

DVI KVM Matrixswitches

DVICenter 7.0

DVI KVM Matrixswitch

Matrix switch for the operation and administration of multiple computers with digital video via distributed consoles





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 DVICenter enables the operation of **1 - 31 computers** over **1 - 31 simultaneous user modules**. The 32 available ports can be combined as desired.

Configured with e.g. 4 consoles, it is possible to connect **up to 1,372 computers** to the system.

A working system consists of at least:

- 1 x central module DVICenter DP32
- 1 x computer module DVI-CPU
- 1 x user module DVI-CON
- 2 x CAT transmission cable (type 5, 6, 7)

The DVICenter switches the following signals:

- keyboard/mouse [PS/2 and USB]
- video [DVI Single-Link]
- audio

The DVICenter is available as DP32 variant.



Highlights/System

Video

- switch and extender combined in one system
- HDIP (High Dynamic Image Processing) for highest video quality
- transmission up to 140 m over CAT cable at maximum resolution between all modules

Signals

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

Expansion

- expandable to up to 6,750 computers or 62 consoles
- expandable with power-switching component
- increases the system range to up to 10,000 m over fibre optics
- firmware expansion for multi-monitor consoles (TS function)
- firmware expansion for moving/getting own or external screen contents (Push-Get function)
- firmware expansion for preparing the switching over network (IP-Control-API)

Network / Communication

- access protection and user administration can be switched off
- auto-recognition and display of the system structure
- two network ports
- configuration over web interface
- central update of all DVICenter components over network

Security

- failover connection (if the central module fails, you can establish a direct connection between user module and computer module and therefore still operate the system)
- support of external authentication via LDAP, Active Directory, TACACS+, Radius
- redundant power supply

Highlights Monitoring / SNMP

Function: receive DVICenter status info
Operation over: web interface/SNMP
Efficiency: 1 cluster

The DC-Monitoring feature enables you to detect the system status of G&D devices.
 The web interface of the particular device provides information that can be sent (SNMP trap) or queried (SNMP GET) as well.

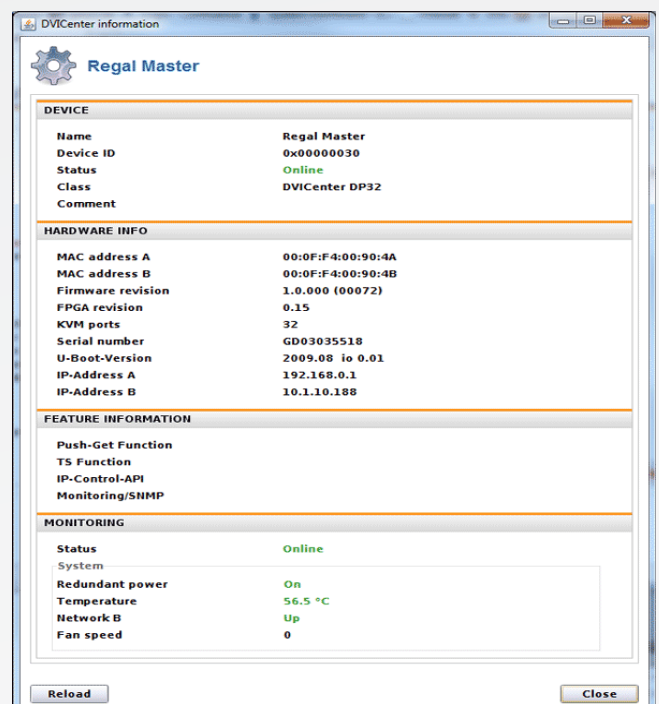
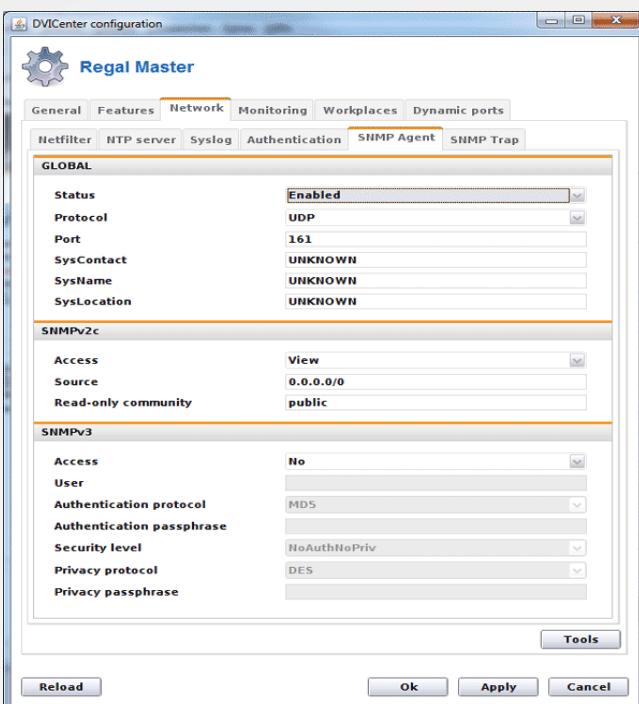
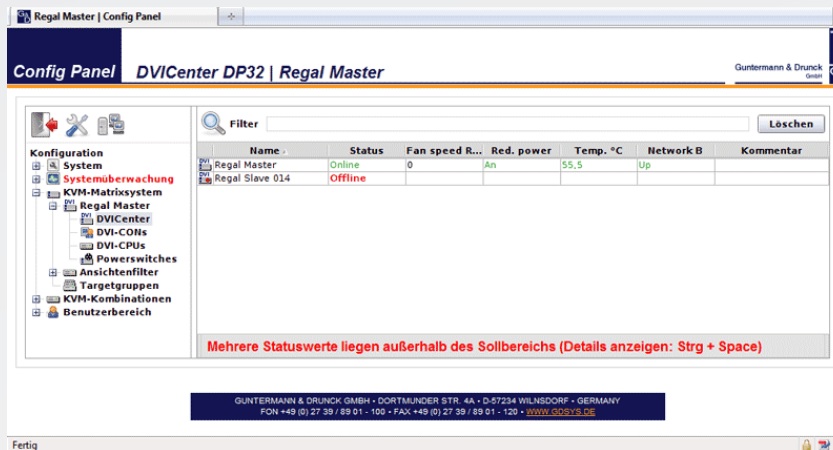
Both monitoring function and SNMP trap and agent are included in the scope of supply.

