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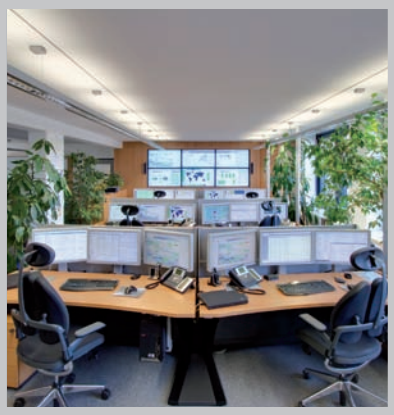
Guntermann & Drunck GmbH

VGA KVM Matrix Switches CompactCenter X2 | 7.3

VGA KVM Matrix Switches
Matrix Switches for the operation and administration of multiple computers across distributed users






Leading the way in digital KVM

Leading the way in digital KVM

Guntermann & Drunck GmbH has been established in 1985 and is named after its founders. Over 25 years have since past, and we are now a leading manufacturer of digital and analog KVM switching systems.
As an owner-managed company we work with a broad range in both digital and analog KVM closely with the marketplace and make our decisions with and in the interests of our customers. It is our philosophy to meet our customers while making decisions, to accompany them in the process and ensure that they achieve their goals.

We can do this because as a medium sized company we have short communication paths and all core competencies are in house – from development through to production. This way we can even make the impossible possible at times. If it is thanks to the modularity of the products or by implementing a customised solution. We orient ourselves towards the needs of the customer – and not the other way round.

Organisations, service providers and companies of all sizes managing numerous computers, servers and other network devices trust the comprehensive advice and service provided by Guntermann & Drunck GmbH.

Thanks to these different fields of specialisation, the demands placed on the products are many and are manifold. Our products have to provide a long-life service, be secure, uncomplicated, user-friendly, understandable and adaptable.

The System

The KVM matrix switch CompactCenter X2 enables the operation **of 16 computers** over **2 simultaneous, integrated console connections (1 x local, 1 x IP)**.

The device provides no expansions.

A **working system requires** at least:

- 1 × central module CompactCenter X2
- 1 × computer module CATpro2
- 1 × CAT transmission cable (type 5, 6, 7)

By applying the required CATpro2 computer modules, the CompactCenter X2 processes **the following signals**:

- Keyboard/Mouse [USB, PS/2, DEC-PS/2, SUN-USB-DE, SUN-USB-US]
- Video [VGA, DVI (at server side)]

The CompactCenter X is only available as X2 variant.

Highlights/System

Video

- switch and extender combined in one system
- automatic image tuning for each line between user module and computer module
- integration of DVI computers with CATpro2-DVI-Audio-UC

Signals

- PS/2 and USB keyboard/mouse

Expansion

- expandable with power switching component

Network/Communication/Safety

- access protection and user administration can be switched off
- auto-recognsing and showing of system architecture
- two network ports
- configuration » via web interface
- text-based media control over TCP/IP e.g. AXM and Crestron; Monitoring values can also be sent to AMX or Crestron media control
- reports device conditions (temperature, voltage, computer status, etc.)
- supports external authentication via LDAP, Active Directory, TACACS+, Radius
- redundant power supply

Highlights Monitoring / SNMP

Function: receive CompactCenter X2 status info
Operation via: web interface/SNMP
Efficiency: 1 cluster

The „COC-Monitoring“ feature allows you to detect the system status of G&D devices.

The web interface of the particular device provides these information, which can also be sent (SNMP trap) or queried (SNMP GET). Monitoring values can also be sent to AMX or Crestron media control.

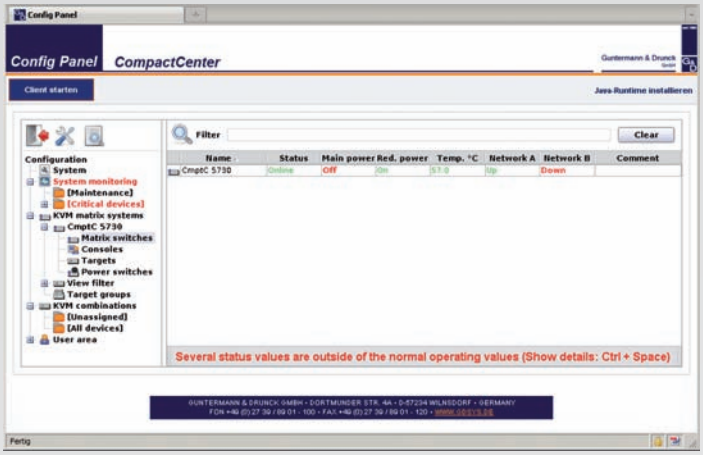
Both the monitoring function and SNMP trap and agent are included in the scope of supply.

