Guntermann & Drunck GmbH

seit 1985

VGA KVM Matrix Switches

CATCenter NEO 7.0

VGA KVM Matrix Switches

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

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 switches CATCenter NEO enable the operation of **32 - 64 computers over 4, 8 or 16 simultaneous user modules**.

When cascaded, up to **128 consoles** can access up to **2048 computers**.

A **working system** consists of the following components:

- 1 × central module CATCenter NEO
- 1 × computer module CATpro2
- 1 × user module UCON
- 2 × CAT transmission cable (type 5, 6, 7)

By applying the required modules (UCON/CATpro2), the CATCenter NEO **processes the following signals**:

- keyboard/mouse [USB, PS/2, DEC-PS/2, SUN-USB-DE, SUN-USB-US]
- video [VGA, DVI (server-sided)]
- audio

We provide the following CATCenter variants for 4, 8 or 16 users.

Highlights/System

Video

- switch and extender combined in one system
- automatic image tuning for each line between user module and computer module
- transmission up to 300 m over CAT cable at maximum resolution
- integration of DVI computers with CATpro2-DVI-Audio-UC

Signals

- switches audio signals
- PS/2 and USB keyboard/mouse

Expansion

- expandable to up to 2048 computers and 128 consoles
- expandable with power switching component
- increases the system range to up to 10,000 m via fibre optics
- firmware expansion for multi-monitor consoles (TS function)
- firmware expansion to push/get own or remote screen contents (Push-Get function)
- firmware expansion to prepare switching over network (IP-Control-API)

Network / Communication / Safety

- access protection and user administration can be switched off
- auto-recognising and showing of system architecture
- two network ports
- configuration over web interface
- supports external authentication via LDAP, Active Directory, TACACS+, Radius
- redundant power supply

Highlights Monitoring / SNMP

Function: receive CATCenter NEO status info
Operation via: web interface/SNMP
Efficiency: 1 cluster

The „CCNEO 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).

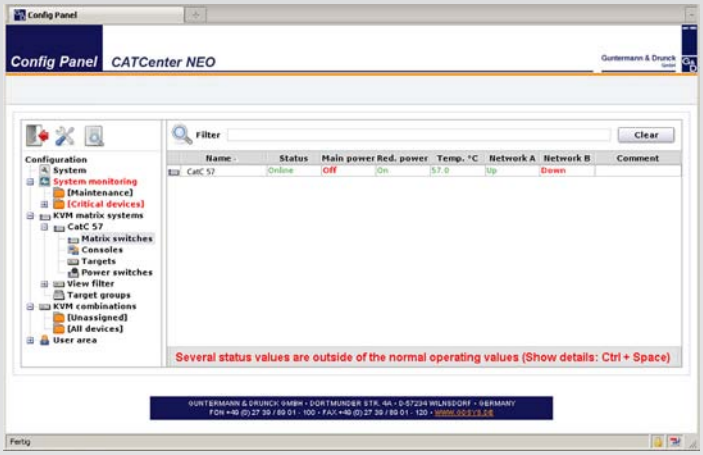
Both the monitoring function and SNMP trap and agent are included in the scope of supply.

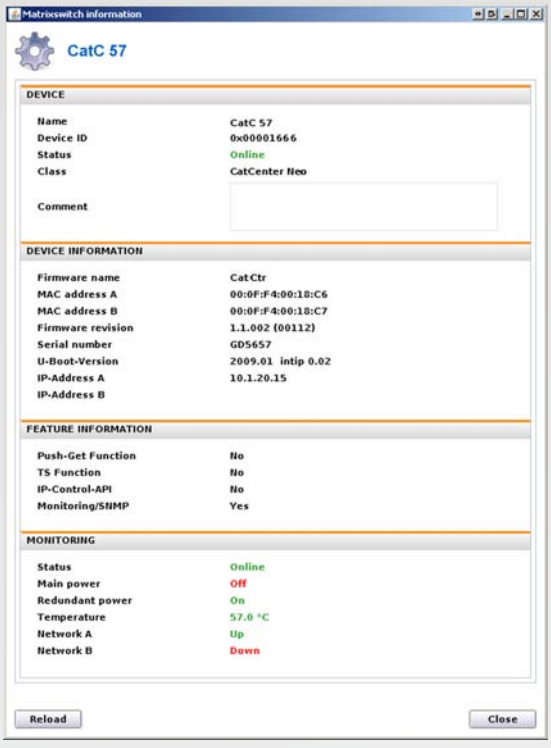
The information section shows the configuration settings and the detected status values of the device.

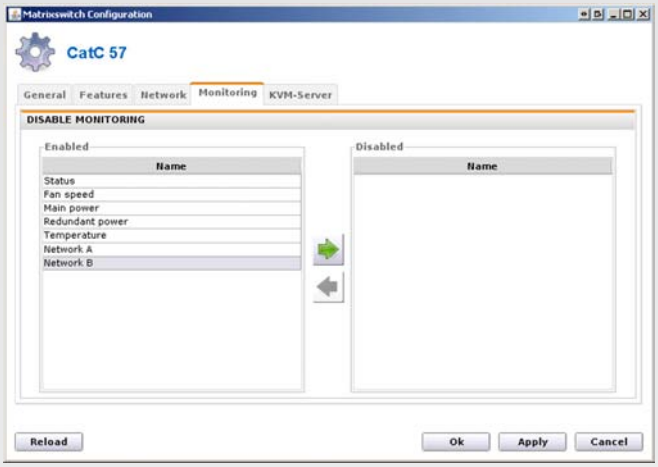
Among others, the following status values can be monitored:

- 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. Based on defined parameters, the device also notifies the administrator.







Features

Video

- VGA video resolution up to 1920 × 1440 @ 75Hz
- VGA colour mode 32 bits
- video resolution over IP max. 1920 × 1200 @ 60 Hz according to VESA CVT-RB
- digital colour mode 8 bit (with UCON-IP-NEO)
- automatic video setting, which can be adjusted to each user
- transmission length between computer module and user module: 300 m via CAT cable

Audio

- unidirectional transmission of audio signals (computer to console)
- digital resolution 24 bits
- bandwidth 22 kHz/refresh rate 48 kHz

Device

- only accesses the computer's standard interfaces
- no software installation required
- available as desktop variant incl. 19" rack mount kit
- aluminium housing for best noise immunity
- redundant power supply
- hot pluggable system components
- stay-alive function for servers
- switchable power bars (Hardboot CCX) can be optionally integrated

Use

The CATCenter NEOs are designed for the deployment in applications with large traffic and an accordingly large number of computers and simultaneous accesses.
The application can even be placed at several locations.

