8** to (de)activate the assignment.

   NOTE: A target module assigned to a view filter is marked with an arrow (▸).
8. Repeat steps 6 and 7 for further target modules.
9. Press **F2** to save your settings.

Renaming a view filter

How to rename a view filter:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **View filter** and press **Enter**.
4. Mark the view filter you want to rename and press **F5**.
5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.
7. Press **F2** to save your settings.

Deleting a view filter

The created view filters can be deleted at any time. Deleting a view filter has no effect on the target modules assigned to the view filter.

How to delete a view filter:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **View filter** and press **Enter**.
4. Mark the view filter you want to delete and press **F4**.
5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Target modules

The target modules serve to connect the target computers to the matrix system. The target modules can be accessed through the user modules.

Adjusting the access and config rights

Accessing a target module

> **ADVICE:** It is generally recommended to assign the target access rights with the aid of target groups (see page 48).
>
> This way, you are able to keep an overview of the KVM matrix systems. It also benefits the operating performance within the on-screen display of the system.

In order to carry out settings for a user that deviate from the rights assigned to the existing target groups, you can assign individual access rights in addition to the group rights.

How to change the user account's target access rights:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose target access rights you want to change and press **F5**.
6. Mark the row **Target access rights** and press **Enter**.
7. Mark the desired target module whose access right you want to change.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

8. Press **F8** to select one of the following options:

no:	denies access to the computer connected to the target module
view:	enables to view the screen content of the computer connected to the target module
full:	full access to the computer connected to the target module

> **NOTE:** The *View mode* enables the user to see the monitor image of the target computer. Inputs, however, are *not* possible.

9. Repeat steps 7 and 8 to change the access rights to further target modules.

10. Press **F2** to save your settings.

Accessing a target group

How to change the user account's target group access right:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose target group access rights you want to change and press **F5**.
6. Mark the row **Target group access rights** and press **Enter**.
7. Mark the desired target group whose access rights you want to change.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

8. Press **F8** to select one of the listed options:

no:	denies access to the computer connected to the group's target modules
view:	enables to view the screen content of the computer connected to the group's target modules
full:	full access to the computer connected to the group's target modules

> **NOTE:** The *View mode* enables the user to view the monitor image of the target computer. Inputs, however, are *not* possible.

9. Repeat steps 7 and 8 to change the access rights to further target modules.

10. Press **F2** to save your settings.

Access mode when simultaneously accessing a target computer

How to change the multi access rights:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose multi access rights you want to change and press **F5**.
6. Mark the row **Operation rights** and press **Enter**.
7. Mark the row **Multi access** and press **F8** (repeatedly) to select one of the following options:

no:	denies access to an already accessed target computer
view:	allows to view the screen content of the targer computer; *no* inputs possible
full:	full access to an already accessed target computer

8. Press **F2** to save your settings.

Rights to configure the target modules

How to change the target config rights:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose rights to edit and configure the target modules you want to change and press **F5**.
6. Mark the row **Config rights** and press **Enter**.
7. Mark the row **Target Config** and press **F8** to select one of the following options:

yes:	allows the right to view and edit the target module config
no:	denies the right to view and edit the target module config

8. Press **F2** to save your settings.

Rights to reset or reactivate a PS/2 mouse

Unlike USB mouse devices, PS/2 mouse devices do not support the hot plug technology. It is therefore possible to insert the PS/2 plug during operation but the target module or the connected computer possibly do not detect the input device.

In order to activate or reset the PS/2 mouse, a special command can be sent from the matrix system to the computer connected to the target module.

Further information regarding this topic can be found in the chapter *Activating or resetting a PS/2 mouse* on page 69.

How to change the rights to reset or reactivate the PS/2 mouse:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose rights to reset or reactivate the PS/2 mouse you want to change and press **F5**.
6. Mark the row **Operation rights** and press **Enter**.
7. Mark the row **Mouse reset** and press **F8** to select one of the following options:

yes:	allows the reset or reactivation of the PS/2 mouse interface of a target computer
no:	denies the reset or reactivation of the PS/2 mouse interface of a target computer

8. Repeat step 6 if you want to change further menu settings.
9. Press **F2** to save your settings.

Basic configuration of the target modules

Renaming a target module

During the initiation of the matrix system, the target modules are automatically named. Here, the text *CPU-ID* is put before the physical device ID.

All target modules that were automatically named can be renamed.

> **ADVICE:** The target modules can be renamed in the *Configuration* menu (see below) or in the *Select* menu (see page 63).

How to rename a target module in the *Configuration* menu:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module you want to rename and press **F5**.

   > **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.

   > **NOTE:** The message »*Name exists*« appears if a target module with the same name has already been connected to the system.
   >
   > The settings of such target modules are stored within the matrix system and are only visible via the *Config Panel* web application. If necessary, use the web application to delete the target module from the system.
   >
   > Afterwards, this name can be asigned to another target module.

7. Press **F2** to save your settings.

How to rename a target module in the *Select* menu:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Select the target module to be renamed.

> **NOTE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

3. Press **F5**.
4. Change the name and press **Enter**.

> **NOTE:** The message *Name exists* appears if a target module with the same name has already been connected to the system.
>
> The settings of such target modules are stored within the matrix system and are only visible via the *Config Panel* web application. If necessary, use the web application to delete the target module from the system.
>
> Afterwards, this name can be assigned to another target module.

Deleting a target module from the KVM matrix system

If the matrix system is not able to detect an already known target module, the system defines the device as being switched off.

Therefore, you have to manually delete the list entry of the target module you want to permanently remove from the system.

> **NOTE:** Only switched-off target modules can be deleted.

How to delete a target module that is switched off or disconnected from the system:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module you want to delete and press **F4**.

> **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Copying the target module config settings

If a target module of the KVM matrix system is replaced by another device, it is possible to copy the previous config settings to the new device.

After the config settings have been copied to the new device, it can be operated immediately.

IMPORTANT: The target module whose settings you want to copy is afterwards deleted from the KVM matrix system.

How to copy the target module config settings:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.

   ADVICE: Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

4. Mark the activated target module to which you want to copy the config settings of a target module that is switched off or disconnected from the matrix system and press **F7**.
5. Mark the target module whose settings you want to copy and press **Enter**.

   NOTE: Only target modules that are switched off or disconnected from the system are listed in this menu.

6. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.
7. Press **F2** to save your settings.

Settings for special hardware

Keymode for Apple computers

> **NOTE:** This setting can only be edited with USB versions of the target modules.

If the Apple computer that is connected to the target module does not react (properly) when the multimedia keys are pressed, activate a special keymode for Apple computers.