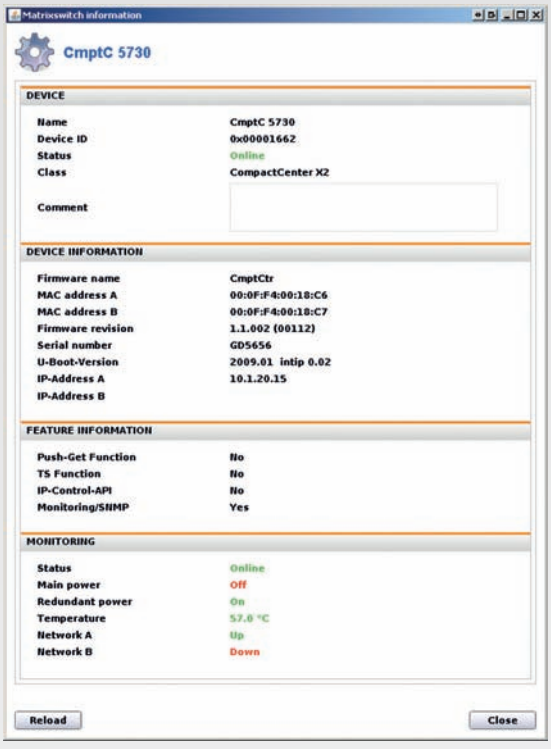
The information section shows the configuration settings and the detected status values of the device.

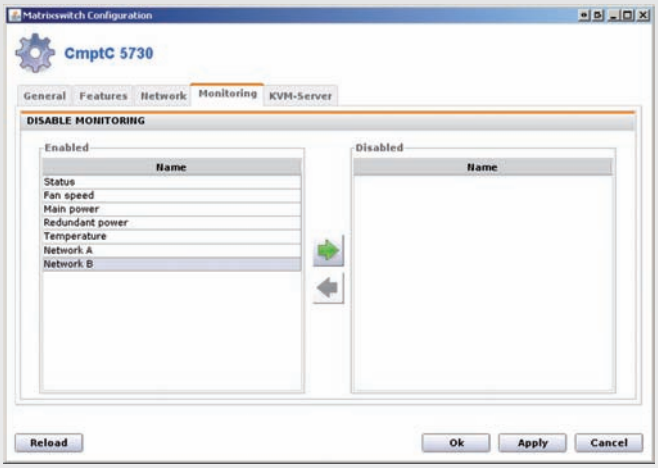
Among others, the following status values can be monitored:

- device‘s main power supply
- device‘s redundant power supply
- device‘s temperature

Status changes (e.g. power on/off) and exceeding defined threshold values (e.g. temperatures) highlight these values in red in the web interface.
On the basis of defined parametres, the device also notifies the administrator.







Features

Video

- VGA resolution up to 1920 x 1440 @ 60Hz
- VGA colour mode 24 bits
- video resolution over IP: up to 1600 x 1200 @ 60Hz according to VESA DMT or up to 1920 x 1200 @ 60Hz according to VESA CVT-RB
- colour mode digital 8 bits
- automatic video adjustment including possibility for manual readjustment
- transmission distance from computer module to central module: 30 m over CAT cable