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

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 parameters, the device also notifies the administrator.



Features

Video

- DVI video resolution up to 1920 × 1200 @ 60 Hz (at user modules also VGA 1280 × 1024 @ 85 Hz)
- colour mode DVI 24 bits
- automatic video adjustment
- system transmits a total length of 560 m:
 - computer module to central module 140 m
 - central module to user module 140 m
 - central module to other central modules (up to 2 ×) 140 m

Audio

- bidirectional transmission of audio signals
- resolution 24 bits digital
- bandwidth 22 kHz / refresh rate 96 kHz

Device

- only accesses the computers' standard interfaces
- no software installation required
- available as desktop and 19" variant
- shipped in an aluminium housing for best noise immunity
- redundant power supply
- hot pluggable system components
- stay-alive function for computers
- optional integration of power switches (Hardboot CCX)

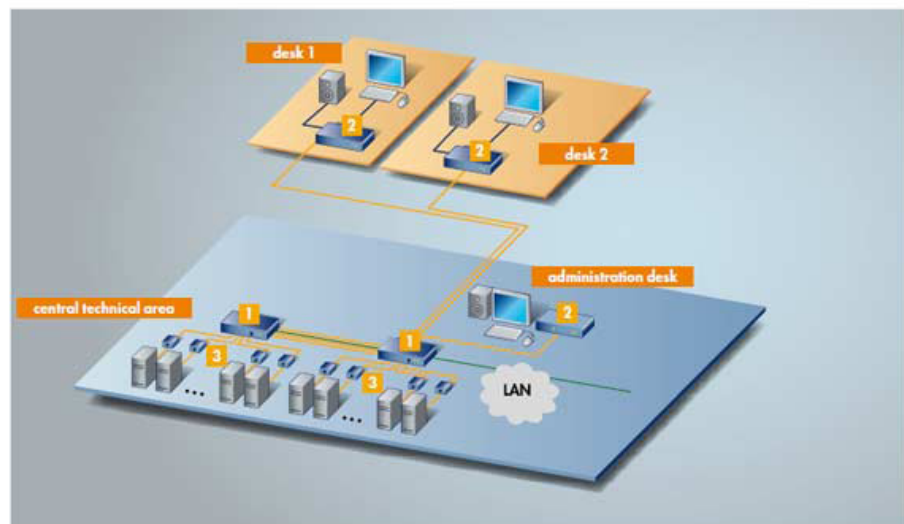
Use

Thanks to its dynamic ports, the DVICenter can be applied in any applications where many computers are operated over multiple simultaneous consoles.

The system's modular design enables you to adjust the DVICenter's functions to any increasing demands. The system is applied, e.g., in control centres, OB vans, or studios.

Application scheme

- 1 DVICenter DP32
- 2 DVI-CON
- 3 DVI-CPU



Example: The computers are housed in a central control room, separated from the users. In the technical area, an administration console allows the administrator to operate the computers. The desks can be provided with both digital and analog monitors. Two DVICenter DP32 (1 x master, 1 x slave) connect the user modules and the computer. A dedicated CAT-x link integrates the productive workplaces into the operational concept (DVI-CON) where they

work on the computers like a 1:1 connection. The DVICenter DP32 can be integrated into the network for configuring the device via web interface, sending messages to a Syslog server or using directory services. Each user module can access every computer. Flexible operation concepts can be implemented, which creates perfect conditions for both users and computers.

Variants

Design

- The DVICenter DP32 is shipped as desktop device.
- The package contents contain a 19" rack mount set.

