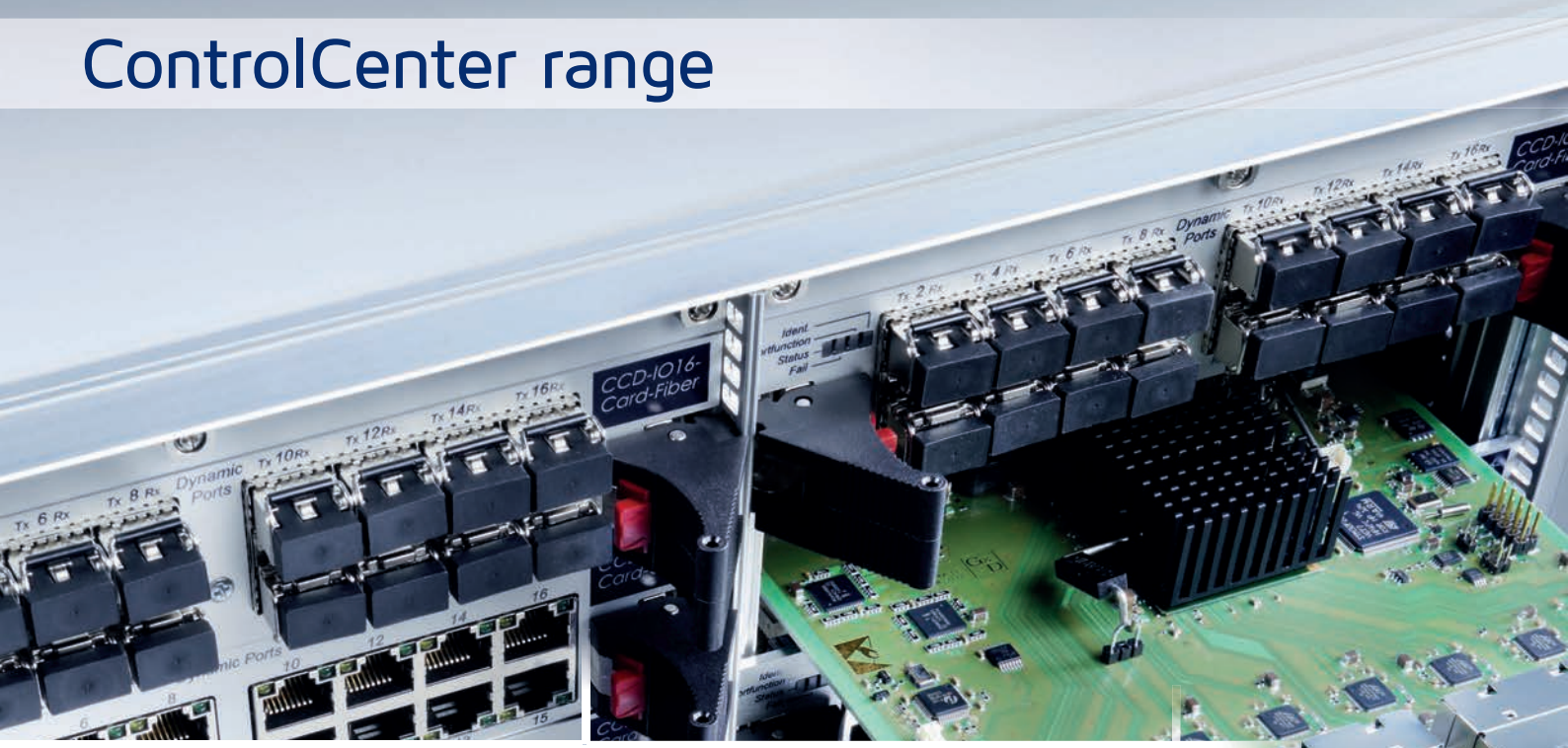
ControlCenter range

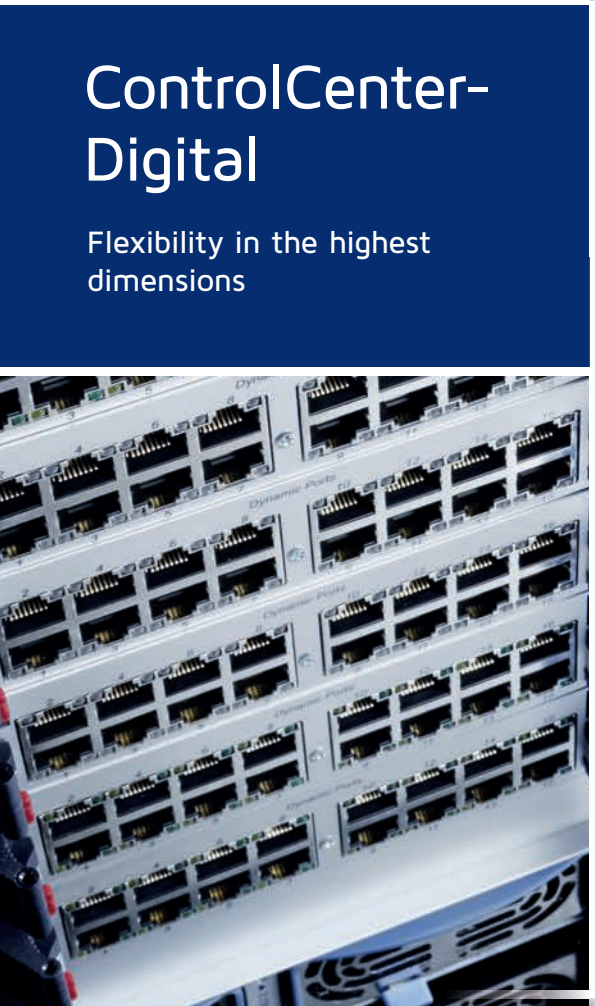


ControlCenter-Digital

Flexibility in the highest dimensions

ControlCenter-Compact

Maximum performance in a compact package



G&D
IF IT'S KVM

The solution, no matter how challenging your needs.

Flexibility in the highest dimensions – the ControlCenter-Digital

The ControlCenter-Digital is a KVM matrix system, which helps you operate multiple computers via multiple consoles. The matrix system convinces with its modular design and consists of:

- Replaceable in- and output cards **(I/O cards)***,
- **Switch card*,** which contains the matrix's central switching logic,
- **Controller card*** with central system administration, monitoring and control
- Up to three redundant **power packs**
- Two **fan boards.**

The modular in- and output cards support the transmission of signals via CAT cables and fibre optics even in mixed mode. Switch card and controller unit are each on separate cards and can be replaced individually, if required.

With its modular setup, the ControlCenter-Digital is highly flexible and ready to adapt to any surrounding conditions. The matrix switch enables the remote access of large, distributed IT installations in control rooms and is ready for any future IT requirements.

Maximum performance in compact form – the new ControlCenter-Compact

The ControlCenter-Compact KVM matrix switch offers the full spectrum of ControlCenter-Digital services in a compact package.

The various expansion stages from 8 to 80 ports either to a connection to a computer module or workplace module are available in CAT or fibre optic versions, as well as combinations of the above. The CCD and CCC are fully compatible with one another and use the same end components (CPUs and CONs).