Device

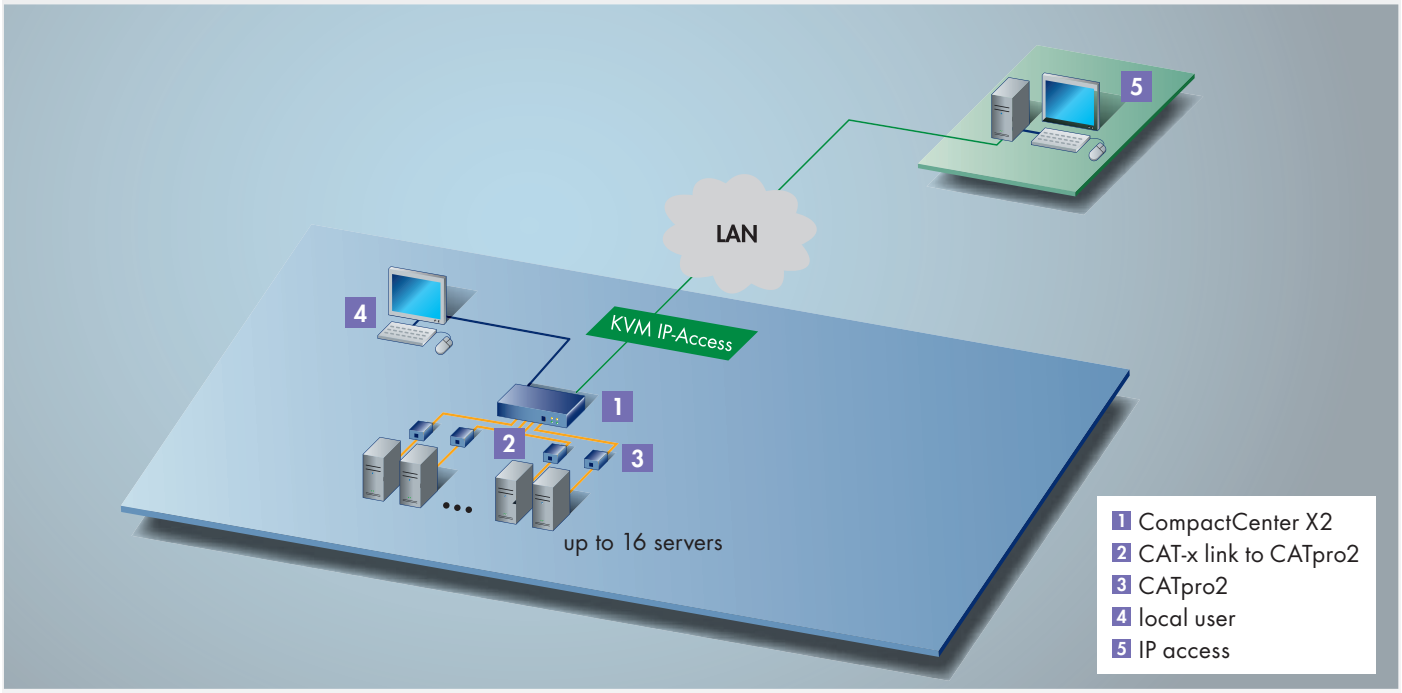
- only accesses the computer's standard interfaces
- two network ports for configuration/network services and access over IP
- no software installations required
- available as desktop and rackmount version
- housed in an aluminium casing for best interference resistance
- redundant power supply
- hot pluggable system components
- stay-alive-function for computers
- optional integration of power switches (Hardboot CCX)

Application

The CompactCenter X2 can be applied as rack switch or in small server rooms.

Thanks to its integrated IP console, it is also suitable to centrally administrate multiple smaller, distributed IT installations.

Application scheme



Variants

Design

The CompactCenter X2 devices are shipped as desktop variant. The package contents include a 19“ rackmount set.

CompactCenter X2

left: CompactCenter X2 - front view
right: CompactCenter X2 - rear view

	CompactCenter X2
User console	
Integrated consoles	2 (1 × local, 1 × IP)
Max. number of consoles per cluster	2
Local console	
Video	D-Sub HD 15 socket
Keyboard/Mouse	2 × Mini-DIN 6 socket 2 × USB-A socket
IP console	
Transmission protocol to KVM-IP client	TCP/IP protocol
Interfaces for network	2 × RJ45 socket
Communication Ethernet	10/100/1000 Mbit/s
Range of IP	unlimited
Computer	
Computer ports	16
Transmission type to computer module	dedicated CAT-x link
Max. distance computer to central module	30 m
Interfaces to computer module	16 × RJ45 socket
Main Power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.5-0.2A
Redundant power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.5-0.2A
Casing	
Material	anodised aluminium
Desktop (W × H × D)	435 × 44 × 286 mm
Rackmount (W × H × D)	19" × 1U × 286 mm
Weight	approx. 3.0 kg
Update	
Process	via web interface
Connection	RJ45 socket
Operational environment	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

Computer modules

The CATpro2 computer modules connect the **computer's external keyboard, video, mouse, and audio interfaces** with the matrix switch system.