DVICenter DP32



left: DVICenter DP32 - Front view
right: DVICenter DP32 - Rear view

	DVICenter DP32
Console	
Type of console ports	dynamic
Console ports per device	min. 1 - max. 31
Transmission type user module	dedicated CAT-x link
Transmission length to user module	140 m
Interfaces for user modules	RJ45 sockets
Network port	2 × RJ45 socket
Computer	
Type of computer ports	dynamic
Computer ports	min. 1 - max. 31
Computer ports cascade level 1	min. 19 - max. 961
Computer ports cascade level 2	min. 21 - max. 6,750
Transmission length between cascades	140 m
Transmission type to computer module	dedicated CAT-x link
Transmission length to computer module	140 m
Interfaces to computer module	RJ45 sockets
Main power supply	
Type	internal power pack
Connection	1 × IEC plug
Voltage	AC100-240V/60-50Hz
Redundant power supply	
Type	internal power pack
Connection	1 × IEC plug
Voltage	AC100-240V/60-50Hz
Housing	
Material	anodised aluminium
Desktop (W × H × D)	435 × 44 × 286 mm
Rack mount (W × H × D)	19" × 1U × 286 mm
Weight	approx. 3.0 kg
Update	
Mode	via network
Connection	via network port
Power Switching	
Interface	RJ11 socket
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	< 85% non-condensing
Conformity	CE, RoHs

Computer modules

The **DVI-CPU computer modules** link external keyboard, video, mouse, and audio interfaces to the DVICenter system.

The DVI-CPU's combine signals, process them, and use CAT cables to transmit the signals to the KVM matrix switch.

Any DVI-CPU has a unique ID that helps identifying the device within a DVICenter system.

We provide the following DVI-CPU variants:



DVI-CPU - Front view

DVI-CPU

Standard variant transmitting the following signals:

- single-link DVI-D
- PS/2 + USB keyboard/mouse
- Audio (Line In / Line Out)
-

The DVI-CPU-**Wintu3** and **-Wintu4** versions supports the communication with Wacom Intuos3 or 4[®] tablets.

The DVI-CPU is also available without a supplied AC adaptor. Order the DVI-CPU **without-power-pack** if the computer modules are to be supplied with power from a central source. The DVI-CPU supports „**Power-Loop**“, the looping through

the power supply. Up to three devices can get their power from one loop.

For this solution, please order:

1 × A 2320051 / 2 × A 2320053 + loop cables

Installation:

We provide **19" rack mount solutions** facilitating the installation of DVI-CPU computer modules into a server rack. The rack solutions are listed under KVM Accessories.

DVI-CPU-UC

Dual module for connecting a computer to two DVICenter clusters. Transmits the following signals:

- single-link DVI-D
- PS/2 + USB keyboard/mouse
- Audio (Line In / Line Out)

DVI-CPU-Wintu3 variants support the communication with Wacom Intuos3[®] tablets.

Installation:

We provide **19" rack mount solutions** facilitating the installation of DVI-CPU-UC computer modules into a server rack. The rack solutions are listed under KVM Accessories.

DVI-CPU



left: DVI-CPU - Front view
right: DVI-CPU-UC - Front view

	DVI-CPU	DVI-CPU-UC
Video		
Signal type/Video	single-link DVI-D	
Resolution	1920 × 1200 @ 60 Hz	
Colour depth	24 bits	
Audio		
Resolution	24 bits digital	
Refresh rate	96 kHz	
Bandwidth	22 kHz	
Transmission		
No. of interfaces to central module	1	2
Transmission type	dedicated 1:1 connection via CAT-x cable	
Transmission length	140 m to central module	
Power supply		
Main Type	via external power pack	
Connection	Mini-DIN 4 socket	
Voltage	+12VDC / 500mA	+12VDC / 600mA
Power loop	yes	no
Interfaces to computer		
Video	DVI-D socket	
Keyb./Mouse	2 × Mini-DIN 6 socket/1 × USB-B socket	
Audio	2 × 3.5mm jack socket	
Other interfaces		
Connection for central module	1 × RJ45 socket	
Service	Mini-USB-B socket	
Update		
Mode	via Config panel of DVICenter	
Connection	via network	
Housing		
Total length incl. cable	approx. 2 m	
Material	anodised aluminium	
Design	tube mini housing	
Dimensions (W×H×D)	105 × 26 × 104 mm	
Weight	approx. 240 g	
Operating conditions		
Temperature	+5 to +45 °C	
Air humidity	< 85% non-condensing	
Conformity	CE, RoHS	

User module

The DVI-CON connects the consoles to the system.

CAT cable connect the DVI-CON to the DVICenter and provide the required interfaces for peripherals (monitor, keyboard, mouse, speakers/microphone).

The video output of the DVI-CON (DVI-I interface) also provides a VGA video signal. The output can be used to connect a VGA monitor.