How to (de)activate the special keymode for Apple computers:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Apple support** and press **F8** to select one of the following options:

yes:	activated keymode for Apple computers
no:	activated standard mode

6. Press **F2** to save your settings.

Keymode for USB multimedia keyboards

> **NOTE:** This setting can only be edited with USB versions of the target modules.

Various manufacturers have added special keys to some USB keyboards.

Use the *USB multimedia keyboard* menu to activate or deactivate the support of such keys.

How to (de)activate the support for the multimedia keys of a USB keyboard:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **USB multimedia keyboard** and press **F8** to select one of the following options:

yes:	support for multimedia keys of a USB keyboard is activated
no:	support for multimedia keys of a USB keyboard is deactivated

6. Press **F2** to save your settings.

Support for servers of IBM's RS/6000 series

NOTE: This setting can only be edited with PS/2 versions of the target modules.

Activate the support for UNIX servers of IBM's RS/6000 series in the *IBM RS/6000 support* menu if the target computer is such a server.

How to (de)activate the special support for servers of IBM's RS/6000 series:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module whose settings you want to change and press **F5**.

ADVICE: Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **IBM RS/6000 support** press **F8** to select one of the following options:

yes:	support for servers of IBM's RS/6000 series is activated
no:	support for servers of IBM's RS/6000 series is deactivated

6. Press **F2** to save your settings.

Enhanced functions

Displaying »Multiuser« information

If several users are accessing a target computer (*Multiuser* mode), the »*Multiuser*« information can be activated. This way, all accessing users are provided with the information that at least one other user is currently accessing the target computer.

NOTE: The setting to display this information for the entire system are usually carried out in the *Configuration* menu. This setting of the *Personal Profile* menu enables you to individually configure this setting for each user account.

Both possibilities are described on this page.

How to (de)activate the »Multiuser« information *for the entire system*:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the **Configuration** menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **Multiuser display** and press **F8** to select one of the following options:

yes:	activated »Multiuser« display
no:	deactivated »Multiuser« display

5. Press **F2** to save your settings.

How to (de)activate the »Multiuser« information for a particular *user account*:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F10** to call the *Personal Profile* menu.
3. Mark the row **Multiuser display** and press **F8** (repeatedly) to select one of the following settings.

System:	The global setting made in the *Configuration* menu applies for this user account.
on:	displays *Multiuser* information
off:	does *not* display *Multiuser* information

4. Press **F2** to save your settings.

Adjusting the power management of the target module

NOTE: This setting can only be edited with USB versions of the target modules.

The target modules of the *CATpro2*-USB series are usually switched on as soon as the USB controller provides the target module with the required voltage.

Deactivate the *USB power management* setting if no screen content is being displayed on the monitor of the accessing user module while the target computer is booting.

How to change the power management setting of the target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module whose settings you want to change and press **F5**.

   ADVICE: Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **USB power management** and press **F8** to select one of the following options:

yes:	The target module of the *CATpro2-USB series* is switched on as soon as the USB controller provides the target module with the required voltage.
no:	The target module of the *CATpro2-USB series* is directly switched on.

6. Press **F2** to save your settings.

Activating or resetting a PS/2 mouse

Unlike USB mouse devices, PS/2 mouse devices do not support the hot plug technology. It is therefore possible to insert the PS/2 plug during operation but the target module or the connected computer possibly do not detect the input device.

In order to activate or reset the PS/2 mouse, a special command can be sent from the matrix system to the computer connected to the target module.

NOTE: Since the commands differ depending on the used mouse type and the installed operating system, four different functions are provided.

How to start and use the *Mouse utility* function:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **F** or mark the row **F - Mouse utility** and press **Enter**.

ADVICE: After the on-screen display has been called, you are enabled to activate the *Mouse utility* function by pressing the key combination **Ctrl+F**.

4. Select one of the following functions with the arrow keys and press **Enter**:

Reset Mouse:	resets the PS/2 mouse interface of a Windows computer
Enable mouse (for Unix):	activates the PS/2 mouse of a Linux computer
Enable Intelli:	activates the PS/2 wheel mouse of a Linux computer
Enable Intelli-Explorer:	activates the PS/2 wheel mouse with additional keys of a Linux computer

Viewing the route information of the target module

The route information provides an overview of how the target module is physically connected to the other devices of the matrix system.

How to view the route information:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Move the cursor to the target module whose route information you want to view.

> **ADVICE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

3. Press the key combination **Ctrl + F12** to display the route information:

```
Route Information
CPU-Server                00005821
➜ Master                  000010BE
 Transmission ➜ CPU 1
------------------------------
CATCenterNEO              000010BE
➜ CON-Admin               00001AEB
 Console 1 ➜ Transmission
ESC
```

The exemplary information window provides the following information:

- The target module *CPU-Server* is connected to the *Master* matrix switch. The devices are connected through the *Transmission* port of the target module and the *CPU 1* of the matrix switch.
- The user module *CON-Admin* is connected to the *Master* matrix switch. The devices are connected through the *Console 1* port of the matrix switch and the *Transmission* port of the user module.

> **ADVICE:** If the user module accesses a target module, the arrows of this active connection are displayed in *blue*.

> **NOTE:** Any slave devices that are connected to the matrix system are also displayed in the route information as long as the connection between target module and user module is carried out by such devices.

Resetting the video profiles of a target module

A video profile is created for each target module. This video profile stores the information on different cable parameters. This information ensures that an optimum video image is displayed at the monitor.

Changing the cable length between a target module and the matrix switch can affect the image quality.

In this case, delete the existing video profiles of the target module. When accessing the target module the next time, a new profile is created at the workplace.

How to delete the stored video profiles of a target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module whose video profiles you want to delete and press **F5**.

> **ADVICE:** Use the menu's *search function,* the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the entry **Reset target video data** and press **Enter**.
6. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.
7. Press **F2** to save your settings.

> **NOTE:** Every time a connection without an existing entry in the video profile database is established between the user module and the target module, the image signal coming from the computer is switched off within the target module. A test signal is created instead and transmitted to the user module.
>
> With the aid of this test signal, the required parameters to display an optimized image are determined. If other users are trying to access this target module at the same time, they receive a message regarding the video adjustment.
>
> Depending on the cable length, the cable quality, and the connected monitor type, it takes between 5 and 10 seconds until the image is displayed again at these user modules.

User modules

The target computers connected to the KVM matrix system are operated at the user modules of the system.

Operating modes of user modules

Depending on the intended use of the user module, the module's operating mode can be selected from the following two options:

Standard operating mode

NOTE: This operating mode is preset in the default.

The *Standard* operating mode only permits access to the matrix system after the user has entered their username and password.