The CATpro2 modules combine signals, process them, and use **CAT cables to transmit said signals to the KVM matrix switch**.

Each CATpro2 has a **unique ID** helping you locate the device within a matrix switch system.

CATpro2-USB

Legend

extended	120 cm overall length for telescopic rail support
UC	offers connectivity for 2 CATCenter clusters
DVI	integration of DVI-I single-link video on server side
Audio	offers connectivity for unidirectional audio
DE	German SUN keyboard layout
US	American SUN keyboard layout
VT100	converts the VT100 protocol to VGA and PS/2

Computer module | Standard

Standard variant. Transmits the following signals:

- VGA
- Keyboard/mouse PS/2, PS/2-DEC, USB or SUN-USB (DE/US)

CATpro2-PS/2

	Standard
General information	
Signal type/Video	analog video
No. of interfaces to central module	1
Total length incl. cable	0.3 m
Power supply	
Main Type	via computer keyboard interface
Connection	Mini-DIN 6/USB
Voltage	+5VDC
Interfaces to computer	
CATpro2-PS/2	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug
CATpro2-PS/2-DEC	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug
CATpro2-USB	1 × USB-A plug, 1 × D-Sub HD 15 plug
CATpro2-SUN-USB (de)	1 × USB-A plug, 1 × D-Sub HD 15 plug
CATpro2-SUN-USB (us)	1 × USB-A plug, 1 × D-Sub HD 15 plug
Interfaces to central module	
	1 × RJ45 socket
Housing	
Material	plastics
Desktop (W × H × D)	45 × 20.7 × 65 mm
Design	converter
Weight	approx. 120 g
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

Computer module | extended

Standard variant with extended connection cable for installing telescopic rails in rack mounted servers (total length of housing and cable = 120 cm). Transmits the following signals:

- VGA
- Keyboard/mouse PS/2, PS/2-DEC, USB or SUN-USB (DE/US)

CATpro2-extended-PS/2

	extended
General information	
Signal type/Video	analog video
No. of interfaces to central module	1
Total length incl. cable	1.2 m
Power supply	
Main Type	via computer keyboard interface
Connection	Mini-DIN 6 / USB
Voltage	+5VDC
Interfaaces to computer	
CATpro2-extended-PS/2	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug
CATpro2-extended-PS/2-DEC	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug
CATpro2-extended-USB	1 x USB-A plug, 1 × D-Sub HD 15 plug
CATpro2-extended-SUN-USB (de)	1 x USB-A plug, 1 × D-Sub HD 15 plug
CATpro2-extended-SUN-USB (us)	1 x USB-A plug, 1 × D-Sub HD 15 plug
Interfaces to central module	
	1 × RJ45 socket
Housing	
Material	plastics
Desktop (W × H × D)	45 × 20.7 × 70 mm
Design	converter
Weight	approx. 120 g
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non condensing
Conformity	CE, RoHs

Computer module | DVI-A

Standard variant with audio support. Transmits the following signals:

- DVI-A
- Keyboard/mouse PS/2, USB

CATpro2-DVIA-USB

	DVI-A
General information	
Signal type/Video	analog video
No. of interfaces to central module	1
Total length incl. cable	0.3 m
Power supply	
Main Type	via computer keyboard interface
Connection	Mini-DIN 6 / USB
Voltage	+5VDC
Interfaces to computer	
CATpro2-Audio-PS/2	2 × Mini-DIN 6 plug, 1 x DVI-A plug
CATpro2-Audio-USB	1 x USB-A plug, 1 x DVI-A plug
Interfaces to central module	
	1 × RJ45 socket
Housing	
Material	plastics
Desktop (W × H × D)	65 × 20.7 × 65 mm
Design	converter
Weight	approx. 130 g
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

Computer module | DVI-Audio-UC

Variant for connecting computers with DVI single-link video at resolutions up to 1920 x 1200 @ 60 Hz. Converts DVI to VGA. Designed as dual module with audio support for the connection to two matrix switch clusters. Transmits the following signals:

- DVI single link
- Keyboard/mouse USB or SUN-USB (DE/US)
- Audio (Line Out)

Audio is exclusively supported by CATCenter NEO.