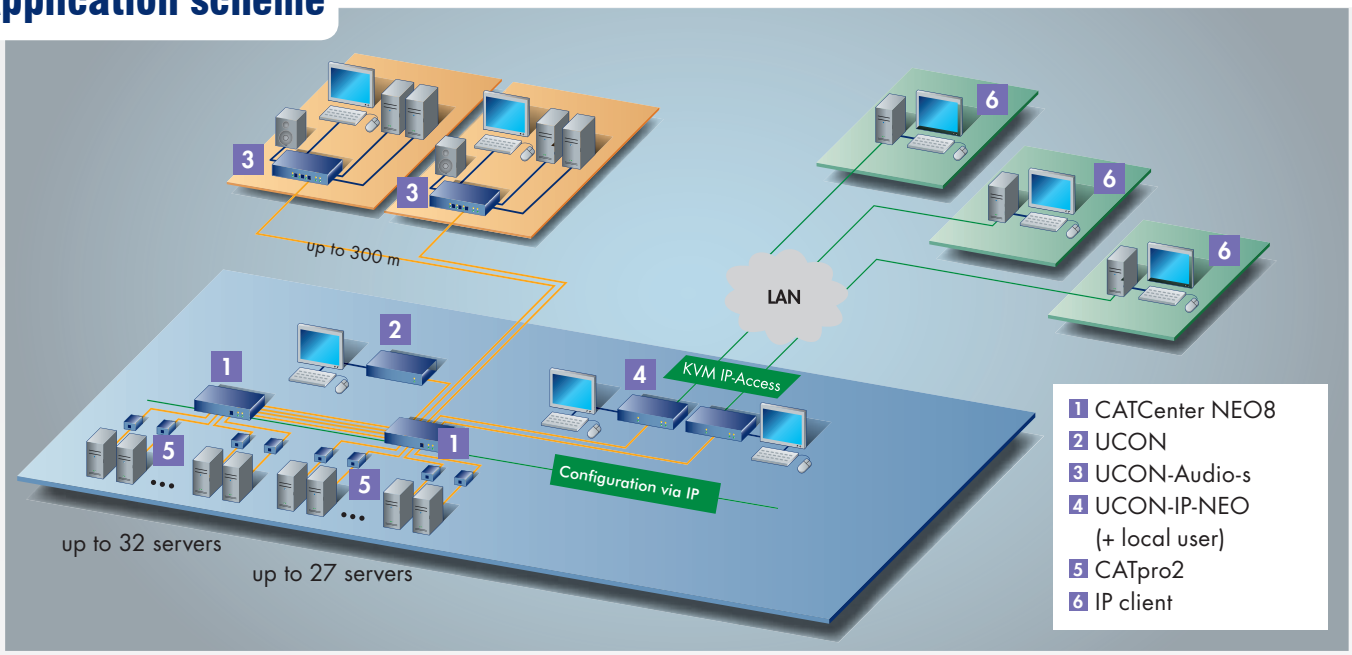
Thanks to their modularity, the matrix switches can be adapted to growing functions as well as a growing amount of computers that need to be connected.

The devices are deployed e.g. for administrating large server rooms, control centres or OB vans.

The main differences to other compact KVM matrix switches are:

- possibility to switch audio signals
- configuration via web interface
- all variants provide network ports
- up to 128 consoles

Application scheme



Variants

Design
The CATCenter NEO devices are shipped as desktop variant.

The package contents contain a 19" rackmount set.

CATCenter NEO4

left: CATCenter NEO4 - front view
right: CATCenter NEO4 - rear view

	CATCenter NEO4
User console	
Type of User Ports	permanently assigned
User ports per device	4
Max. no. of user ports per system (several clusters)	32
Transmission type to user module	dedicated CAT-x link
Transmission length to User module	300 m between user and computer module
Interfaces to user module	RJ45 socket
Network connection	2 × RJ45 socket
Computer	
Type of computer ports	permanently assigned
Computer ports	32
Computer ports cascade level 1	256
Computer ports cascade level 2	2048
Transmission type to computer module	dedicated CAT-x link
Interfaces to computer modules	32 × RJ45 socket
Main power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.3 - 0.2A
Redundant power supply	
Type	external power pack
Connection	Mini-DIN 4 socket
Voltage	+12VDC
	1.2A
Casing	
Material	anodised aluminium
Desktop (W × H × D)	435 × 44 × 286 mm
Rackmount (W × H × D)	19" × 1U × 286 mm
Weight	approx. 2.5 kg
Update	
Process	via web interface
Connection	RJ45 socket
Power Switching	
Interface	RJ11 socket
Operating environment	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

CATCenter NEO8

left: CATCenter NEO8 - front view
right: CATCenter NEO8 - rear view

	CATCenter NEO8
User console	
Type of User Ports	permanently assigned
User ports per device	8
Max. no. of user ports per system (several clusters)	64
Transmission type to user module	dedicated CAT-x link
Transmission length to user module	300 m between user and computer module
Interfaces to user module	RJ45 socket
Network connection	2 × RJ45 socket
Computer	
Type of computer ports	permanently assigned
Computer ports	32
Computer ports cascade level 1	128
Computer ports cascade level 2	512
Transmission type to computer module	dedicated CAT-x link
Interfaces to computer modules	32 × RJ45 socket
Main power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.4 - 0.2A
Redundant power supply	
Type	external power pack
Connection	Mini-DIN 4 socket
Voltage	+12VDC
	1.5A
Casing	
Material	anodised aluminium
Desktop (W × H × D)	435 x 44 x 286 mm
Rackmount (W × H × D)	19" x 1U x 286 mm
Weight	approx. 3.0 kg
Update	
Process	via web interface
Connection	RJ45 socket
Power Switching	
Interface	RJ11 socket
Operating environment	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

CATCenter NEO16

left: CATCenter NEO16 - front view
right: CATCenter NEO16 - rear view

	CATCenter NEO16
User console	
Type of User Ports	permanently assigned
User ports per device	16
Max. no. of user ports per system (several clusters)	128
Transmission type to user module	dedicated CAT-x link
Transmission length to user module	300 m between user and computer module
Interfaces to user module	RJ45 socket
Network connection	2 × RJ45 socket
Computer	
Type of computer ports	permanently assigned
Computer ports	64
Computer ports cascade level 1	256
Computer ports cascade level 2	1024
Transmission type to computer module	dedicated CAT-x link
Interfaces to computer modules	64 × RJ45 socket
Main power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.8 - 0.3A
Redundant power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.8 - 0.3A
Casing	
Material	anodised aluminium
Desktop (W × H × D)	435 x 88 x 286 mm
Rackmount (W × H × D)	19" x 2U x 286 mm
Weight	approx. 4.2 kg
Update	
Process	via web interface
Connection	RJ45 socket
Power Switching	
Interface	RJ11 socket
Operating 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 CATCenter NEO 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 CATCenter NEO 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 | Audio

Standard variant with audio support. Transmits the following signals:

- VGA
- Keyboard/mouse PS/2, USB or SUN-USB (DE/US)
- Audio (Line Out)

CATpro2-Audio-PS/2

	Audio
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 D-Sub HD 15 plug, 1 x 3.5 mm jack plug
CATpro2-Audio-USB	1 x USB-A plug, 1 x D-Sub HD 15 plug, 1 x 3.5 mm jack plug
CATpro2-Audio-SUN-USB (de)	1 x USB-A plug, 1 x D-Sub HD 15 plug, 1 x 3.5 mm jack plug
CATpro2-Audio-SUN-USB (us)	1 x USB-A plug, 1 x D-Sub HD 15 plug, 1 x 3.5 mm jack 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 | UC

Dual variant to connect a computer to two matrix switch clusters. Transmits the following signals:

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

CATpro2-UC-PS/2

	UC
General information	
Signal type/Video	analog video
No. of interfaces to central module	2
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-UC-PS/2	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug
CATpro2-UC-USB	1 × USB-A plug, 1 × D-Sub HD 15 plug
CATpro2-UC-SUN-USB (de)	1 × USB-A plug, 1 × D-Sub HD 15 plug
CATpro2-UC-SUN-USB (us)	1 × USB-A plug, 1 × D-Sub HD 15 plug
Interfaces to central module	
	2 × RJ45 socket
Housing	
Material	plastics
Desktop (W × H × T)	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 | Audio-UC