The user rights can be individually adjusted in the settings of the user accounts.

Open Access operating mode

In this operating mode, the access to the matrix system is not password-protected.

For this user module, you can configure the same access rights as for a user account.

IMPORTANT: The configured access rights apply for all users at this user module.

Selecting the user module's operating mode

How to select the user module's operating mode:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the row **Console type** and press **F8** to select an access type:

Standard:	Standard operating mode
Open Access:	Open Access operating mode

> **NOTE:** By selecting the option *Open Access*, further submenus to configure the access rights are activated.
>
> These settings are explained in the chapter *Administering user accounts* on page 42 ff.

5. Press **F2** to save your settings.

Basic configuration of the user modules

Renaming a user module

How to rename a user module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module you want to rename and press **F5**.

> **ADVICE:** Use the menu's *search function*, the *view filter* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.
7. Press **F2** to save your settings.

(De)activating the user module

If you want to deny the access to the matrix system to a user module, this user module can be deactivated.

> **NOTE:** As soon as the user module is deactivated, the monitor displays the message »*This console has been disabled*«. It is therefore not possible to call the on-screen display or the login mask.
>
> If a user is currently accessing this user module, access is *immediately* withdrawn.

How to (de)activate the user module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the user module you want to (de)activate and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

4. Mark the row **Enable** and press **F8** to select one of the following options:

yes:	user module activated
no:	user module deactivated

5. Press **F2** to save your settings.

Copying the user module config settings

If a user module of the matrix system is replaced by another device, the previous config settings can be copied to the new device.

Afterwards, the new device can be operated immediately.

> **IMPORTANT:** The user module whose settings are to be copied is afterwards deleted from the system.

How to copy the user module config settings:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

4. Mark the activated user module to which you want to copy the config settings of a user module that is switched off or disconnected from the matrix system and press **F7**.
5. Mark the user module in the list whose settings you want to copy and press **Enter**.

> **NOTE:** Only user modules that are switched off or disconnected from the system are listed in this menu.

6. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.
7. Press **F2** to save your settings.

Deleting a user module from the matrix system

If the matrix system is not able to detect an already known target module, the system defines the device as being switched off.

Therefore, you have to manually delete the list entry of the user module you want to permanently remove from the system.

> **NOTE:** Only user modules that are switched off can be deleted by the administrator and by all users who hold the *Superuser* right.

How to delete a user module that is switched off or disconnected from the system:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module you want to delete and press **F4**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Settings for special hardware

Adjusting the scancode set of a PS/2 keyboard

If a key is pressed on a PS/2 keyboard, the keyboard processor sends a data packet called scancode. The two common scancode sets (sets 2 and 3) contain different scancodes.

In the standard configuration, the user module interprets all inputs made at a PS/2 keyboard with the scancode set 2.

If the pipe ("|") cannot be input or if the keyboard's arrow keys do not function properly, it is recommended to switch to scancode set 3.

How to select the scancode set of the PS/2 keyboard:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Scancode** and press **F8** to select the scancode sets **2** or **3**.
6. Press **F2** to save your settings.
7. Restart the user module to apply the changed settings.

Activating the support for PS/2 special keyboards

How to activate the support for a PS/2 special keyboard:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

4. Mark the row **Enh. keyboard** and press **F8** to select the keyboard type:

default:	standard keyboard
PixelPower Clarity (blue):	special *PixelPower Clarity (blue)* keyboard
PixelPower Rapid Action:	special *PixelPower Rapid Action* keyboard
SKIDATA1:	special *SKIDATA1* keyboard

5. Press **F2** to save your settings.

Enhanced functions

Setting the automatic user logout

The user module can be configured to automatically disconnect the access to the target module after a user has been inactive for a certain amount of time and logout the user from the matrix system.

How to set the automatic user logout:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Auto logout (min)** and press **Enter**.
6. Enter a number between **1** and **99** minutes to set the automatic logout and press **Enter**.

> **NOTE:** The value »0« deactivates the automatic user logout.

7. Press **F2** to save your settings.

Automatically disconnecting the access to a target module

The user module can be configured in a way that the active access to a target module is automatically disconnected after the user has been inactive for a certain amount of time.

If the on-screen display is opened at the moment of disconnection, it remains on the screen even after it has been automatically disconnected.

In case the on-screen display is closed at the moment of disconnection, the message displayed on the right appears on the screen of the user console.

```
CON-Admin
Not connected
```

How to automatically disconnect the access to a target module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Auto disconnect (min)** and press **Enter**.
6. Enter a number between **1** and **99** minutes to start the screensaver and press **Enter**.

> **NOTE:** The value »0« deactivates the automatic disconnection when a target module is accessed.

7. Press **F2** to save your settings.

Activating or resetting a PS/2 mouse

Unlike USB mouse devices, PS/2 mouse devices do not support the hot plug technology. It is therefore possible to insert the PS/2 plug during the operation but the target module or the connected computer possibly do not detect the input device.

In order to activate or reset the PS/2 mouse, a special command can be sent from the matrix system to the computer connected to the target module.

Further information regarding this topic can be found in the chapter *Target modules* on page 58.

Viewing technical information about the user modules

The *Console status* menu provides detailed information about the user modules. Among other things, the physical ID, the accessing user and the firmware version are being displayed.

How to call detailed information about the user modules:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F12** to call the *Information* menu.
3. Mark the row **Console status** and press **Enter**.
4. Press **F8** (repeatedly) to select the information to be displayed in the right column:

ID:	displays physical device ID
Port:	displays connection port at matrix switch
User:	displays active user
Target:	displays accessing target module
Firmware:	displays firmware version of user module
Type:	displays operating type of user module

5. Press **Esc** to leave the menu.

Resetting the video profile of a user module

A video profile is created for each user module. This video profile stores information on the different cable parameters. This information ensures that the video image is optimally displayed at the monitor.

Changing the cable length between a user module and the matrix switch can affect the image quality.

In this case, delete the existing video profiles of the target module. When accessing the user module the next time, a new profile is created at the console.

How to delete the saved video profiles of a user module:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose video profile you want to delete and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the entry **Reset video data** and press **Enter**.

6. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.
7. Press **F2** to save your settings.

Remembering the username in the login mask

If the same user often works at a certain user module, use their username as default in the login mask for quicker access.

Now, after a user has logged out of the system, the login mask automatically remembers the username of the last active user.

How to remember the username in the login mask:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings you want to change and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Remember last username** and press **F8** to select one of the following options:

yes:	remember last username
no:	do not remember last username

6. Press **F2** to save your settings.

Setting the hold time for the screensaver

The screensaver deactivates the screen display at the user module after the user has been inactive for an amount of time you can adjust.