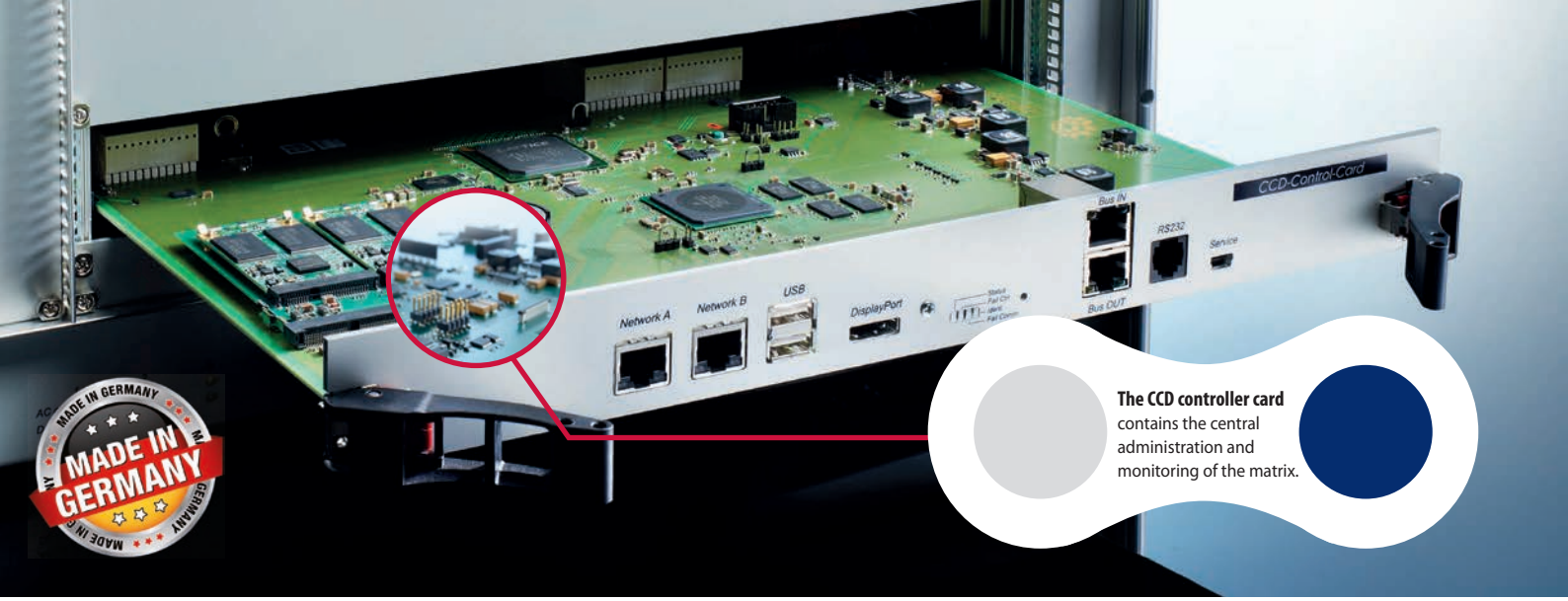
*any terms written in bold are defined in the glossary at the last page of this brochure.

MODULAR
POWERFUL
SAFE

Expand your possibilities – with the ControlCenter-Digital

The ControlCenter-Digital offers maximum flexibility. With its modular design, you can adjust all system components precisely according to your requirements. This way, your ControlCenter-Digital consists exactly of the parts you need – no more no less. The basic model contains different modular types of cards: I/O CAT cards, I/O fiber cards, I/O multi cards, trunk cards (optional), a switch card and a controller card, which can all be replaced if required. The modular in- and output cards also support a mixed mode (CAT and fibre) as well.

CAT cards, fibre cards, power packs, redundant power packs and fan modules can be hot-plugged or hot-swapped.