Dual variant with audio support to connect a computer to two matrix switch clusters. Transmits the following signals:

- VGA
- Keyboard/mouse PS/2, USB or SUN-USB (DE/US)
- Audio (Line Out)

CATpro2-Audio-UC-PS/2

	Audio-UC
General information	
Signal type/Video	analog video
No. of interfaces to central module	2
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-UC-PS/2	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug, 1 × 3.5 mm jack plug
CATpro2-Audio-UC-USB	1 × USB-A plug, 1 × D-Sub HD 15 plug, 1 × 3.5 mm jack plug
CATpro2-Audio-UC-SUN-USB (de)	1 × USB-A plug, 1 × D-Sub HD 15 plug, 1 × 3.5 mm jack plug
CATpro2-Audio-UC-SUN-USB (us)	1 × USB-A plug, 1 × D-Sub HD 15 plug, 1 × 3.5 mm jack plug
Interfaces to central module	
	2 × 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 | 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 | extended-UC

Dual variant for connecting a computer to two matrix switch clusters with an 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, USB

CATpro2-extended-UC-PS/2

	extended-UC
General information	
Signal type/Video	analog video
No. of interfaces to central module	2
Total length incl. cable	1.2 m
Power supply	
Main Type	via target keyboard interface
Connection	Mini-DIN 6 / USB
Voltage	+5VDC
Interfaces to computer	
CATpro2-extended-UC-PS/2	2 × Mini-DIN 6 plug, 1 × D-Sub HD 15 plug
CATpro2-extended-UC-USB	1 × USB-A plug, 1 × D-Sub HD 15 plug
Interfaces to central module	
	2 × 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 CATCenter 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

User modules

Use the UCON user modules to connect monitor, keyboard and mouse to the CATCenter systems.

CAT cables connect the UCONs to the CATCenters. The UCONs also provide the required ports for peripherals.

The UCON user modules are available in variants for direct (= 1:1 via CAT cable) or digital (= over IP) access.

UCON - front view

UCON (direct access)

UCONs provide the following features:

- dedicated 1:1 connection
- large video bandwidth
- high performance (1:1)
- no latencies

If the console to be installed is attached to a certain place and placed within a maximum distance of 300 metres away from the farthest computer, we recommend deploying direct access UCONs.

We provide the following UCON variants:

- UCON
- UCON-Audio
- UCON-s
- UCON-Audio-s

Digital UCON (access over IP)

If you need to access your computers from anywhere, we recommend deploying digital UCONs.

Digital UCONs provide the following features:

- servers can be accessed over network
- within the existing infrastructure (in-band)
- no additional software at console
- no soft- or hardware installations at target server
- no configuration at target server, e.g. mouse settings
- comprehensive password protection

We provide the following digital UCON variants:

- UCON-IP-NEO
- Twin-UCON-IP-NEO

Are you interested in experiencing the performance of our KVM-over-IP solutions? Then please request your access data here.

IP-Access trial

User module | UCON

Application

- UCON for direct access
- console up to 300 metres away from the computer module

Signals

- VGA Video
- Keyboard/Mouse PS/2 + USB

Operation

- select computers via OSD or hotkeys
- configuration via OSD (and web interface at CATCenter NEO)
- supports both TS and Push-Get function (see expansions)

UCON - rear view

Design

- desktop or rack mount variant
- also available as TWIN variant (two devices in one housing on 1U)

	UCON
User module	
Consoles	1
Additional ports for console computers	no
Interfaces for console computers (with CATpro2 variant)	- -
Assigned console ports at central module	1
Interfaces to central module	RJ45 socket
Transmission	
Transmission type	dedicated CAT-x link
Transmission cable type	CAT-x cable
Transmission distance	300 m
Video	
Signal type/Video	VGA Video
resolution (depending on cable), local connection	1920 x 1440 @ 75Hz
Delay compensation	yes
Interfaces for console	
Video	D-Sub HD 15 socket
Keyboard/Mouse	2 x Mini-DIN 6 socket
	2 x USB-A socket
TradeSwitch-LED	D-Sub 9 socket
Main power supply	
Type	internal power pack
Connector	1 x IEC plug
Voltage	AC100-240V/60-50Hz / 0.2-0.1A
Redundant power supply	
Type	external power pack
Connector	Mini-DIN 4 socket
Voltage	+12VDC/0.8A

Housing	
Material	anodised aluminium
Desktop (W×H×D)	270 x 44 x 211 mm
Rackmount (BxHxT)	19" x 1HE x 211 mm
Weight	approx. 1.3 kg
Update	
Process	via update wizard at local service socket
Connector	2.5 mm jack plug
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

User module | UCON-Audio

UCON-Audio - rear view

Application

- UCON for direct access
- console up to 300 metres away from the computer module

Signals

- VGA Video
- Keyboard/Mouse PS/2 + USB
- Audio (speakers)

Operation

- select computers via OSD or hotkeys
- configuration via OSD (and web interface with CATCenter NEO)
- supports both TS and Push-Get function (see expansions)

Design

- desktop or rackmount variant

	UCON-Audio
User module	
Consoles	1
Additional ports for console computers	no
Interfaces for console computers (with CATpro2 variant)	- -
Assigned console ports at central module	1
Interfaces to central module	RJ45 socket
Transmission	
Transmission type	dedicated CAT-x link
Transmission cable type	CAT-x cable
Transmission distance	300 m
Video	
Signal type/Video	VGA Video
resolution (depending on cable), local connection	1920 x 1440 @ 75Hz
Delay compensation	yes
Audio	
Type	internal
Sampling rate	48 kHz
Resolution	24 bit digital
Bandwidth	22 kHz
Interfaces for console	
Video	D-Sub HD 15 socket
Keyboard/Mouse	2 x Mini-DIN 6 socket
	2 x USB-A socket
Audio	3.5 mm jack plug
TradeSwitch-LED	D-Sub 9 socket
Stromversorgung Main	
Type	internal power pack
Connector	1 x IEC plug
Voltage	AC100-240V/60-50Hz / 0.2-0.1A

Redundant power supply	
Type	external power pack
Connector	Mini-DIN 4 socket
Voltage	+12VDC/0.9A
Housing	
Material	anodised aluminium
Desktop (W×H×D)	270 x 44 x 211 mm
Rackmount (BxHxT)	19" x 1HE x 211 mm
Weight	approx. 1.4 kg
Update	
Process	via update wizard at local service socket
Connector	2.5 mm jack plug
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

User module | UCON-s

Application

- UCON for direct access
- console up to 300 m away from the computer module
- additional connection of two console computers

Signals

- VGA Video
- Keyboard/Mouse PS/2 + USB

Operation

- select computers via OSD or hotkeys
- select console computers or remote computers via button at the front

UCON-s - rear view

- configuration via OSD (and web interface with CATCenter NEO)
- supports Push-Get function (see expansions)