> **NOTE:** This setting operates independently from the screensaver settings of the target computer.

How to set the hold time of the screensaver:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Console** and press **Enter**.
4. Mark the user module whose settings are you want to change and press **F5**.

   > **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Screensaver (min)** and press **Enter**.
6. Enter a number between **1** and **99** minutes to activate the screensaver and press **Enter**.

   > **ADVICE:** The value »0« deactivates the screensaver.

7. Press **F2** to save your settings.

Video tuning

The first time a user module accesses a target module, a video profile is automatically created for this connection.

This video profile stores information about the different cable parameters. This information ensures that the video image is perfectly displayed at the user console.

The video profile can be recalculated at any time or manually adjusted by the user.

NOTE: If the cable length between a user module and the matrix switch or between the target module and the matrix switch is changed, the image quality is influenced.

After the cabling has been changed, we recommend to carry out an automatic video tuning (see below).

Deleting the existing video profile can have the effect that the automatic video tuning is automatically carried out the first time a user module accesses a target module (after the profile has been deleted).

Further information:

- *Resetting the video profiles of a target module* on page 71
- *Resetting the video profile of a user module* on page 79

Automatic video tuning

How to carry out the automatic video tuning:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.

   IMPORTANT: The *Video Tuning* menu can only be called if the console has access to any target module.

2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Video tuning (IVT)** and press **Enter**.
4. Press **F3** to automatically optimise the image.
5. Press **F2** to save your settings.

   ADVICE: The automatic video tuning can be activated by pressing **Ctrl+Scroll** followed by **F3**.

Manually operating the video tuning

How to manually operate the video tuning:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.

> **IMPORTANT:** The video tuning settings only apply if the user module has access to any target module.

2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Video tuning (IVT)** and press **Enter**.
4. Mark one of the desired rows to change a particular setting:

Boost:	sets the video boost
Noise filter:	sets the noise filter
Fine tuning:	removes the colour shadow
delay R(ed):	sets the delay compensation (red colour signal)
delay G(reen):	sets the delay compensation (green colour signal)
delay B(lue):	sets the delay compensation (blue colour signal)

5. Use the following keys to change the marked settings:

Left arrow:	successively decreases the setting
Right arrow:	successively increases the setting
Ctrl + Left arrow:	decreases the setting by 5
Ctrl + Right arrow	increases the setting by 5
Home:	sets the maximum value
End:	sets the minimum value

> **IMPORTANT:** If the setting that has been selected by the user causes the monitor to turn black, press **Esc** to cancel the function and return to the previous setting.

6. Repeat steps 4 and 5 to edit further settings.
7. Press **F2** to save your settings.

Rights administration

Rights to configure video profiles

How to change the rights to configure the video profiles:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose rights to configure the video profiles you want to change and press **F5**.
6. Mark the row **Config rights** and press **Enter**.
7. Mark the menu entry you want to change and press **F8** to select one of the following options:

yes:	allows to view and edit the configuration of the video profile
no:	denies to view and edit the configuration of the video profile

8. Press **F2** to save your settings.

Power switch

By integrating a remote power switch (*CompactCenter*) into the matrix system, you are enabled to (de)activate the power supply of the devices through the system.

For this, one or several power outlets are assigned to a target module. Afterwards, these outlets can be switched in the *Operation* menu.

Switching the power outlets assigned to the target

The *Target power* function enables the user to switch the power outlets of a connected and configured power switch.

Requirements to use this function:

- *installed G&D Hardboot CCX power switch*
- *a power switch power outlet assigned to the target module* (see page 88)
- *assigned user rights* (see page 86) *or user group rights* (see page 87) *for power switching*

How to switch on/off the power outlets assigned to the currently accessed target module:

IMPORTANT: At first, access the target whose assigned power outlet you want to switch (see page 4).

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F9** to call the *Operation* menu.
3. Press the hotkey **I** (repeatedly) or mark the row **I - Target power** and press **F8** (repeatedly) to select between the following options:

off:	switches off power outlets
on:	switches on power outlets

IMPORTANT: The entry **n.c.** (not connected) indicates that no power outlets of a power switch that is connected to the matrix system are assigned to the currently accessed target module.

ADVICE: After the on-screen display has been called, you are enabled to activate the *Target power* function in the *Select* menu by pressing the key combination **Ctrl+I**.

Rights administration

Rights to switch the power outlets of a target module

How to change the rights to switch the power outlet(s) assigned to a target:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose target power switching rights you want to change and press **F5**.
6. Mark the row **Target power rights** and press **Enter**.
7. Mark the desired target module whose power switching right you want to change.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

8. Press **F8** to select one of the following options:.

yes:	allows the switching of the power outlets assigned to the selected target module
no:	denies the switching of the power outlets assigned to the selected target module

9. Repeat steps 7 and 8 to change further power switching rights.
10. Press **F2** to save your settings.

Rights to switch the power outlets of a target group

How to change the right to switch the power outlet(s) assigned to the target modules of the group:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose target power switching group rights you want to change and press **F5**.
6. Mark the row **Target power group rights** and press **Enter**.
7. Mark the desired target group whose power switching right you want to change.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

8. Press **F8** to select one of the following options:

yes:	Allow the switching of the power outlets assigned to the target modules of the selected group.
no:	Deny the switching of the power outlets assigned to the target modules of the selected group.

9. Repeat steps 7 and 8 to change further power switching rights.
10. Press **F2** to save your settings.

Configuration

Assigning a power switch power outlet to the target module

If at least one *G&D Hardboot CCX* power switch is provided to the system, you are enabled to assign one or more power outlets to a target module.

The assigned power outlets can be switched via the *Operation* menu.

Further information:

- *Switching the power outlets assigned to the target* on page 85

How to change the assigned power switch outlets:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Target** and press **Enter**.
4. Mark the target module you want to assign one or several power switch power outlets to or whose assignment you want to cancel and press **F5**.
5. Mark the **Assign power switch outlets** entry and press **Enter**.
6. The *Target Power* menu lists all known power switches and the available power outlets. The right column displays the target module name if the power outlet has already been assigned to a target module:

```
Target Power
Sort Alph+
Search .....................
power switch1
  1.1                   CPU-001
  1.2
power switch2
  1.1                   CPU-002
  1.2                   CPU-002
F9: Operation F10:Pers.Profile
F11:Config  F12:Info
```

7. Mark the power outlet to assign to the target module or whose assignment you want to cancel.
8. Press **F8** to assign the power outlet to the currently active target module or to cancel this assignment.

   Power outlets assigned to the currently active target module are marked with an arrow (▸).