CATpro2-DVI-Audio-UC-USB

	DVI-Audio-UC
General information	
Signal type/Video	digital video (DVI-D)
Resolution	1920 × 1200 @ 60 Hz
No. of interfaces to central module	2
Total length incl. cable	2.0 m
Power supply	
Main Type	via USB interfaces of computer module/external power pack
Connection	USB | Mini-DIN 4 Buchse
Voltage	+ 5VDC | +12VDC
Interfaces to computer	
CATpro2-DVI-Audio-UC-USB	2 × USB-B socket, 1 × DVI-D socket, 1 x 3,5 mm jack plug
CATpro2-DVI-Audio-UC-SUN USB (de)	2 × USB-B socket, 1 × DVI-D socket, 1 x 3,5 mm jack plug
CATpro2-DVI-Audio-UC-SUN USB (us)	2 × USB-B socket, 1 × DVI-D socket, 1 x 3,5 mm jack plug
Interfaces to central module	
	2 × RJ45 socket
Housing	
Material	anodised aluminium
Desktop (W × H × D)	105 × 26 × 84 mm
Design	converter
Weight	approx. 200 g
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

Computer module | VT100

Variant for connecting serial servers or other components (e.g. network devices) without graphical interface via serial interface. Converts VT100 protocol to VGA and PS/2. The CATpro2-VT100 can be configured and operated over graphical user interface.

Features

- displays resolutions of 800 × 600 or 1024 × 768
- configuration over GUI
- copy/paste via mouse within the terminal window
- supports various keyboard layouts
- visible bell (visual message)
- switches between DCE and DTE
- interface generates no break signals (break-free)
- supports current features of higher VT protocols
- upgradeable (e.g. reloadable character sets)

CATpro2-VT100

	VT100
General information	
Signal type/protocol	serial, VT100
No. of interfaces to central module	1
Total length incl. cable	2.0 m
Transmission rate RS232	max. 115200 bps
Updates	1 × 2.5 mm jack plug
Power supply	
Main Type	external power pack
Connection	Mini-DIN socket
Voltage	+12VDC
Interfaces to computer	
CATpro2-VT100	1 × D-Sub 9 socket
Interfaces to central module	
	1 x RJ45 socket
Housing	
Material	anodised aluminium
Desktop (W × H × D)	105 × 26 × 84 mm
Design	converter
Weight	approx. 200 g
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

Operation / Configuration

The CompactCenter X system is operated/configured via:

- OSD + hotkeys
- web interface
- KVM-IP client

Both OSD and hotkeys are available at all local consoles. The web interface can be accessed from any consoles integrated into the network. This ensures a quick, clear and consistent operation across the entire system. Additionally the UCON-IP-eco module offers a KVM-IP client serving to establish an IP session and select and operate the servers. The client is available as native version for Windows and GNU-Linux or, independently from the operating system, as JAVA version.

OSD

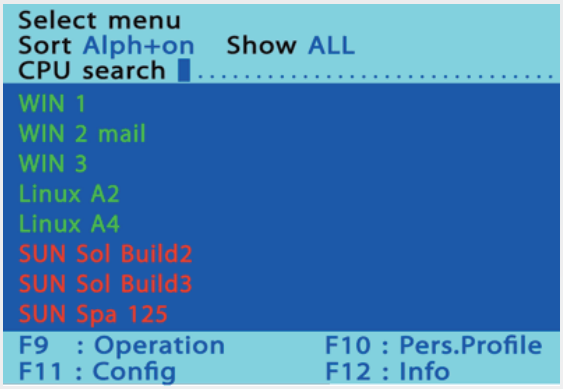
The OSD as the central, network-independent component for operating and configuring the system is available at the integrated user consoles.