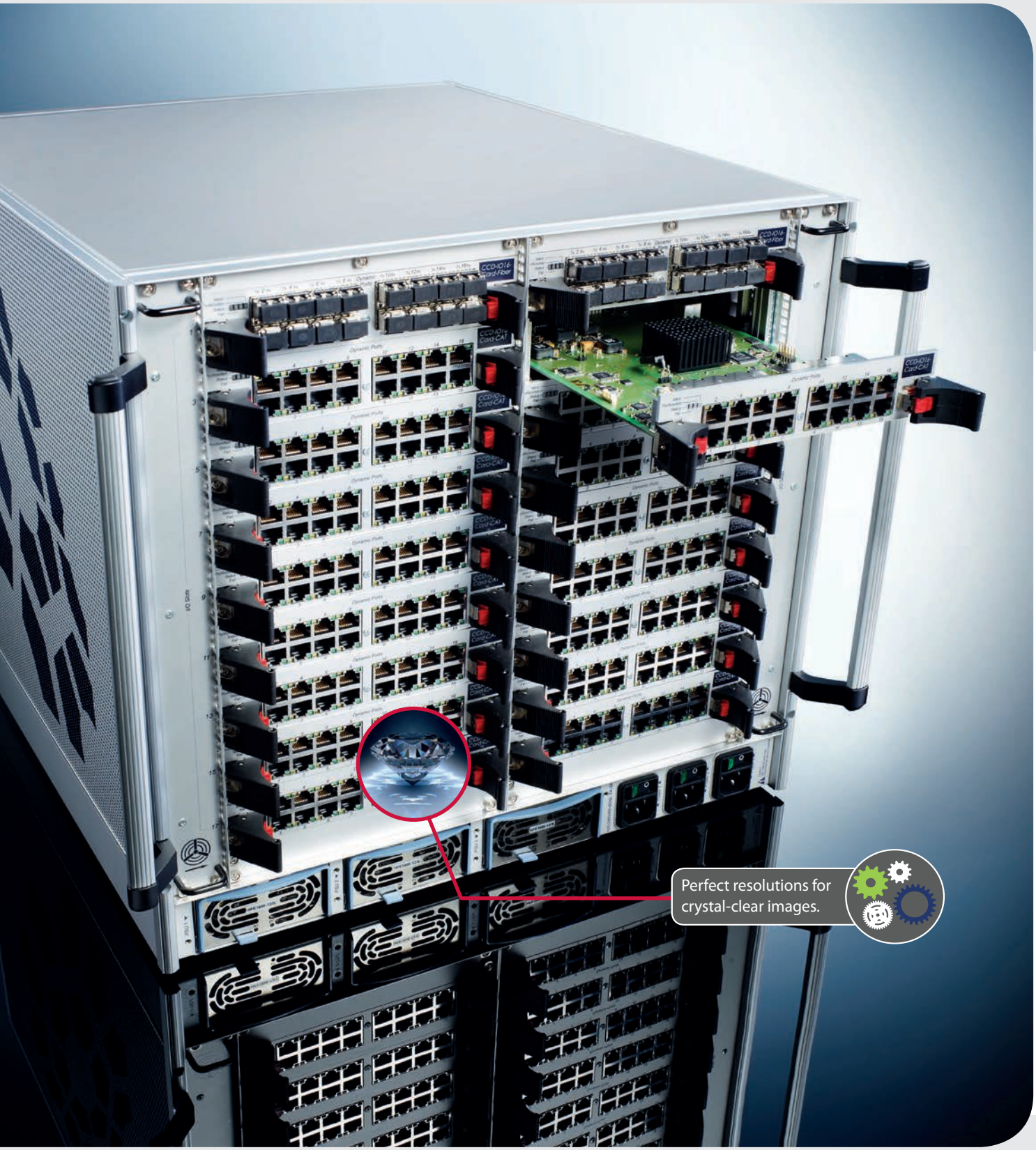


Advantages for more flexibility

- Completely modular setup, replaceable parts
- Matrix configuration on a separate replaceable card
- Signal transmission via CAT cables and fibre optics even in mixed operation
- Variable port assignment and automatic device detection
- Maximum flexibility through high adaptability and compatibility with existing G&D equipment
- Even largest installations with thousands of servers can be implemented
- Hot-pluggable and hot-swappable system parts
- **Stay-alive function**
- Optional **TradeSwitch function, KVM Matrix-Grid™, Push-Get function, CrossDisplay-Switching** as well as optional **remote control over IP switching (API)**
- Devices can be configured, backed up and restored via web interface
- Firmware updates over network (web interface): matrix system and its peripherals
- Cascadable up to three levels (full cascade)
- bidirectional cascading via KVM MatrixGrid™