9. Press **F2** to save your settings.

Renaming a power switch

How to rename a power switch:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Power switch** and press **Enter**.
4. Mark the power switch you want to rename and press **F5**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Mark the row **Name** and press **Enter**.
6. Enter the new name and press **Enter**.
7. Press **F2** to save your settings.

Deleting a power switch from the matrix system

If the matrix system is not able to detect an already known power switch, the system defines the device as being switched off.

Therefore, manually delete the list entry of the power switch you want to permanently remove from the matrix system.

> **NOTE:** Only switched-off power switches can be deleted.

How to delete a power switch that is switched off or disconnected from the system:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Power switch** and press **Enter**.
4. Mark the power switch you want to delete and press **F4**.

> **ADVICE:** Use the menu's *search function* or the *sort criteria* (see page 10 ff.) to limit the selection of list entries.

5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Shared editing

The matrix system enables two users that hold the respective rights to edit the settings at the same time.

If two users simultaneously change the user account settings, for example, the on-screen display informs the other user about these changes:

- The upper row of the footer displays a *purple* message which points out the changes of the other user.
- The changed setting or the menu item in the submenu which contains this setting is also displayed in green.

If you have made changes in this sector, the following options are provided to process your collected data when leaving the current menu mask (by pressing **Esc**):

Save:	In order to save the changes select this menu entry with the **Tab** key or the **arrow keys** and press **Enter**.
Discard:	In order to discard the changes select this menu entry with the **Tab** key or the **arrow keys** and press **Enter**.
Cancel:	In order to cancel the data storage, select this menu entry with the **Tab** key or the **arrow keys** and press **Enter**. Hereupon, the your entered values are displayed again in the last-opened menu.
Load:	In order to load the current values from the databank, select this menu entry with the **Tab** key or the **arrow keys** and press **Enter**.

System settings and functions

Basic configuration

Renaming the matrix switch

How to rename the matrix switch:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **Name** and press **Enter**.
5. Enter the new name and press **Enter**.
6. Press **F2** to save your settings.

Network settings

The network ports on the back panel of the matrix switch enable you to achieve the following network functions:

- execution of the matrix switches' network configuration
- authentication against directory services (LDAP, Active Directory, RADIUS, TACACS+)
- time synchronisation via NTP server
- forwarding of log messages to syslog servers
- execution of firmware updates and backups

Configuring the network interfaces

NOTE: In the defaults, the following settings are pre-selected:

- IP address of *network interface A*: **192.168.0.1**
- IP address of *network interface B*: address obtained using **DHCP**
- global network settings: settings obtained using **DHCP**

How to configure the network interface settings:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Network** and press **Enter**.
4. Mark the row **Settings** and press **Enter**.

5. Collect the following data in the section **Interface A** (interface *Network A*) or **Interface B** (interface *Network B*):

Operational mode:	Press **F8** to select the operating mode of the interface **Network A** or **Network B**: ▪ **Off:** switches off network interface. ▪ **Static:** uses static settings. ▪ **DHCP:** obtains the settings from a DHCP server.
IP address:	Enter the interface IP address. This setting is automatically obtained in the DHCP operating mode.
Netmask:	Enter the network netmask. This setting is automatically obtained in the DHCP operating mode.
Connection type:	Press **F8** to define if the network interface and its communication partner are to negotiate the connection type automatically (**Auto**) or select one of the listed types.

6. Press **F2** to save your settings.

Configuring the global network settings

The global network settings ensure even in complex networks that the matrix switch is available from all sub networks.

How to configure the global network settings:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **Network** and press **Enter**.
4. Mark the row **Settings** and press **Enter**.
5. Collect the following data in the paragraph **Main Network**:

Global preferences	Select the operating mode by pressing **F8**: ▪ **Static:** uses static settings. ▪ **DHCP:** automatically obtains the settings described below from a DHCP server.
Hostname:	Enter the matrix switch hostname.
Domain:	Enter the domain the matrix switch is supposed to belong to.
Gateway:	Enter the gateway IP address.

DNS Server 1:	Enter the DNS server IP address.
DNS Server 2:	Optionally, enter the IP address of another DNS server.

6. Press **F2** to save your settings.

Resetting the netfilter rules

In the default settings, all network computers can access the system's IP address (open system access).

The *Config Panel* web application enables the creation of netfilter rules to control the access to the matrix system. As soon as a netfilter rule has been created, the open system access is deactivated and all incoming data packets are compared to the netfilter rules.

The created netfilter rules can also be deleted with this function.

How to delete the created netfilter rules:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **Reset netfilter configuration** and press **Enter**.
5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Enhanced functions

Reading out the status of the network interfaces

At any time, the current status of both network interfaces can be read out via the on-screen display.

How to detect the status of the network interfaces:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Select the row **Network** and press **Enter**.
4. Select the row **Link Status** and press **Enter**.

5. The paragraphs **Interface A** (*Network A* interface) or **Interface B** (*Network B* interface) show the following data:

Link detected:	connection to network established (**yes**) or interrupted (**no**).
Auto-negotiation:	The transmission speed and the duplex mode have been configured automatically (**yes**) or manually by the administrator (**no**).
Speed:	transmission speed
Duplex	duplex mode (**full** or **half**)

NOTE: Press **Enter** to update the displayed data.

6. Press **Esc** to leave the menu.

Testing the reachability of a host in the network (Ping)

The on-screen display of a user module can be used to test the reachability of a particular host (e. g. a computer or a network device) in the network.

How to test the reachability of a host in the network:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Select the row **Network** and press **Enter**.
4. Select the row **Ping Host** and press **Enter**.
5. Use the **Host** field to enter the IP address or the host name and press **Enter**.
6. The test results are displayed in the following table:

Transmitted:	number of transmitted data packets
Received:	number of received data packets
Lost:	number of lost data packets
Min. RTT:	minimum round-trip-time
Avg. RTT:	average round-trip-time
Max. RTT:	maximum round-trip-time

NOTE: A message informs the user if the host name cannot be resolved into an IP address.

7. Press **Esc** to leave the menu.

Resetting the default settings

This setting resets the default settings of the matrix switch. All settings that have been changed by the user are reset.

How to reset the default settings of the matrix switch:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **Set system defaults** and press **Enter**.
5. Use the arrow keys to mark the entry **Yes** and press **Enter** to confirm the appearing security request.

Adjusting the RS232 mode and the baud rate of the service port

The RS232 interface of the matrix switch can be used for different applications. In addition to controlling a power switch, this interface can be used by the customer service team for service diagnoses.

Depending on the interface application, the interface mode and, if necessary, the baud rate have to be selected.