DVI-CON - Front view

DVI-CON

Application

- remote console
- operates the DVICenter from distances up to 140 metres

Signals

- single-link DVI-I video
- PS/2 + USB keyboard/mouse
- audio (speakers / Line In)

Operation

- select computers via OSD or hotkeys
- configuration via OSD or web interface of the DVICenter
- supports TS function and Push-Get function **Design**
- desktop or rack mount variant
- twin variant (two devices housed in one casing, shipped as desktop version incl. rack mount kit)

Design

- desktop or rack mount variant
- twin variant (two devices housed in one casing, shipped as desktop version incl. rack mount kit)

DVI-CON



right: DVI-CON - Rear view

	DVI-CON
Console	
Consoles	1
Assigned console ports at central module	1
Video	
Signal type/Video	DVI single-link
DVI resolution	1920 × 1200 @ 60Hz
VGA resolution	1280 × 1024 @ 85Hz
Audio	
Design	internal
Refresh rate	96 kHz
Resolution	24 bit digital
Bandwidth	22 kHz
Transmission	
Cabling	dedicated CAT-x connection
Transmission cable	CAT-x cable
Transmission length	140 m
Connection	RJ45 socket
Interfaces for console	
Video	DVI-I socket
Keyboard/Mouse	2 × Mini-DIN 6 socket
	2 × USB-A socket
Audio	2 × 3.5 mm jack socket
TradeSwitch-LED	D-Sub 9 socket
Main power supply	
Type	internal power pack
Connection	1 × 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/1.2A
Housing	
Material	anodised aluminium
Desktop (W × H × D)	210 × 44 × 210 mm
Rackmount (W × H × D)	19" × 1U × 210 mm
Weight	approx. 1.3 kg
Update	
Mode	via Config panel of DVICenter
Connection	via network
Operating conditions	
Temperature	+5 to +45 °C
Air humidity	below 85%, non-condensing
Conformity	CE, RoHs

Operation / Configuration

The DVICenter system is operated/configured via:

- OSD + hotkeys
- web interface

Both OSD and hotkeys are available at all DVI-CON user modules; the web interface can be accessed at any console that is connected to the network and ensures quick and easy operation.

OSD

The OSD enables you to operate and configure the DVICenter independently from any network. The DVI-CON modules provide the OSD at all consoles. The OSD only covers a part of the current screen content and is not a full screen display.

The on-screen display can be adjusted to the user's needs and the application's safety regulations.

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

The following menus are available:

- Select (select a computer)
- Operation (frequent operations)
- Personal Profile (adjust user-related details)
- Configuration (change system settings)
- Information (query system status)

Exemplary operating options:

User settings

- create up to 256 individual user accounts
- integrated multi-level user/rights administration
- create password protection for all consoles
- create groups for effective rights management
- assign individual configuration rights
- assign access rights for each computer
- define a computer that is automatically accessed after the login
- multiuser-mode: multiple users have simultaneous access to one computer

Computer settings

- create, edit, or delete computer names
- select or search computers by names using the select menu
- Free Seating: access a user-related computer by logging in at any console
- set permanent display to show the computer names at the console
- create groups for effective access management
- select 3 scan modes to auto-scan the connected computers
- show computer routing – even over cascades

Power-Switching

- switch the computer's power supply (requires additional hardware)

System info

- recognise components with automatic assignment of the known configuration information
- schematic figure of the system structure from computer to console
- show all computers in one list - even over cascades; no switching though multiple OSDs
- show busy states console <-> computer

Console settings

- connect PS/2 keyboards with special functions
- create open access without querying password
- enable access protection per auto-log off when leaving the console
- block OSD to prevent access to certain consoles
- install a video console (e.g. projector) that can be remotely controlled by other consoles (requires Push-Get and TradeSwitch module)
- firmware/OSD updates via corresponding interfaces

Configuration	Console 1
User	
User group	
Target	
Target group	
View filter	
EDID	
Console	
Cascade	
System	
Power switch	
Network	
ESC: Select	F9 : Operation
F10 : Pers.Profile	F12 : Info

Operation	Console 1
A - Autoscan	
B - Autoskip	
C - Stepscan	
D - Disconnect	
E - User Logout	
F - Mouse utility	
G - Return to last target	
H - Target info	off
I - Target power	
ESC: Select	F10 : Pers.Profile
F11 : Config	F12 : Info

Web-Interface

The „Config Panel“ web application offers a graphical user interface to configure the DVICenter.

The well-arranged user interface shows the comprehensive OSD settings and therefore makes the web interface the primary configuration tool.

The Config Panel is divided into the following sections. The list below highlights the most important settings:

Basic configuration

- network parameter
- tools (backup/restore, firmware update, resetting the defaults)
- query of syslog messages