Design

- desktop or rackmount variant

	UCON-s
User module	
Consoles	1
Additional ports for console computers	yes, 2
Interfaces for console computers (with CATpro2 variant)	RJ45 socket
Distance console computers - UCON-s	max. 5 m
Assigned console ports at central module	1
Interfaces to central module	RJ45 socket
Transmission	
Transmission type	dedicated CAT-x link
Transmission cable type	CAT-x cable
Transmission distance	300 m
Video	
Signal type/Video	VGA Video
resolution (depending on cable), local connection	1920 x 1440 @ 75Hz
Delay compensation	yes
Interfaces for console	
Video	D-Sub HD 15 socket
Keyboard/Mouse	2 x Mini-DIN 6 socket
	2 x USB-A socket
TradeSwitch-LED	D-Sub 9 socket
Main power supply	
Type	internal power pack
Connector	1 x IEC plug
Voltage	AC100-240V/60-50Hz / 0.2-0.1A
Redundant power supply	
Type	external power pack
Connector	Mini-DIN 4 socket
Voltage	+12VDC/0.8A

Housing	
Material	anodised aluminium
Desktop (W×H×D)	270 x 44 x 211 mm
Rackmount (BxHxT)	19" x 1HE x 211 mm
Weight	approx. 1.3 kg
Update	
Process	via update wizard at local service socket
Connector	2.5 mm jack plug
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

User module | UCON-Audio-s

Application

- UCON for direct access
- console up to 300 m away from the computer module
- additional connection of two console computers

Signals

- VGA Video
- Keyboard/Mouse PS/2 + USB
- Audio (speakers)

Operation

- select computers via OSD or hotkeys
- select console computers or remote computers via button at the front

UCON-Audio-s - rear view

- configuration via OSD (and web interface with CATCenter NEO)
- supports TS and Push-Get function (see expansions)

Design

- desktop or rackmount variant

	UCON-Audio-s
User module	
Consoles	1
Additional ports for console computers	yes, 2
Interfaces for console computers (with CATpro2 variant)	RJ45 socket
Distance console computers - UCON-s	max. 5 m
Assigned console ports at central module	1
Interfaces to central module	RJ45 socket
Transmission	
Transmission type	dedicated CAT-x link
Transmission cable type	CAT-x cable
Transmission distance	300 m
Video	
Signal type/Video	VGA Video
resolution (depending on cable), local connection	1920 x 1440 @ 75Hz
Delay compensation	yes
Audio	
Type	internal
Sampling rate	48 kHz
Resolution	24 bit digital
Bandwidth	22 kHz
Interfaces for console	
Video	D-Sub HD 15 socket
Keyboard/Mouse	2 x Mini-DIN 6 socket
	2 x USB-A socket
Audio	3.5 mm jack plug
TradeSwitch-LED	D-Sub 9 socket

Main power supply	
Type	internal power pack
Connector	1 x IEC plug
Voltage	AC100-240V/60-50Hz / 0.2-0.1A
Redundant power supply	
Type	external power pack
Connector	Mini-DIN 4 socket
Voltage	+12VDC/0.9A
Housing	
Material	anodised aluminium
Desktop (W×H×D)	270 x 44 x 211 mm
Rackmount (BxHxT)	19" x 1HE x 211 mm
Weight	approx. 1.4 kg
Update	
Process	via update wizard at local service socket
Connector	2,5 mm jack plug
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

User module | UCON-IP-NEO

Application

- digital UCON for IP access
- IP console, which accesses the system over network (unlimited distance)
- competing local console at device for access at server room

TWIN-UCON-IP-NEO- rear view

Signals

- VGA Video
- colour mode 8 Bit
- resolution via IP up to 1920 x 1200 @ 60Hz
- resolution locally up to 1920 x 1440 @ 75Hz
- Keyboard/Mouse PS/2

Operation

- IP session over native client for Windows or Linux
- or Java client (called up via web interface of UCON-IP-NEO)
- select computers via OSD or graphical interface
- configuration over web interface of the device
- supports Push-Get function (see expansions)

Design

- also available as twin variant (two devices in one housing on 1U)
- desktop version incl. rackmount kit

	UCON-IP-NEO
User module	
Consoles	2 (1 x IP, 1 x local, competing)
Additional ports for console computers	no
Interfaces for console computers (with CATpro2 variant)	- -
Assigned console ports at central module	1
Interfaces to central module	RJ45 socket
Network interface	RJ45 socket
Transmission	
Type to central module	dedicated CAT-x link
Cable type	CAT-x cable
Distance	300 m
Type to KVM-IP client	TCP/IP protocol
Communication Ethernet	10/100/1000 Mbit/s
Distance IP	unlimited
Video	
Signal type/Video	VGA video
resolution (depending on cable), local connection	1920 x 1440 @ 75Hz
Resolution via IP up to	1920 x 1200 @ 60Hz
Delay compensation	yes
Interfaces for console	
Video	D-Sub HD 15 socket
Keyboard/Mouse	2 x Mini-DIN 6 socket
Main power supply	
Type	internal power pack
Connector	1 x IEC plug
Voltage	AC100-240V/60-50Hz / 0.3-0.2A

Redundant power supply	
Type	external power pack
Connector	Mini-DIN 4 socket
Voltage	+12VDC/1.2A
Housing	
Material	anodised aluminium
Desktop (W×H×D)	435 x 44 x 356 mm
Rackmount (BxHxT)	19" x 1HE x 356 mm
Weight	approx. 3.0 kg
Update	
Process	via web interface
Connector	RJ45 socket
Operating conditions	
Temperature	+5 to +40 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

Operation / Configuration

The CATCenter Neo system is operated/configured via:

- OSD + hotkeys
- web interface
- KVM-IP client (only for UCON-IP-NEO)
- UCON-IP web interface (only for UCON-IP-NEO)

OSD and hotkeys are available on all UCON user modules and ensure fast, clearly arranged and easy operation across the entire system.

OSD

The OSD as the central component for operating and configuring the system is available at all external or internal UCON user consoles.

It can be adapted to the user's needs and the security policies of its environment.

The OSD can be easily accessed via keyboard/mouse and configurable hotkeys while key combinations open the OSD menus.

The following main menus are available:

Select

- select any computer
- search any computer

Operation (frequent operating processes)

- scan channels
- logout
- disconnect
- switch power

Personal Profile (user-related settings)

- define preferred computer
- OSD position/size
- channel display on/off

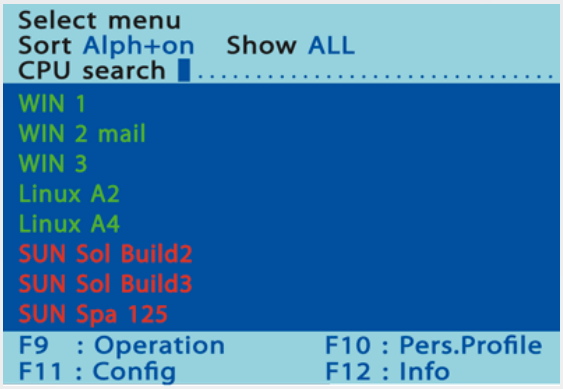
Configuration (change system settings)

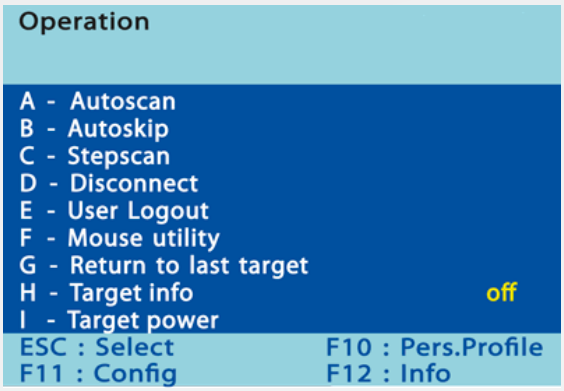
- user administration
- user group management
- access rights managment