How to change the mode and/or the baud rate of the RS232 interface:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. Mark the row **System** and press **Enter**.
4. Mark the row **RS232 service** and press **F8** to select if you want to use the interface for controlling the **Powerswitch (G&D Hardboot)** or for diagnoses that are carried out by the customer service team (**Debug**).
5. Mark the row **RS232** baud rate and press **F8** to select the desired baud rate (**9600**, **19200**, **38400**, **57600** or **115200**).

   NOTE: Depending on the interface operating mode, the baud rate is possibly preset.

6. Press **F2** to save your settings.

Calling information about the system

Hotkey settings

The active hotkey as well as the valid select keys and tradeswitch keys are displayed in the *Hotkey information* menu.

How to display the hotkey settings:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F12** to call the *Information* menu.
3. Mark the row **Hotkey information** and press **Enter**.

   The desired information are now being displayed.
4. Press **Esc** to leave the menu.

Displaying firmware information of the matrix system

The *Firmware information* menu displays the firmware of the matrix switch, the user module, and the accessing target module.

How to call the Firmware information:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F12** to call the *Information* menu.
3. Mark the row **Firmware information** and press **Enter**.

   The desired information are now being displayed.
4. Press **Esc** to leave the menu.

Displaying hardware information of the matrix switch

The hardware information of the matrix switch can be displayed in the *Hardware information* menu.

Among other things, this menu lists the firmware version, the device's serial number and the MAC addresses of the network ports.

How to display the hardware information:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F12** to call the *Information* menu.
3. Mark the row **Hardware information** and press **Enter**.

   The desired information are now being displayed.
4. Press **Esc** to leave the menu.

Rights administration

Login rights for the »Config Panel« web application

The *Config Panel* web application offers a graphical user interface to configure the matrix system.

The web application provides an alternative to the configuration of the matrix switches via the devices' on-screen display at the user consoles and can be applied independently from the user modules in the network.

IMPORTANT: For applying the web application, the user accounts or the user groups have to hold the *WebIf Login* right.

How to change the login right for the *Config Panel* web application:

1. Press the hotkey **Ctrl+Num** (default) to call the on-screen display.
2. Press **F11** to call the *Configuration* menu.
3. If you want to change this right of a user account, select the row **User.**
   In case of a user group, select the row **Usergroup**.
4. Press **Enter**.
5. Mark the user account or the user group whose right to login with the *Config Panel* web application you want to change and press **F5**.
6. Mark the row **Config rights** and press **Enter**.
7. Mark the row **WebIf Login** and press **F8** to select one of the following options:

yes:	allows access to *Config Panel* web application
no:	denies access to *Config Panel* web application

8. Press **F2** to save your settings.

Controlling the matrix switch via XML

IMPORTANT: Activate the additional »IP-Control-API« function to send text-based commands.

XML enables you to control the matrix switch using third-party devices (e.g. AMX® and Crestron®). The matrix switch uses the ethernet interface to process any XML commands received from third-party devices.

Structure of a valid XML document

Any commands are transmitted as XML documents to the G&D device. Valid XML documents start with an optional, standardized header. On the top level, they are surrounded by the **<root>** tag:

STRUCTURE OF A VALID XML DOCUMENT

```
<?xml version="1.0" encoding="utf-8"?>    <!-- optional header -->
<root>                                    <!-- start tag of document -->
</root>                                   <!-- end tag of document  -->
```

Any commands you want to execute are placed between a tag that starts and ends the document (**root**). The commands are described on page 105.

Selecting devices

As of version 1.1, the XML API lets you specify devices not only by ID, but also by name.

Use the attribute **type** to select devices via ID (**"id"**) or via name (**"name"**). The attribute is supported by all commands referring to devices with a name.

ADVICE: The use of the **type** attribute is optional. If you do not use this attribute, devices are identified via ID.

USING THE NAME OF A USER MODULE FOR IDENTIFICATION

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <logon>
        <NeoConsole type="name">CON1</NeoConsole>
        <User>JohnDoe</User>
        <Password>secret</Password>
    </logon>
</root>
```

USING THE ID OF A USER MODULE FOR IDENTIFICATION

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <logon>
        <NeoConsole type="id">0x22222222</NeoConsole>
        <User>JohnDoe</User>
        <Password>secret</Password>
    </logon>
</root>
```

Use of device IDs

For responses and messages, device IDs are output as hexadecimal values including the prefix **0x (**as of version 1.1 of the XML API).

IMPORTANT: In version 1.0, device IDs were often output as described above. In some responses, however, IDs were output as hexadecimal values.

In commands, device IDs can be stated as hexadecimal values including the prefix **0x**, as octal values including the prefix **0** or as decimal values.

Use of port names

As of version 1.1 of the XML API, port names are always output in a *visible notation*. The port names are teh same as printed on the device panel.

Responses and messages of G&D devices

As of version 1.1 of the XML API, G&D devices respond with a *complete* XML document after processing an XML document.

IMPORTANT: In some cases, version 1.0 of the XML API sent a message in unstructured plain text.

Responses of G&D devices

Responses of the device are included in a **<result>** tag.

The attribute **<type>** includes the name of the executed command. When executing several commands within an XML document (see below), you can assign the responses to the different commands.

In the following example, data of a user module was requested. The available information is listed within **<item>** tags:

EXEMPLARY RESPONSE OF XML API

```
<?xml version="1.0" encoding="utf-8"?>
<root>
 <result type="list">
     <NeoConsole>
         <item>
             <id>0x22222222</id>
             <cl>NeoConsole</cl>
             <type>UCON Audio</type>
             <name>CON1</name>
             <ownerId>0x11111111</ownerId>
             <ownerCl>NeoMatrix</ownerCl>
             <ownerPort>8</ownerPort>
             <enable>1</enable>
             <poweredOn>true</poweredOn>
         </item>
     </NeoConsole>
</result>
</root>
```

Messages of G&D devices

If the XML service is not able to process a request, the service responds with an error document:

STRUCTURE OF AN ERROR DOCUMENT

```
<?xml version="1.0" encoding="utf-8"?>
<root>
     <Error>Invalid request document</Error>
</root>
```

Depending on the type of message, responses to commands, which are not executed by the XML service itself, but are delegated to the device service of the matrix switch, are output in different XML containers.

The following containers are used for this purpose:

- Error messages are output within the container **<Error>**.
- Warnings are output within the container **<Warning>**.
- Success messages and general messages not fitting the categories given above are output within the container **<commandStatus>**.

IMPORTANT: Until version 1.0 of the XML API, all responses of delegated commands were output within the container **<commandStatus>**.