Dynamic port configuration

- define ports as console or computer connection in any order

Rights configuration

- user rights
- user group rights
- computer rights
- computer group rights

Matrix switch configuration

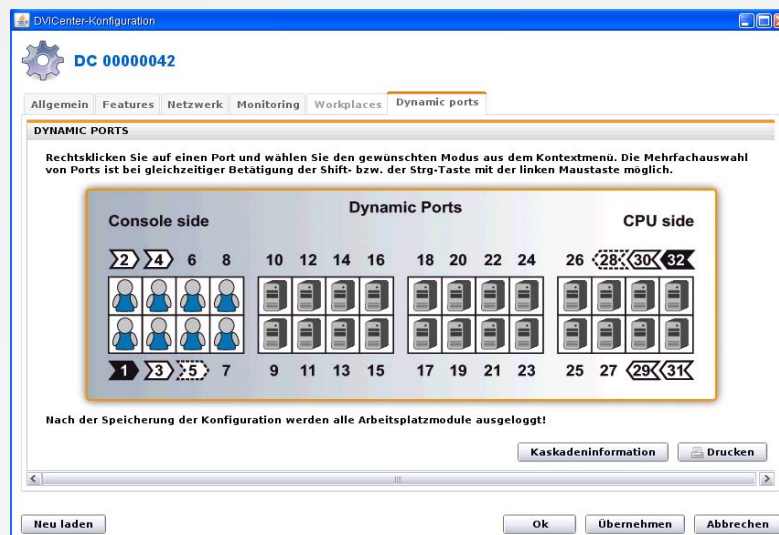
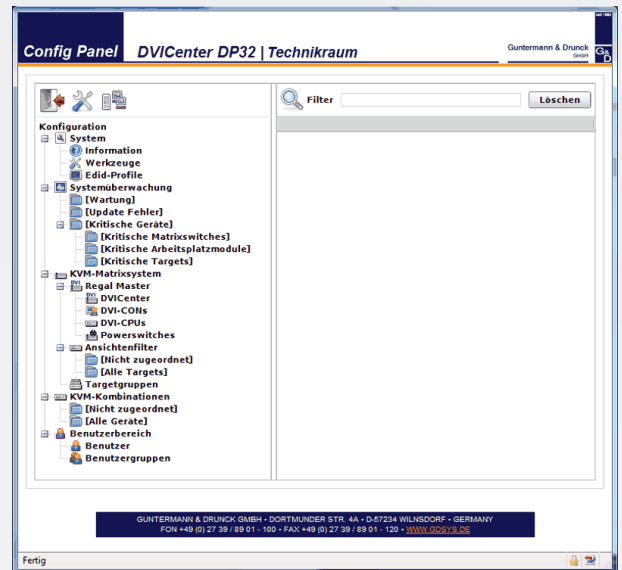
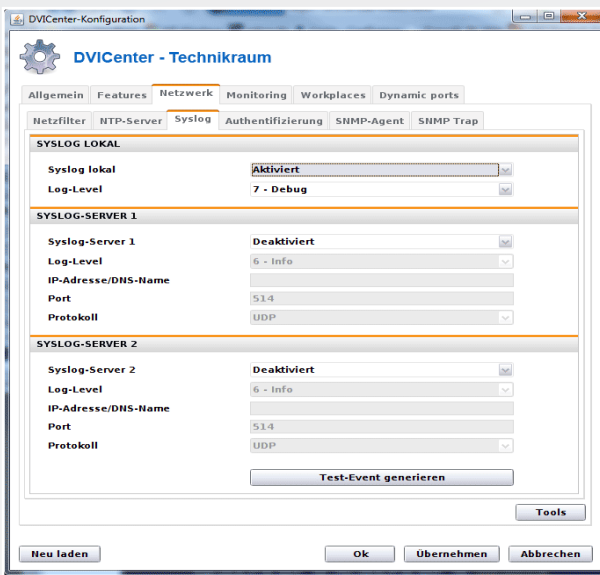
- name, hotkeys etc.
- location
- activation of communication modules
- network settings

User module configuration

- name
- cascade information

Computer configuration

- locations
- configuration of the computer module



Hardware / Expansion

The hardware components are connected to the DVICenter and fully integrated into operation. This way e.g. the power-switching can be carried out in the OSD.

We provide the following hardware expansions:

- remote power-switching with HardBoot CCX
- increase the number of computers by cascading with other DVICenters
- double the number of consoles with the DVI-CPU-UC computer modules (also applicable for backup systems/ mirrored systems)
- increase the system's range up to 10,000 m by integrating a fibre optics line (DVI-FiberLink)

Power Switch

The HardBoot CCX is especially designed to be operated with G&D matrix switches. It enables the user to switch up to 128 users with one matrix switch.

The HardBoot CCX provides eight AC outputs per device. Two separate power circuits each contain four outputs. A power cluster contains up to 16 HardBoot devices (= 128 outputs).

The 128 outputs can be randomly grouped. This way, even redundant power packs are supported. The HardBoot CCX is connected to the DVICenter and operated via the DVICenter's OSD.

For more information on the HardBoot, please visit Power Switches



HardBoot plus

more Consoles

The DVI-CPU-UC devices allow you to connect more consoles **than ports provided at the device**.

Use **DVI-CPU-UC modules** instead of the usual DVI-CPU computer modules to increase the number of consoles or to establish a redundant system.

Using a **second RJ-45 socket**, the DVI-CPU-UC module **doubles** the keyboard, video, mouse, and audio **interfaces** to the DVICenter. Thus, a computer can be connected to two DVICenter clusters. Combining the DVI clusters with the corresponding central and user modules increases the number of consoles.

This requires:

- 1 x computer module DVI-CPU-UC per computer
- + number of DVI-CON modules according to the number of additional consoles
- + DVICenter DP32 according to the number in cluster 1

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



DVI-CPU-UC - Rear view

more Computers

When **cascaded into three levels**, the DVICenter DP32 system increases the number of connectable computers. The master device takes over all controlling tasks. The listed possibilities guarantee the **full access of all consoles** to all computers over all cascade levels.