Information (query system status)

Several 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

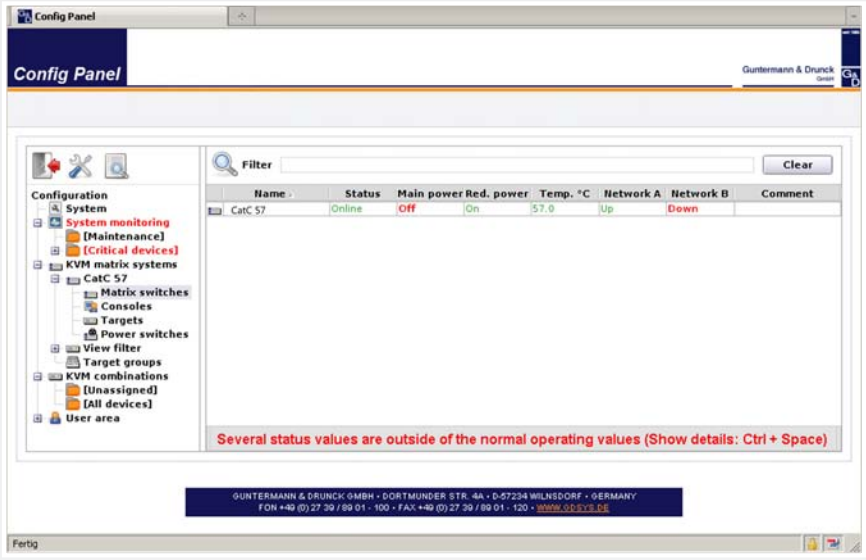
- names, hotkeys etc.
- locations
- activation of communication modules
- network settings

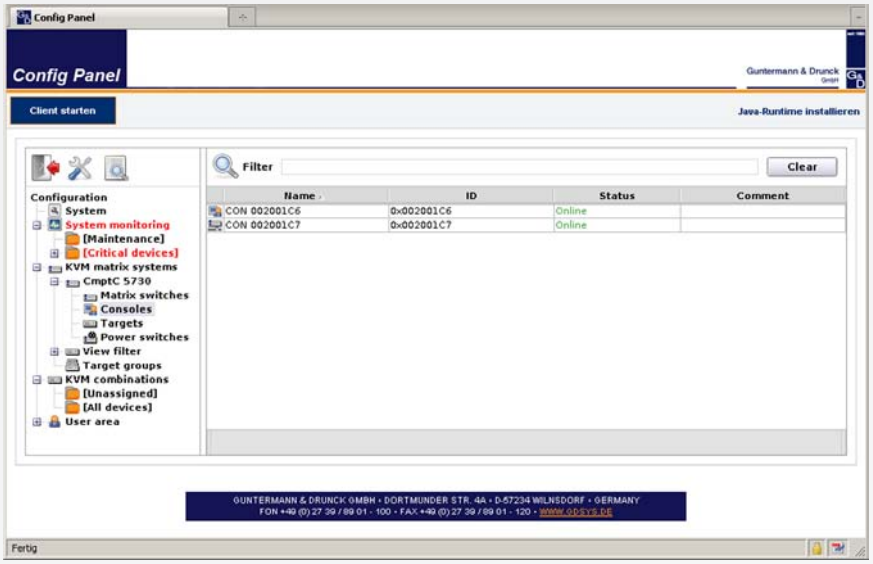
User module configuration

- 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

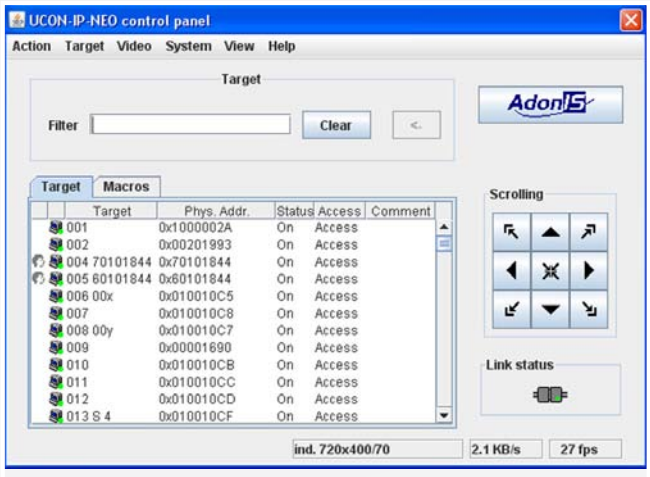
- automatic determination of video profiles for best performance and image replication
- manual adjustment of video profiles
- activate full-screen mode
- automatic adjustment of client window to target resolution
- make screenshots of active session

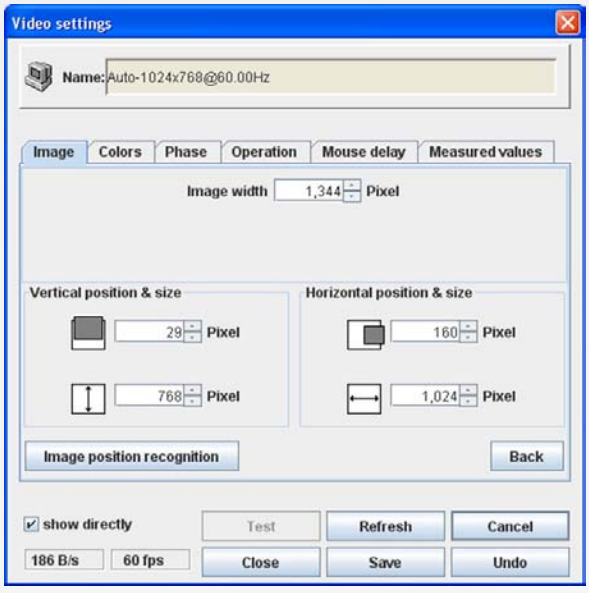
Communication

- 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





UCON-IP Web-Interface

The web interface is used to configure the UCON-IP-NEO user console and provides the following selected settings:

Configuration

- set network parameters
- enable session time-out for IP clients
- set system date and time, select NTP server

Maintenance

- backup configuration data
- restore configuration data
- reset system defaults

Logging

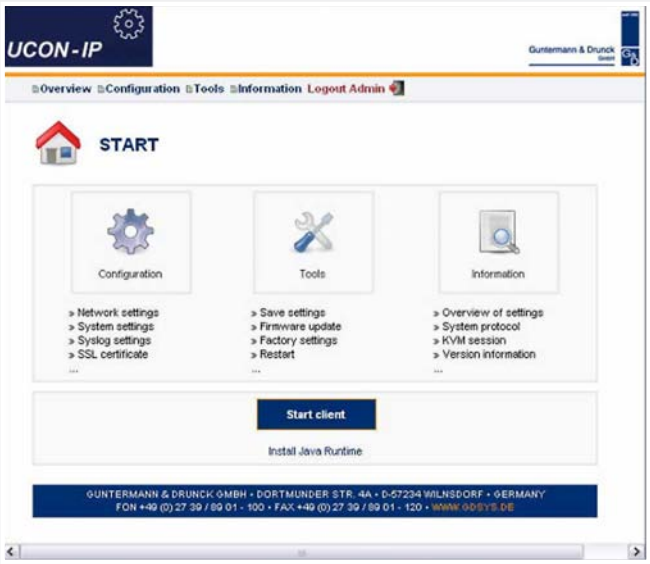
- adjust syslog settings
- query system information, e.g. current network settings, log files, system configuration, active IP sessions, local syslog protocol
- forward syslog messages to two different servers