EXEMPLARY ERROR MESSAGE

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <result type="logon">
        <Error>authentication failed</Error>
    </result>
</root>
```

Combining multiple commands in an XML document

You can combine several commands within one XML document. The XML service processes the commands in the same order in which they are listed in the XML document.

An XML document as described above can look as follows:

COMBINING MULTIPLE COMMANDS IN ONE XML DOCUMENT

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <logon>
        <NeoConsole>0x22222222</NeoConsole>
        <User>JohnDoe</User>
        <Password>secret</Password>
    </logon>
    <connect>
        <NeoConsole>0x22222222</NeoConsole>
        <NeoCpu>0x33333333</NeoCpu>
    </connect>
    <showmessage>
        <Type>INFO</Type>
        <Text> Message</Text>
        <NeoConsole>0x22222222</NeoConsole>
    </showmessage>
</root>
```

The corresponding response combines individual commands in one document.

Push notifications for events occurred

For TCP connection, the service for text-based control sends *push notifications* to inform users about events occurred.

Such events are reported via **<pushNotification>** container. The type of notification is listed as **type** attribute of this tag.

EXAMPLE: Connecting and disconnecting of devices triggers push notifications for every channel. It is not important how the connection was established or disconnected (e.g. via OSD or XML).

PUSH NOTIFICATION WHEN ESTABLISHING A CONNECTION

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <pushNotification type="connection_event">
        <consoleId>0x22222222</consoleId>
        <consoleCl>DviConsole</consoleCl>
        <consoleName>CON1</consoleName>
        <targetId>0x33333333</targetId>
        <targetCl>DviCpu</targetCl>
        <targetName>CPU1</consoleName>
        <userName>JohnDoe</userName>
        <userRealname>John Doe</userRealname>
    </pushNotification>
</root>
```

PUSH NOTIFICATION WHEN DISCONNECTING A CONNECTION

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <pushNotification type="disconnection_event"
        ><consoleId>0x22222222</consoleId>
        <consoleCl>DviConsole</consoleCl>
        <consoleName>CON1</consoleName>
    </pushNotification>
</root>
```

ADVICE: When evaluating push notifications, you can reproduce any switching processes of the device, for example.

By default, the following notifications are active:

- **connection_event:** Connection between user module and target module established
- **disconnection_event:** Connection between user module and target module disconnected
- **user_push_event:** Push event triggered by user

In addition, you can subscribe to the following notifications:

- **device_online_event:** Status change of a module to *online*
- **device_offline_event:** Status change of a module to *offline*
- **redirect_event:** Redirection of keyboard and mouse data executed

Subscribing to push notifications

NOTE: The subscription applies only for the connection on which the *subscribe* command is sent.

Use the **<subscribe>** container, to subscribe to push notifications for one or more types of notifications.

Within the **<Notification>** tag, you can specify the type of notification (see above) by using the **type** attribute.

To activate notifications for the event that the device status changes, you can use the following XML document:

ACTIVATING NOTIFICATIONS FOR CHANGES OF THE DEVICE STATUS

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <subscribe>
        <Notification type="device_online_event"/>
        <Notification type="device_offline_event"/>
    </subscribe>
</root>
```

Unsubscribing from push notifications

NOTE: The unsubscription applies only for the connection on which the *subscribe* command is sent.

Use the **<unsubscribe>** container, to unsubscribe to push notifications for one or more types of notifications.

Within the **<Notification>** tag, you can specify the type of notification (see above) by using the **type** attribute.

To activate notifications for events regarding connections, you can use the following XML document:

DEACTIVATING NOTIFICATIONS FOR EVENTS REGARDING CONNECTIONS

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <unsubscribe>
        <Notification type="connection_event"/>
        <Notification type="disconnection_event"/>
    </unsubscribe>
</root>
```

Configuring accesses of devices for XML control

Use the web application *Config Panel* to define »remote control« accesses and their settings.

IMPORTANT: These accesses are required to control the device via XML.

How to create a new access or edit an existing access:

1. In the directory tree, click **KVM matrix systems > [Name] > Matrix switches**.
2. Right-click the device you want to configure and click **Configuration** on the context menu.
3. Click the **Network> Remote Control** tabs.
4. To add a new remote control access, click **Add**.
   To edit an existing access, click **Edit**.
5. Enter or edit the following data:

Access:	Select the protocol (**TCP**) or (**UPD**) to process XML communication.
Port:	Enter the port to process XML communication.
Status:	Select if access is **Enabled** or **Disabled**.

6. Click **OK** to save your settings and to close the window.

Commands

User logon and user logoff

User can log in with the command **<logon>**.
The command **<logoff>** logs users off.

A successful login requires the following parameters:

<NeoConsole>	User module of user logon
<User>	Name of user who wants to log in
<Password>	Password of user who wants to log in

Transmitting username and password is not required when logging in.

USER LOGIN

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <logon>
        <NeoConsole>0x22222222</NeoConsole>
        <User>JohnDoe</User>
        <Password>secret</Password>
    </logon>
</root>
```

USER LOGOFF

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <logoff>
        <NeoConsole>0x22222222</NeoConsole>
    </logoff>
</root>
```

Establishing a connection to a target module or disconnecting a connection

The command **<connect>** allows a user module to access a target module.

The ID or name of the target module to be accessed and the ID or name of the user module are used as parameters:

<NeoConsole>	User module
<NeoCpu>	Target module
<CloseDialogs>	Close OSD after establishing a connection (connect)
<OpenSelectDialog>	Close OSD after disconnection (disconnect)

ESTABLISHING A CONNECTION

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <connect>
        <NeoConsole>0x22222222</NeoConsole>
        <NeoCpu>0x33333333</NeoCpu>
        <CloseDialogs/>
    </connect>
</root>
```

DISCONNECTING A CONNECTION

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <disconnect>
        <NeoConsole>0x22222222</NeoConsole>
        <OpenSelectDialog/>
    </disconnect>
</root>
```

Showing messages

Use the command **<showmessage>** to send a message to a user module. Users at the user module can see the message on their OSD.

NOTE: As of version 1.1 of the XML API, you can add an optional timeout (time in seconds). After the time elapses, the message closes automatically.