Cascading allows for an **additional transmission distance of 140 m** per DVICenter DP32. When fully cascaded, the distance from computer through to the cascaded central modules up to the user module can be up to 560 m.

How to read the following table (e.g. the row „2 Console ports“)

When configuring the DVICenter with

- **2 console ports and 30 computer ports (stand-alone)**
- you can operate **450** computers via 2 simultaneous consoles in the first cascade. This requires **16** DVICenters.

The first DVICenter provides no ports for connecting computers. Its 30 computer ports transmit $15 \times 2 = 30$ console accesses to the 15 DVICenters of the first cascade level.

Stand-Alone		1 Cascade		2 Cascade	
Console Ports	Computer Ports	No. of Computers	No. of DVICenter	No. of Computers	No. of DVICenter
1	31	961	32	--	--
2	30	450	16	6.750	241
3	29	263	10	2.396	91
4	28	196	8	1.372	57
5	27	137	6	687	31
6	26	106	5	426	21
7	25	79	4	241	13
8	24	72	4	216	13
9	23	51	3	107	7
10	22	46	3	94	7
11	21	31	2	41	3
12	20	28	2	36	3
13	19	25	2	31	3
14	18	22	2	26	3
15	17	19	2	21	3
16	16	--	--	--	--

more Range

The DVI-FiberLink increases the system range within a DVICenter cluster to up to 10,000 m. The system consists of two identical modules (transceivers) and is available in two variants:

- **DVI-FiberLink(M)**
Transmission via 2 **multi-mode** fiber optics (50/125µm)
Range **up to 550 m**
- **DVI-FiberLink(S)**
Transmission via 2 **single-mode** fiber optics (9/125µm)
Range **up to 10,000 m**

The pair of DVI-FiberLink devices can be placed between any DVICenter module. One pair of DVI-FiberLink devices extends one access (console).

Installation:

We provide **19" rack mount solutions** for easily installing a DVI-FiberLink(S) into a server rack. The solutions are listed under KVM Accessories.



DVI-FiberLink(S) -Rear view

DVI-FiberLink



left: DVI-FiberLink(S) - front view
 right: DVI-FiberLink(S) - rear view

DVI-FiberLink(S)	DVI-FiberLink(S)		DVI-FiberLink(M)
Main power supply			
Type	external power pack		
Connection	Mini-DIN 4 power socket		
Voltage	+12VDC/0.3A		
Power loop support	yes		
Transmission CAT side			
Transmission mode	dedicated 1:1 CAT link		
Interface	1 × RJ45 socket		
Transmission cable	1 CAT-x cable		
Transmission length	up to 140 m		
Transmission fiber side			
Transmission mode	dedicated 1:1 fiber connection		
Interface	1 × LC duplex socket		
Transmission cable	2 single-mode fiber optic strands	2 multi-mode fibre optic strands	
Übertragungslänge	10,000 m (9/125 µm, 2,000 MHz*km, OS1)	550 m (50/125 µm, 500 MHz*km, OM2)	
		275 m (62.5/125 µm, 200 MHz*km, OM1)	
		220 m (62.5/125 µm, 160 MHz*km, FDDI grade)	
Housing			
Material	anodised aluminium		
Desktop (W × H × D)	105 × 26 × 86 mm		
Rackmount	see KVM Accessories/19" Device Carrier		
Weight	approx. 240 g		
Update			
Mode	via service socket		
Connection	1 × Mini-USB-B socket		
Operating conditions			
Temperature	+5 to +40 °C		
Air humidity	< 80% non-condensing		
Conformity	CE, RoHs		

Firmware / Expansion

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

We provide the following firmware expansions:

- TS function
(turn multiple DVI-CONs into a multi-monitor console, and operate this console through only one keyboard/mouse)

- Push-Get function
(move the image and/or operation of your console to another DVI-CON or get the image from there)
- IP-Control-API
(use a third-party program to build an interface for switching/operating the DVICenter over network)

TS-Function

Function: DVI-CON pooling

Operation: via hotkeys

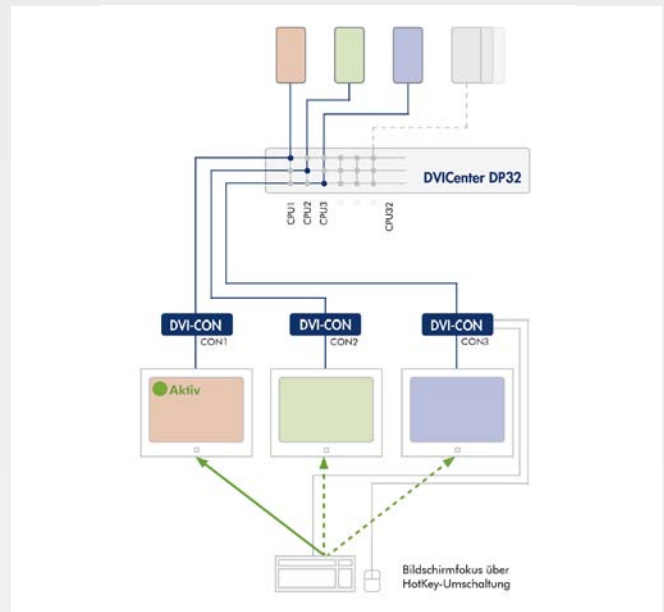
Operating requirement: activation within master

Efficiency: 1 cluster

The TradeSwitch function combines multiple user modules (DVI-CON) to one logical console.