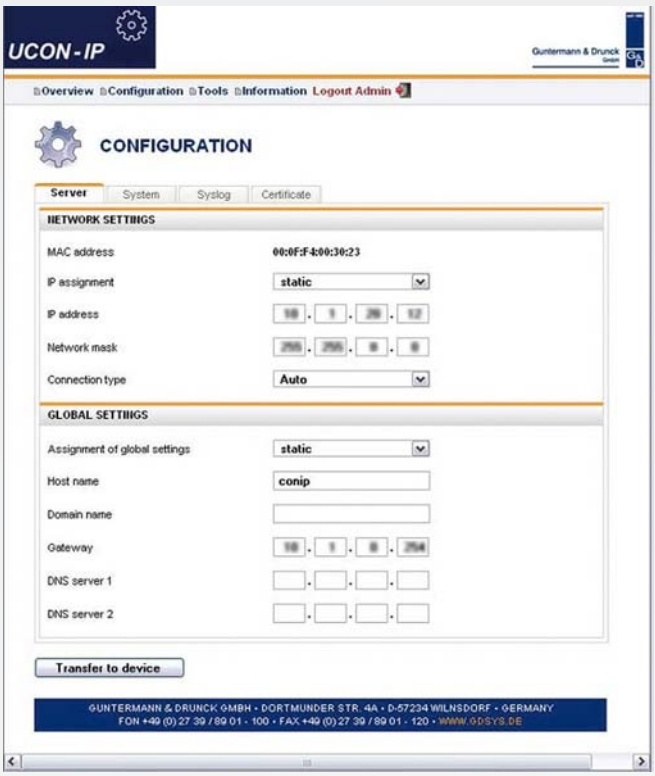
Update

- install firmware updates via network

Java client for access over IP

- activate Java client to access the computers connected to the CATCenter over IP





Hardware / Expansions

Any hardware components are connected to the CATCenter NEO 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
- increasing the number of computers by cascading with other CATCenter NEO switches
- increasing the number of consoles with UC products
  - CATpro2-UC (double the number of consoles, applicable for backup systems)
  - UserCenter CAT8 (multiply number of consoles by eight)
- increasing the system's range up to 10,000 m by integrating a fibre optics line (NEO-FiberLink)

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 CATCenter CPU port).

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

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

HardBoot

More computers

By cascading, CATCenter X and NEO systems can be expanded on the computer side. Any CATCenter central modules can be interconnected.

When cascading different types of CATCenters, the most powerful device should be the master device within the cascade since the master carries out all controlling tasks.

If the CATCenter NEO is used as master, the whole cascade can be configured via network. The CATCenter NEO can also serve as master for CATCenter X devices.

	CATCenter NEO4		CATCenter NEO8		CATCenter NEO16	
	No. of Target Ports	CATCenters in total	No. of Target Ports	CATCenters in total	No. of Target Ports	CATCenters in total
Target-Ports native	32	1	32	1	64	1
Cascade level 1	256	9	128	5	256	5
Cascade level 2	2048	73	512	21	1024	21

more consoles

UC products come in handy if the number of consoles **exceeds the number of available ports at the device**.

The consoles can be expanded by placing UC products between computers and CATCenter Neo.

UC variants are employed instead of - or, when combined with the UserCenter CAT8-Audio, in addition to - CATpro2 computer modules.

- **Doubling** of consoles = any CATpro2-UC variant
- **up to eight times** more consoles = UserCenter CAT8-Audio

UC products multiply a computer's keyboard, video, and mouse interfaces. Now, a computer can be integrated into several CATCenter clusters. Combined with the required number of central and user modules, this increases the number of consoles.

CATpro2-UC

Each computer that is provided with the CATpro2-UC can be connected to two CATCenters (RJ45 sockets).

CATpro2-UC variants are applied instead of the standard CATpro2 modules. Depending on the NEO variant, you can build between 8 and 32 consoles.

This requires:

- 1 × CATpro2-UC target module per computer
- + UCON depending on the number of additional consoles
- + CATCenter NEO depending on the number in cluster 1

Details regarding the CATpro2-UC are given in the section Computer modules.

CATpro2-Audio-UC

UserCenter CAT8-Audio

The UserCenter CAT8-Audio is employed with CATpro2 computer modules. Depending on the NEO variant, you can build between 32 and 128 consoles.

This requires:

- 1 × UserCenter CAT8-Audio for four computers
- + number of UCONs depending on the number of additional consoles
- + (max. 7 ×) CATCenter Neo depending on the number in cluster 1

Technical data for UserCenter CAT8-Audio is given on the next page.

UserCenter CAT8-Audio rear view

UserCenter CAT8-Audio

left: UserCenter CAT8-Audio - front view
right: UserCenter CAT8-Audio - rear view

	UserCenter CAT8-Audio
Interfaces	
to central module	32 × RJ45 socket (4 × 8 sockets)
for computer modules	4 (one per block)
Transmission type	
to central module	dedicated CAT-x connection
to computer module	dedicated CAT-x connection
Main power supply	
Type	internal power pack
Connection	IEC plug
Voltage	AC100-240V/60-50Hz
	0.4 - 0.2A
Redundant power supply	
Typ	external power pack
Connection	Mini-DIN 4 power socket
Voltage	+12VDC
	3.0A
Housing	
Material	anodised aluminium
Desktop (W × D × H)	435 × 44 × 210 mm
Rackmount (W × D × H)	19" × 1U × 210 mm
Weight	approx. 2.3 kg
Update	
Procedure	via service port
Connection	1 × 2.5 mm jack socket
Operating environment	
Temperature	+5 to +45 °C
Air humidity	< 80% non-condensing
Conformity	CE, RoHs

more range

NEO-FiberLink expansions increase the system range within a CATCenter Neo cluster to up to 10,000 m. The system consists of the TX module (slave side) and the RX module (to CATCenter NEO).

The signals are transmitted via multimode (50/125µm and 62,5/125µ) or singlemode (9/125µm) fibre optics (two fibres).

The pair of Neo-FiberLink devices is placed between two CATCenter Neo (master + slave or slave 1 + slave 2).

Each NEO-FiberLink system extends two accesses.

NEO-FiberLink is also available as twin variant „Twin-NEO-FiberLink“. This version unites two identical NEO-FiberLink modules behind one blind. This way, two modules can be placed on only one rack unit.