The following parameters are required to send commands:

<Type>	Type of message (**INFO**, **WARNING** or **ERROR**)
<Text>	Text of message to be shown
<Timeout>	Time in seconds after which the message is closed automatically
<NeoConsole>	User module, which shows the message

SHOWING A MESSAGE (WITH TIMEOUT)

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <showmessage>
        <Type>INFO</Type>
        <Text>Message</Text>
        <Timeout>5</Timeout>
        <NeoConsole>0x22222222</NeoConsole>
    </showmessage>
</root>
```

Opening or closing the OSD

Use the commands **<openmenu>** and **<closemenu>** to open or close the OSD (*Select menu*) on a user module.

The following parameters are required to send commands:

<openmenu>	Open OSD on a user module
<closemenu>	Close OSD on a user module

OPEN OSD

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <openmenu>
        <NeoConsole>0x22222222</NeoConsole>
    </openmenu>
</root>
```

CLOSE OSD

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <closemenu>
        <NeoConsole>0x22222222</NeoConsole>
    </closemenu>
</root>
```

Listing information about devices and connections

Use the command **<list>** to list information about devices and connections.

The parameters of the command define the type of information you want to list:

<NeoCpu>	Data about target modules
<NeoConsole>	Data about user modules
<NeoMatrixSwitch>	Data about matrix switches
<MatrixConnectionList>	Connections between connected devices

- **List of information about matrix switches**

REQUESTING DATA FROM MATRIX SWITCHES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <list>
        <NeoMatrixSwitch/>
    </list>
</root>
```

LIST OF INFORMATION ABOUT A MATRIX SWITCH

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <result type="list">
        <NeoMatrixSwitch>
            <item>
                <id>0x11111111</id>                <!-- ID -->
                <cl>NeoMatrix</cl>                 <!-- Device class -->
                <type>CATCenter NEO16</type>       <!-- Variant -->
                <name>Matrix1</name>               <!-- Name -->
                <poweredOn>true</poweredOn>        <!-- Status of power supply -->
                <ipSwitching>yes</ipSwitching>     <!-- IP-Control-API enabled? -->
                <monitoring>yes</monitoring>       <!-- Monitoring enabled? -->
            </item>
        </NeoMatrixSwitch>
    </result>
</root>
```

- **List of information about a user module**

REQUESTING DATA FROM USER MODULES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <list>
        <NeoConsole/>
    </list>
</root>
```

LIST OF INFORMATION ABOUT USER MODULES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <result type="list">
        <NeoConsole>
            <item>
                <id>0x22222222</id>                  <!-- ID -->
                <cl>NeoConsole</cl>                  <!-- Device class -->
                <type>UCON Audio</type>              <!-- Variant -->
                <name>CON1</name>                    <!-- Name -->
                <ownerId>0x11111111</ownerId>        <!-- ID of connected device -->
                <ownerCl>NeoMatrix</ownerCl>         <!-- Device class of connected device -->
                <ownerPort>8</ownerPort>             <!-- Port at connected device -->
                <enable>1</enable>                   <!-- User module enabled? -->
                <poweredOn>false</poweredOn>         <!-- Status of power supply -->
            </item>
        </NeoConsole>
    </result>
</root>
```

- **List of information about a target module**

REQUESTING DATA FROM TARGET MODULES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <list>
        <NeoCpu/>
    </list>
</root>
```

LIST OF INFORMATION ABOUT TARGET MODULES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <result type="list">
        <NeoCpu>
            <item>
                <id>0x33333333</id>                  <!-- ID -->
                <cl>NeoCpu</cl>                      <!-- Device class -->
                <type>CATpro2</type>                 <!-- Variante-->
                <name>CPU1</name>                    <!-- Name -->
                <poweredOn>false</poweredOn>         <!-- Status of power supply -->
            </item>
        </NeoCpu>
    </result>
</root>
```

- **List of connections between connected devices**

REQUESTING CONNECTIONS BETWEEN CONNECTED DEVICES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <list>
        <MatrixConnectionList/>
    </list>
</root>
```

LIST OF CONNECTIONS BETWEEN CONNECTED DEVICES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <result type="list">
        <MatrixConnectionList>
            <item>
                <cpuId>0x33333333</cpuId>                          <!-- CPU ID -->
                <cpuCl>NeoCpu</cpuCl>                              <!-- CPU device class -->
                <cpuName>CPU1</cpuName>                            <!-- CPU name -->
                <cpuPoweredOn>false</cpuPoweredOn>                 <!-- CPU power supply -->
                <signalType>normal</signalType>                    <!-- Signal: normal|viewonly -->
                <consoleId>0x22222222</consoleId>                  <!-- CON ID -->
                <consoleCl>NroConsole</consoleCl>                  <!-- CON device class -->
                <consoleName>CON1</consoleName>                    <!-- CON name -->
                <connectionOwnerId>0x11111111</connectionOwnerId>     <!-- Matrix ID -->
                <connectionOwnerCl>NrpMatrix</connectionOwnerCl>      <!-- Matrix class -->
                <connectionOwnerPort>8</connectionOwnerPort>          <!-- Matrix port -->
                <consoleConfigEnable>1</consoleConfigEnable>   <!-- CON enabled? -->
                <consolePoweredOn>true</consolePoweredOn>      <!-- CON power supply -->
                <userName>JohnDoe</userName>                   <!--Username -->
                <userRealname>John Doe</userRealname>          <!--Realname -->
            </item>
        </MatrixConnectionList>
    </result>
</root>
```

Requesting monitoring values

The XML tag **<monitor>** is used to request monitoring values. As parameter, the **<monitor>** tag expects the class tag **<NeoMatrixSwitch>**.

In addition to the class tag, you can also add the ID or name of the requested monitoring value as shown in the example:

REQUESTING ALL MONITORING VALUES OF MATRIX SWITCH 0X11111111

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <monitor>
        <NeoMatrixSwitch><id>0x11111111</id></NeoMatrixSwitch>
    </monitor>
</root>
```

By stating the desired monitoring value, you can limit the list even further.

REQUESTING MONITORING VALUE »TEMPERATURE SWITCH« OF MATRIX SWITCH 0X11111111

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <monitor>
        <NeoMatrixSwitch>
            <id>0x11111111</id>
            <monitorName>Temperature</monitorName>
        </NeoMatrixSwitch>
    </monitor>
</root>
```

This is an exemplary response of the XML service:

LIST OF MONITORING VALUES OF MATRIX SWITCHES

```
<?xml version="1.0" encoding="utf-8"?>
<root>
    <result type="monitor">
        <NeoMatrixSwitch>
            <item>
                <id>0x11111111</id>
                <monitorName>Temperature</monitorName>
                <value>35.0</value>
                <alarm>off</alarm>
                <acknowledged>no</acknowledged>
            </item>
        </NeoMatrixSwitch>
    </result>
</root>
```

NOTE: In addition to name and value of the respective monitoring value, the two flags **acknowledged** and **alarm** are always returned as well. With the **alarm** flags, you can check if the monitoring value lies inside (**off**) or outside (**on**) of its defined range. **Acknowledged** complies with the *Viewed* function of the web application.

NOTES

The manual is constantly updated and available on our website.

http://gdsys.de/A9200100

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