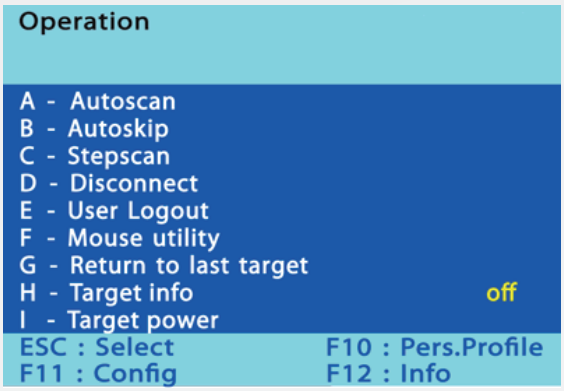
It can be customized to the user's needs and the security policies of its deployment.

The OSD can be easily accessed by keyboard/mouse and configurable hotkeys. Key combinations open the OSD menus.

The following main menus are available:
- Select (select a computer)
- Operation (frequent operations)
- Personal Profile (adjust user preferences)
- Configuration (change system settings)
- Information (query system status)

Exemplary operating options:
- user-related OSD
- targets can be directly accessed from the Select menu
- configurable hotkeys allow quick access to targets
- AutoScan, AutoSkip, StepScan





Web interface

The web-based „Config Panel“ application offers a clearly arranged graphical user interface to configure the Matrix Switches

The Config Panel is divided into several sections. The paragraphs below list only some of the settings that can be adjusted in the particular sections:

Basic configuration

- network parametres
- tools (backup/restore, firmware update, default reset)
- query of syslog messages

Rights configuration

- user rights
- user group rights
- target rights
- target group rights

Matrix switch configuration

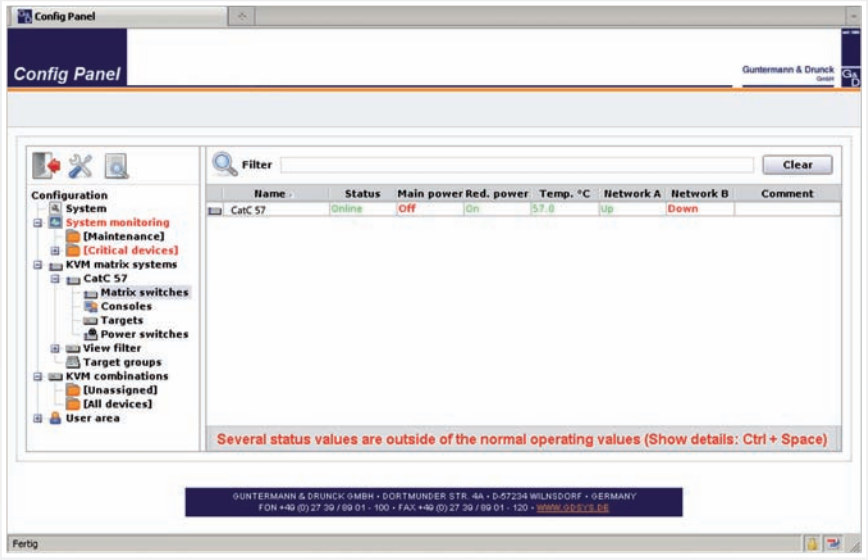
- names, hotkeys etc.
- locations
- activation of communication modules
- network settings