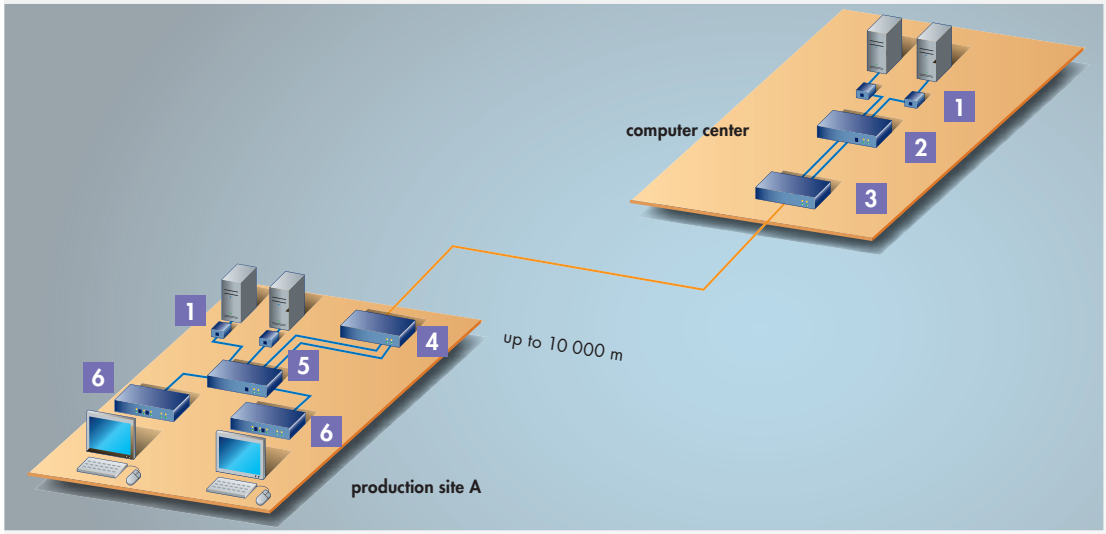
Neo-F berLink(S)-2Rx - rear view

Neo-F berLink(S)-2Tx - rear view

Example:
The computer center of an industrial enterprise provides 32 servers.

The NEO-FiberLink(S)-2 establishes a connection to the remote production site A. From there, 2 users access the 32 servers connected to the CATCenter NEO8 master and the 32 servers located at the remote computer centre.

All computers can be accessed, configured, and operated in realtime and without any perceptible loss in quality.



System diagram

1. CATpro2
2. 1 x CATCenter NEO8 slave
3. NEO-FiberLink(s)-2Tx transmitter
4. NEO-FiberLink(s)-2Rx receiver
5. CATCenter NEO8 master
6. UCON

NEO-FiberLink(M)+(S)

left: NEO-FiberLink(S)-2RX - front view
right: NEO-FiberLink(S)-2RX - rear view

	Neo-FiberLink(M) -2TX und RX	Neo-FiberLink(S) -2TX und RX
Main power supply		
Type	internal power pack	
Connection	1 × IEC plug (IEC-320 C14)	
Voltage	AC100-240V/60-50Hz / 0.4-0.2A	
Redundant power supply		
Type	external power pack	
Connection	Mini-DIN 4 power socket	
Connection	+12VDC/1.5A	
Transmission		
Central module side - Interface	2 × RJ45 socket	
Max. CAT distance RX - UCON	up to 200 m	
Max. CAT distance total	up to 300 m	
F ber side - Interface	1 × LC duplex socket	
F ber side - Transmission type	2 × dedicated fibre optics connection	
F ber-Übertragungsmedium	Multimode fibre	Singlemode fibre
F ber distance TX -> RX at 62,5/125µ [200MHz*km, OM1]	up to 33 m	- -
F ber distance TX -> RX at 50/125µm [2000MHz*km, OM3]	up to 300 m	- -
F ber distance TX -> RX at 9/125µ [2000MHz*km, OS1]	- -	up to 10,000 m
Housing		
Material	anodised aluminium	
Dimensions desktop (W × H × D)	210 × 44 × 210 mm	
Weight	approx. 1.2 kg	
Update		
Mode	via service socket	
Connection	1 × Mini-USB-B socket	
Operating conditions		
Temperature	+5 to +40 °C	
Air humidity	< 85% non-condensing	
Conformity	CE, RoHs	

Firmware / Expansions

Use the devices‘ web interface to install and activate any firmware expansions.

We offer the following firmware expansions:

TS function
- (use multiple UCONs to create a multi-monitor console and operate it over one keyboard/mouse)

Push/Get function
- (move the image - or image and operation - of your console to another UCON or get the image from there)

IP-Control-API
- (create an interface to switch/operate the CATCenter NEO over network using a third-party program)

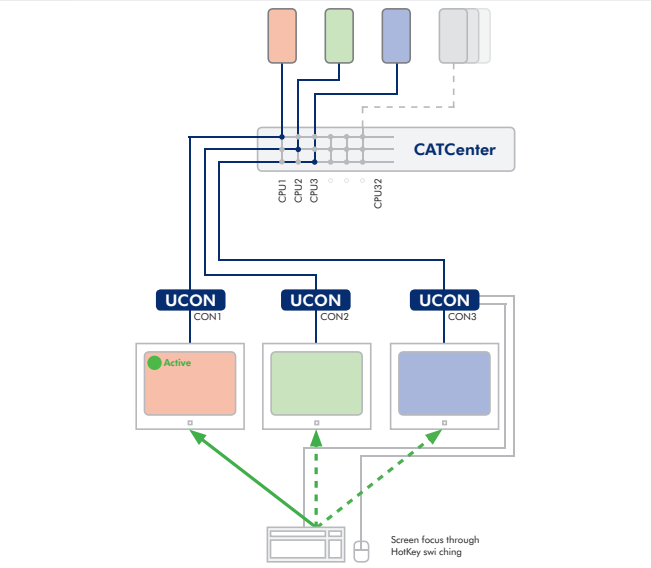
TS-Funktion

Function: UCON pooling
Operation: via hotkeys
Operating requirement: activation within master
Efficiency: with 1 cluster

The TradeSwitch function combines up to 16 user modules (UCON) to one logical console. This logical console can be operated using only one keybord/mouse but provides several monitors (multi-monitor console). Even large-screen projections can be integrated.

Via hotkey, keyboard and mouse focus can be assigned to one any UCON of the logical console. Ten hotkeys that can be individually defined are available.

The 16 user consoles can be grouped in work groups of any size (e.g. eight groups with two UCONs)

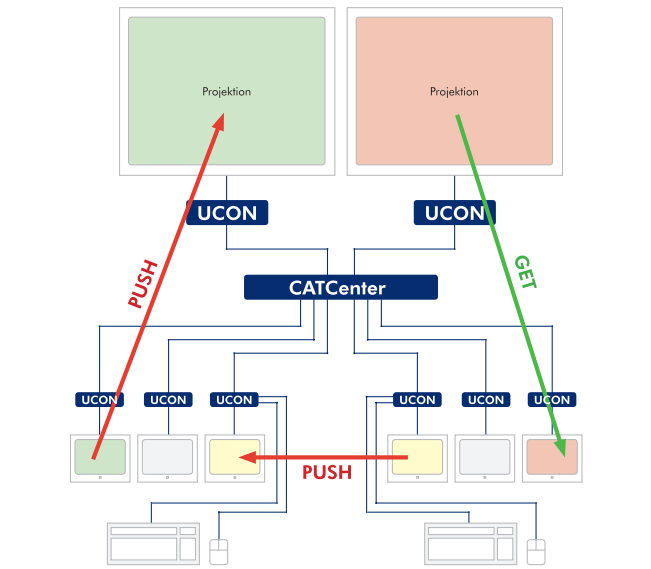


Push-Get

Function: interaction between UCONs
Operation: via OSD
Application requirement: Activation through master
Availability: within one cluster

The Push-Get function allows you to push the screen content of a target from one screen to another – or to get it from there. This console can also be a large screen projection.

This way, up to 16 operators can exchange and share screen contents and tasks.