The logical console can be operated with one keyboard and one mouse while providing multiple displays (multi-monitor console). Large screen projections can also be integrated.

A hotkey assigns keyboard and mouse to the DVI-CON devices of the logical console. The user can define up to 10 hotkeys. The size and amount of user groups is optional.



Push-Get

Function: DVI-CON interaction

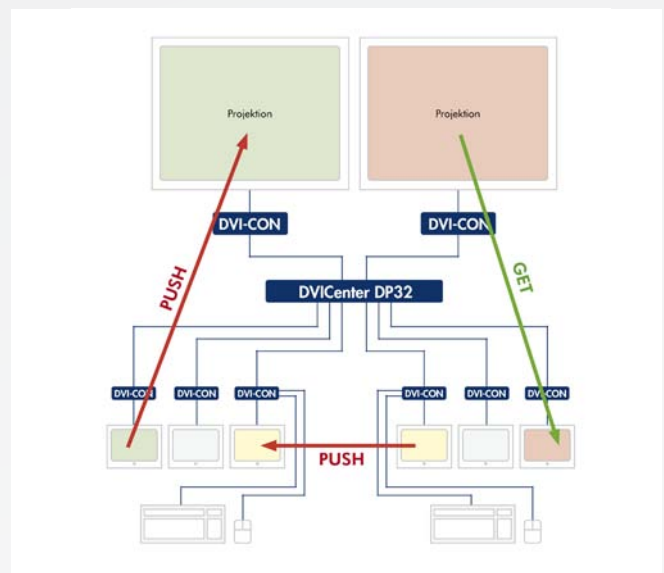
Operation via: OSD

Operating requirement: activation within master

Efficiency: 1 cluster

The Push-Get function allows you to move the image of a target to - or get it from - the display of another console. This display can be a large screen projection, for example.

All consoles can exchange computer and screen contents or work together on tasks.



IP-Control

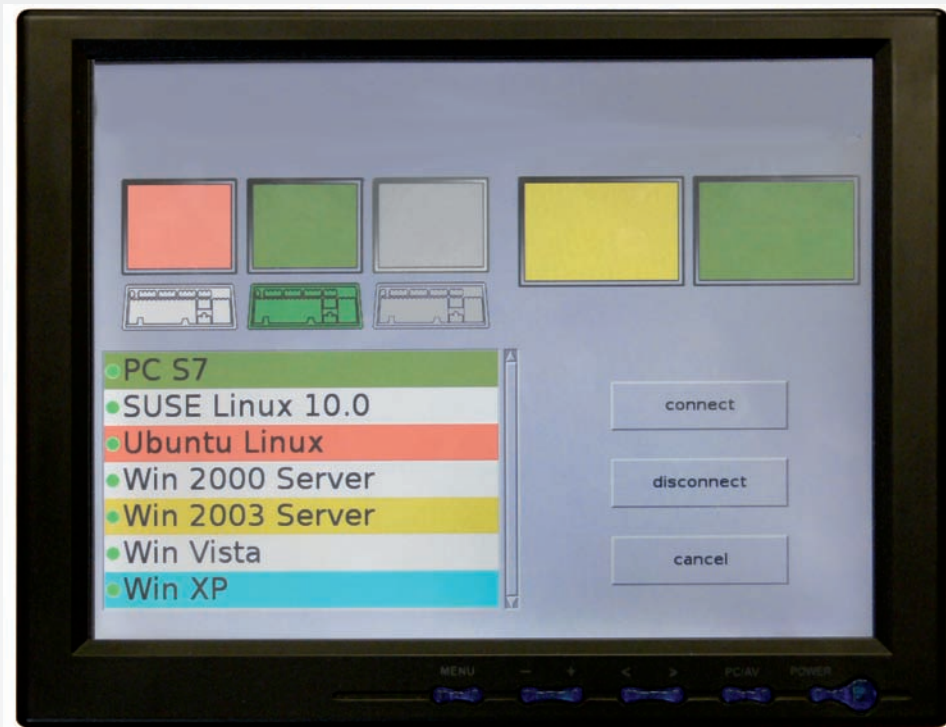
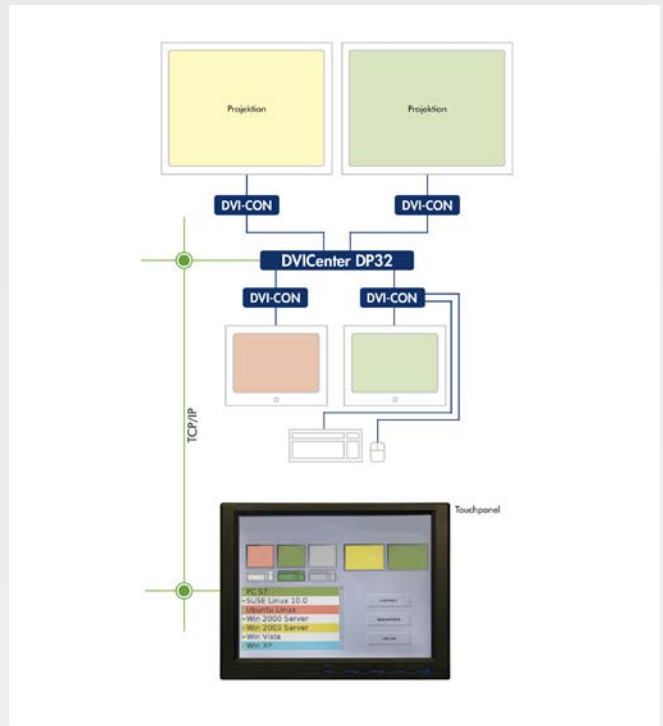
Function: DVICenter remote control over IP
Operation via: customer-programmed user interface
Operating requirement: activation within master + programming of user interface
Efficiency: system (several clusters)