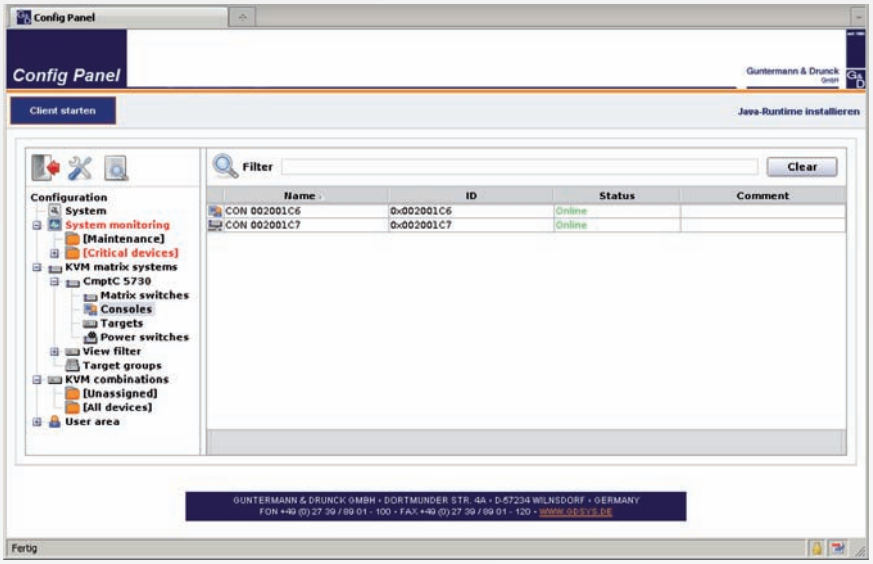
User module configuration

- name
- cascade information

Target configuration

- locations
- configuration of target module





KVM-IP-Client

KVM IP clients enable the user fast and stable remote access to the servers connected to the matrix switches. The connection is either established using the external UCON-IP-NEO user console or the integrated KVM IP port of the CompactCenter.

In order to establish an IP session, a native client (Windows, GNU/Linux) is installed on a client computer or the JAVA client is activated in the web interface of the devices.

The scope of delivery of both UCON-IP-NEO or Compact-Center already provides one native client, which can be installed or copied as often as necessary. The Java client does not require any software installation on the client computer or the target computer.

After the program has been started and the successful authentication, the desktop of the remote target computer is displayed in a program window on the client computer. The target computers does neither require any hard- or software installations nor any special configurations (e.g. mouse settings).

KVM-IP clients provide the following features:

Operation

- native or Java client
- select computers via GUI or OSD
- operate target computer with original cursor and key board down to BIOS level
- execute comprehensive keyboard macros on target computers (e.g. Ctrl+ Alt+Del)
- transfer content of IP client computer‘s clipboard to target computer

Video

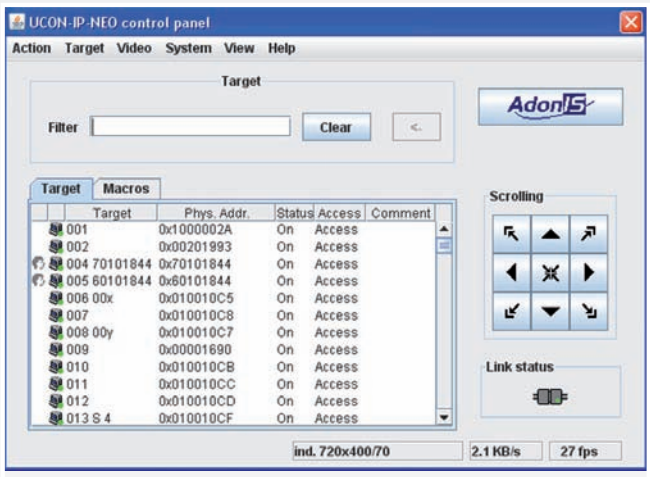
- automatic determination of video profiles for best performance and image replication
- manual adjustment of video profiles
- activate full-screen mode
- automatic adjustment of client window to target resolution
- make screenshots of active session

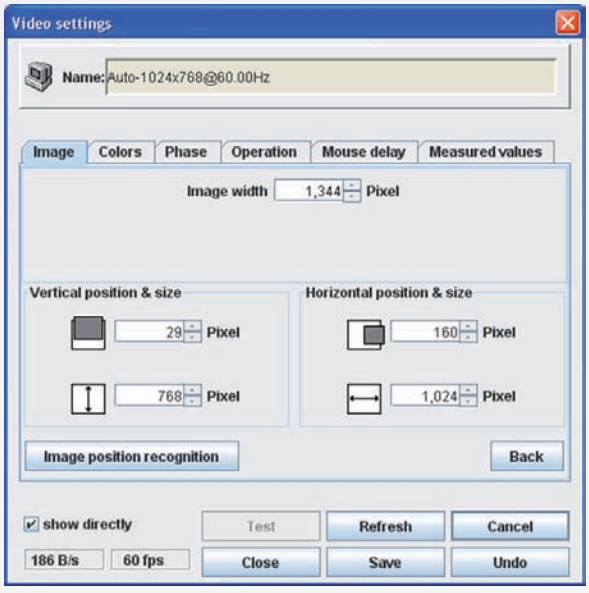
Communication

- chat with another client

System settings

- measure the bandwidth of the data transmission
- configure a mouse break
- enable mouse gestures to operate the IP client





Hardware / Expansions

Any hardware components are connected to the CompactCenter X2 and thus fully integrated into operation. Now, e.g. power-switching can be carried out in the OSD.