IP-Control

Function: CATCenter remote control over IP
Operation: via user interface programmed by customer
Application requirement: Activation through master + programming of a user interface by the customer
Availability: system (several clusters)

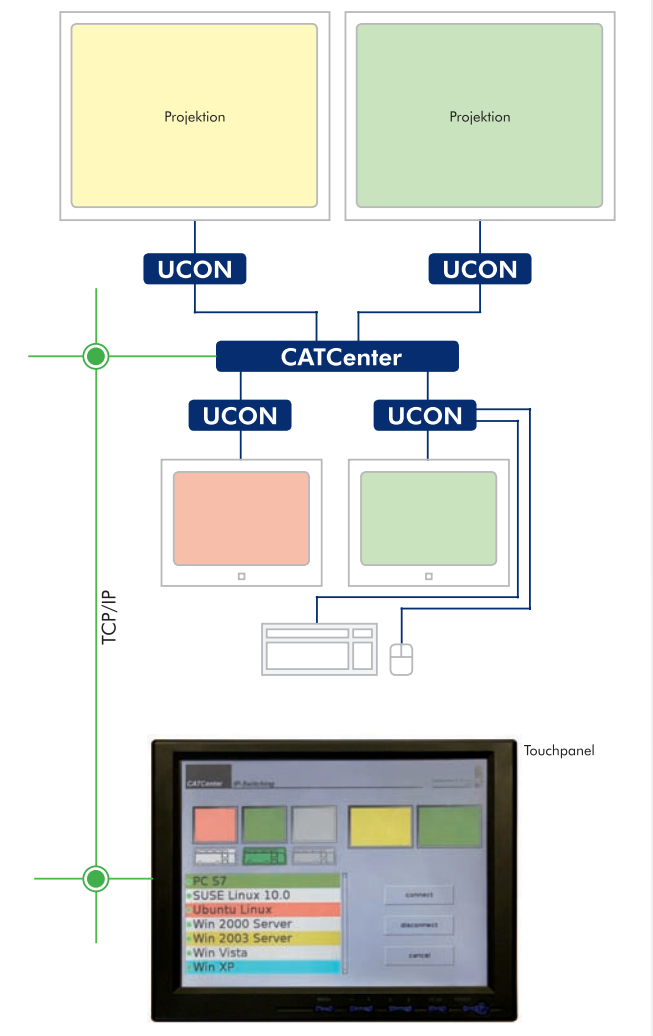
The IP-Control-API function is used to forward switching commands via network to the CATCenter NEO.

This way the system can be operated independently of any UCON user module. Each computer can access the desired projection media and/or operator displays.

We provide the programming interface (Windows DLL or Linus SO) - you program the user interface.

IP Control allows you to:

- receive latest information on the current switching statuses
- cancel all switching statuses (disconnect)
- retrieve information on computer statuses
- administrate the Push-Get function over network (but without integrated OSD)



List of Item Numbers Central Modules

Item no.	Description	User modules	Computer
A2300031	CATCenter NEO4	4	32
A2300032	CATCenter NEO8	8	32
A2300027	CATCenter NEO16	16	64

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-Audio								
A2320038	CATpro2-Audio-PS/2	PS/2		VGA		A	0,3 m	1
A2320039	CATpro2-Audio-USB		USB	VGA		A	0,3 m	1
A2320040	CATpro2-Audio-SUN-USB-DE		USB	VGA		A	0,3 m	1
A2320041	CATpro2-Audio-SUN-USB-US		USB	VGA		A	0,3 m	1
CATpro2-UC								
A2320013	CATpro2-UC-PS/2	PS/2		VGA			0,3 m	2
A2320014	CATpro2-UC-USB		USB	VGA			0,3 m	2
A2320015	CATpro2-UC-SUN USB-DE		USB	VGA			0,3 m	2
A2320016	CATpro2-UC-SUN USB-US		USB	VGA			0,3 m	2
CATpro2-Audio-UC								
A2320042	CATpro2-Audio-UC-PS/2	PS/2		VGA		A	0,3 m	2
A2320043	CATpro2-Audio-UC-USB		USB	VGA		A	0,3 m	2
A2320044	CATpro2-Audio-UC-SUN-USB-DE		USB	VGA		A	0,3 m	2
A2320045	CATpro2-Audio-UC-SUN-USB-US		USB	VGA		A	0,3 m	2
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
CATpro2-extended-UC								
A2320055	CATpro2-extended-UC-USB		USB	VGA			1,2 m	2
A2320056	CATpro2-extended-UC-PS/2	PS/2		VGA			1,2 m	2
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 User Modules

Item no.	Description	Rackmount / Desktop		VGA	Keyboard/ Mouse	Audio	console computer connectivity
A1120031	UCON		DT	VGA	PS/2 USB		0
A1120032	UCON-RM	RM		VGA	PS/2 USB		0
A1120150	TWIN-UCON	RM	DT	VGA	PS/2 USB		0
A1120102	UCON-Audio		DT	VGA	PS/2 USB	A	0
A1120103	UCON-Audio-RM	RM		VGA	PS/2 USB	A	0
A1120033	UCON-s		DT	VGA	PS/2 USB		2
A1120034	UCON-s-RM	RM		VGA	PS/2 USB		2
A1120100	UCON-Audio-s		DT	VGA	PS/2 USB	A	2
A1120101	UCON-Audio-s-RM	RM		VGA	PS/2 USB	A	2
A1000012	UCON-IP-NEO	RM	DT	VGA	PS/2		0
A1000013	Twin-UCON-IP-NEO	RM	DT	VGA	PS/2		0
A8000016	IP-Console Client-WIN	Native client for Windows OS					
A8000017	IP-Console Client-Linux	Native client for Linux OS					

List of Item Numbers Expansions CATCenter NEO

Item no.	Identifier	Description
power switching		
A4100001	HardBootCCX	Power Switch , Rackmount
more users		
A2200014	UserCenter CAT8-Audio	8 x users for 4 computers, DT/RM
more range		
A2300038	NEO-FiberLink(S)-2Tx	transmission module, desktop
A2300039	NEO-FiberLink(S)-2Rx	receiver module, desktop
A2300040	NEO-FiberLink(S)-2Tx-RM	transmission module, rackmount
A2300041	NEO-FiberLink(S)-2Rx-RM	receiver module, rackmount
A2300042	Twin-NEO-FiberLink(S)-2Tx	double transmission module, DT/RM
A2300043	Twin-NEO-FiberLink(S)-2Rx	double receiver module, DT/RM
A2300045	Neo-FiberLink(M)-2Tx	transmission module, desktop
A2300046	Neo-FiberLink(M)-2Rx	receiver module, desktop
A2300047	Neo-FiberLink(M)-2Tx-RM	transmission module, rackmount
A2300048	Neo-FiberLink(M)-2Rx-RM	receiver module, rackmount
A2300049	Twin-NEO-FiberLink(M)-2Tx	double transmission module, DT/RM
A2300050	Twin-NEO-FiberLink(M)-2Rx	double receiver module, DT/RM
firmware expansions		
A8200006	TS-Function CCNEO	TradeSwitch module
A8200007	Push-Get-Function CCNEO	Push-Get module
A8200008	IP-Control-API	IP-Switching module

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

A = Audio
AR = Audio + RS232
R = RS232
U = transparent USB 1.1
U2 = transparent USB 2.0
D = Delay

EQUIPMENT FEATURES

 = keyboard/mouse

= dual-link DVI video

= single-link DVI video

= 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