The IP-Control-API function allows you to send switching commands to the DVICenter. The commands are sent via network.
 The system is operated independently from a DVI-CON user module. Independent from any location, each computer can access the desired projection media and/or operator screens.

We provide you with the programming interface (Windows DLL or Linux SO), you program the user interface.

IP-Switching also allows you to:

- receive information about current switching conditions
- cancel all switching conditions (Disconnect)
- receive information about the computer statuses
- execute the Push-Get function via network (but no OSD integration)



List of Item Numbers Central module

Item No.	Description	Arbeitspl.	Rechner
A2300035	DVICenter DP32 (32 dynamic ports)	1 bis 31	31 bis 1

List of Item Numbers Computer modules

Item No.	Description	PS/2	USB-K/M	DVI	A	Anzahl Cluster
DVI-CPU						
A2320051	DVI-CPU	PS/2	USB	DVI-SL	A	1
A2320053	DVI-CPU without-power-pack	PS/2	USB	DVI-SL	A	1
A2320052	DVI-CPU-UC	PS/2	USB	DVI-SL	A	2
DVI-CPU-Wintu3						
A2320057	DVI-CPU-Wintu3	PS/2	USB	DVI-SL	A	1
A2320058	DVI-CPU-Wintu3-no-PowPack	PS/2	USB	DVI-SL	A	1
A2320059	DVI-CPU-UC-Wintu3	PS/2	USB	DVI-SL	A	2
DVI-CPU-Wintu4						
A2320060	DVI-CPU-Wintu4	PS/2	USB	DVI-SL	A	1
A2320061	DVI-CPU-Wintu4-no-PowPack	PS/2	USB	DVI-SL	A	1
A2320062	DVI-CPU-UC-Wintu4	PS/2	USB	DVI-SL	A	2
Powerloopcables						
A6400041	PowerLoop-MD4P-04	40 cm				
A6400042	PowerLoop-MD4P-1	100 cm				

List of Item Numbers User modules

Item No.	Description	PS/2	USB-HID	DVI	Audio	Desktop/ Rackmount
A1120140	DVI-CON	PS/2	USB	DVI-SL	A	DT
A1120141	DVI-CON-RM	PS/2	USB	DVI-SL	A	RM
A1120142	Twin-DVI-CON	PS/2	USB	DVI-SL	A	DT/RM

List of Item Numbers Expansions DVICenter

























Item No.	Identifier	Description
PowerSwitching		
A4100001	HardBootCCX	Power Switch , Rackmount
more Range		
A2300044	DVI-FiberLink(S)	Singlemode Transceiver bis zu 10.000 m, pro Strecke 2 x bestellen
A2300052	DVI-FiberLink(M)	Multimode Transceiver bis zu 550 m, pro Strecke 2 x bestellen
Firmware-Expansions		
A8200014	TS-Function DVICenter	TradeSwitch-Baustein
A8200013	Push-Get-Function DVICenter	Push-Get Baustein
A8200015	IP-Control-API DVICenter	IP-Switching Baustein

Legend

ABBREVIATIONS

CPU	=	Computer module	M	=	Multimode
PC	=	Computer module	S	=	Singlemode
CON	=	User module	RM	=	For assembly in a 19" rack
REM	=	User module	A	=	Audio
MC2	=	Multichannel 2	AR	=	Audio + RS232
MC3	=	Multichannel 3	R	=	RS232
MC4	=	Multichannel 4	U	=	transparent USB 1.1
			U2	=	transparent USB 2.0
			D	=	Delay

EQUIPMENT FEATURES

 = keyboard/mouse	 = VT100
 = dual-link DVI video	 = KVM IP access
 = single-link DVI video	 = Network connection
 = single-link DVI + VGA	 = Web interface
 = VGA video	 = DevCon support
 = Audio	 = Monitoring
 = RS232	 = CAT cable
 = USB 1.1	 = Fiber optics
 = USB 2.0	 = Single user
 = Delay	 = Multi user
 = Screen Freeze	 = Separat local/remote user
 = Power Switching	
 = Fire Wire	