We provide the following hardware expansions:

- remote power-switching with HardBoot CCX

Power Switch

The HardBoot CCX is especially designed for the use with G&D matrix switches. The device switches up to 128 users per matrix switch.

The remote power switch supplies eight AC outlets per device. The outlets are divided into two different power circuits with four outputs each. Up to 16 HardBoot power switches can be integrated into one power cluster (= 128 outputs).

The 128 outputs can be grouped individually so that redundant power packs are supported as well (up to 3 AC outputs per CompactCenter CPU port).

A serial connection links the HardBoot CCX to the CompactCenter. The power switch is operated via CompactCenter OSD.

For more information on the HardBoot, please see Power Switches.

HardBoot

List of Item Numbers Central Modules

Item no.	Description	Integrated user modules	Computer
A2300033	CompactCenter X2	2	16
A8000016	IP-Console Client-WIN	Native client for Windows OS	
A8000017	IP-Console Client-Linux	Native client for Linux OS	

List of Item Numbers Computer Modules

Item no.	Description	PS/2	USB-K/M	VGA	DVI	Audio	Length of connection cable	Number of clusters
CATpro2 (Standard)								
A2320009	CATpro2-PS/2	PS/2		VGA			0,3 m	1
A2320029	CATpro2-PS/2-DEC	PS/2		VGA			0,3 m	1
A2320010	CATpro2-USB		USB	VGA			0,3 m	1
A2320011	CATpro2-SUN USB-DE		USB	VGA			0,3 m	1
A2320012	CATpro2-SUN USB-US		USB	VGA			0,3 m	1
CATpro2-extended								
A2320017	CATpro2-extended PS/2	PS/2		VGA			1,2 m	1
A2320031	CATpro2-extended PS/2-DEC	PS/2		VGA			1,2 m	1
A2320018	CATpro2-extended USB		USB	VGA			1,2 m	1
A2320019	CATpro2-extended SUN-USB-DE		USB	VGA			1,2 m	1
A2320020	CATpro2-extended SUN-USB-US		USB	VGA			1,2 m	1
A2320076	CATpro2-DVIA-PS/2	PS/2			DVIA		0,3 m	1
A2320077	CATpro2-DVIA-USB		USB		DVIA		0,3 m	1
CATpro2-VT100								
A2320021	CATpro2-VT100	PS/2		VGA			2,0 m	1
CATpro2-DVI-Audio-UC								
A2320047	CATpro2-DVI-Audio-UC-USB		USB		DVI	A	2,0 m	2
A2320048	CATpro2-DVI-Audio-UC-SunUSB-DE		USB		DVI	A	2,0 m	2
A2320049	CATpro2-DVI-Audio-UC-SunUSB-US		USB		DVI	A	2,0 m	2

List of Item Numbers Expansions CompactCenter X2

Item no.	Identifier	Description
power switching		
A4100001	HardBootCCX	Power Switch , Rackmount

ABBREVIATIONS

CPU = Computer module
PC = Computer module

CON = User module
REM = User module

MC2 = Multichannel 2
MC3 = Multichannel 3
MC4 = Multichannel 4

M = Multimode
S = Singlemode
RM = For assembly in a 19“ rack
DT = Available as desktop variant
A = Audio
AR = Audio + RS232
R = RS232
U = transparent USB 1.1
U2 = transparent USB 2.0
D = Delay

EQUIPMENT FEATURES

= modular setup

= keyboard/mouse

= dual-link DVI video

= single-link DVI video

= DisplayPort 1.1

= single-link DVI + VGA

= VGA video

= Audio

= RS232

= USB 1.1

= USB 2.0

= Delay

= Screen Freeze

= Power Switching

= Fire Wire

= VT100

= KVM IP access

= Network connection

= Web interface

= DevCon support

= Monitoring

= CAT cable

= Fiber optics

= Single user

= Multi user

= Separat local/remote user