Technical data

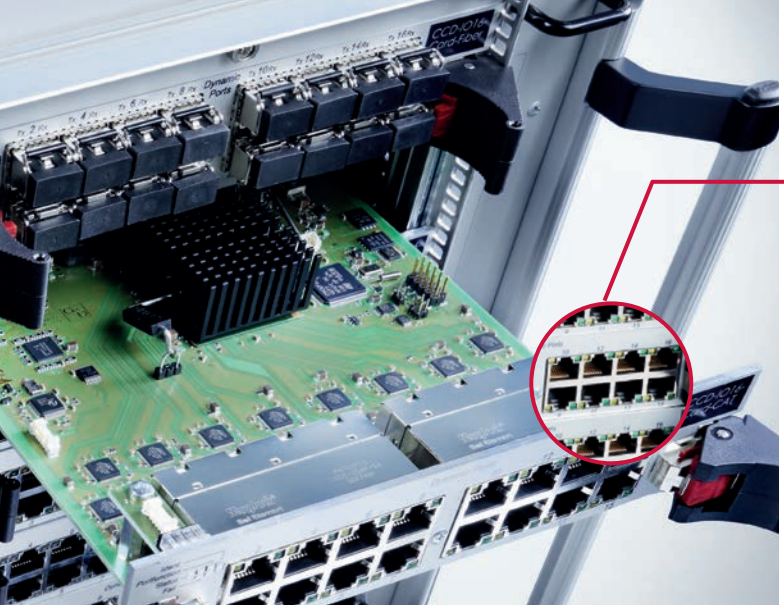
Modularity	• *I/O cards (input/output cards), switch and controller card as well as fan modules and power packs can be easily replaced* • *Be even more flexible: with the central system* • *Administration, monitoring and control placed on a separate controller card* • *Backup and restore of configuration data possible* • *Matrix configuration on a separate replaceable card*
Ports	• *288, 160 or 80 dynamic ports* • *Flexible I/O slots* • *Automatic device detection for computer and user modules*
Range	• *Via CAT cables: up to 140 m between DVI-CPU & Matrix as well as Matrix & DVI-CON* • *Via fibre optics: up to 10,000 m between DVI-CPU & Matrix and Matrix & DVI-CON*
Compatibility	• *All devices of digital matrix series (CCD, CCC, DVICenter as well as their CPU & CON modules)*
System parts	• *1 × central module ControlCenter-Digital including controller and switch card* • *1 × I/O card* • *1 × computer module (e.g. DVI-CPU)* • *1 × user module /e.g. DVI-CON)*

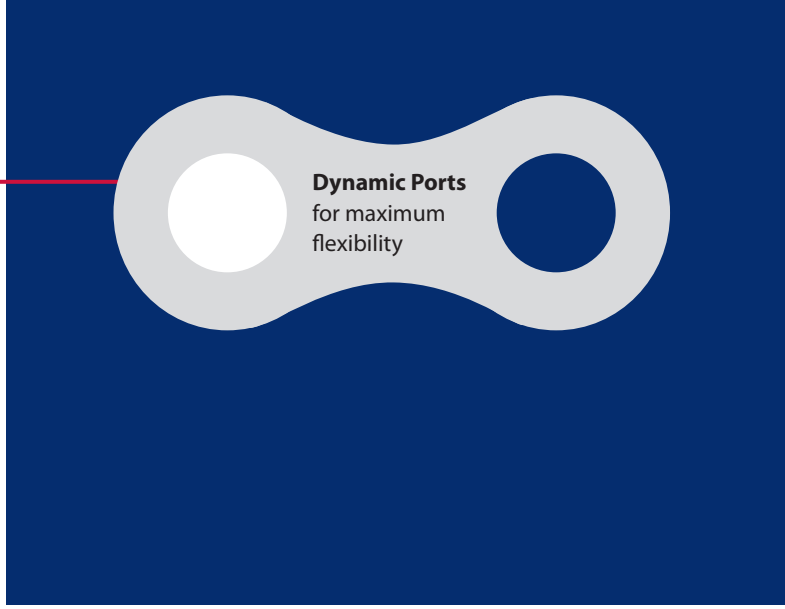


Efficiency down to the point - experience live performance

When it comes to performance, the ControlCenter range is the right choice. A broad spectrum of switchable signals makes G&D matrix systems real multi-talents.
The following signals can be switched: DisplayPort, HDMI, DVI video, VGA, keyboard/mouse, audio bidirectional, RS232 and USB 2.0 transparent. Furthermore, the I/O Card Multi can be used with the ControlCenter-Digital to integrate USB 3.0, SDI, MADI and other signals into the matrix system.

Profit from efficiency and crystal-clear video quality – for optimised 1:1 keyboard, video and mouse performance without any latency.
The variety of supported data signals, the different transmission media as well as intuitive configuration and easy operation make the ControlCenter-Digital the perfect partner for any future requirements and best performance





Advantages for more performance

- Resolution for crystal-clear video images: Up to 4096 x 2160@60 Hz / 4k@60Hz (depending on computer and console modules)
- Multi-monitor workstations
- Mixed operation of different cable types
- Optional CrossDisplay-Switching for user-friendly switching via mouse (All common display arrangements and operating systems are supported by CDS. For your detailed options we're happy to give further advice).
- Undisturbed transmission of moving images
- Comprehensive EDID support (Extended Display Identification Data)
- Support of touch screens
- Compact or modular system

MODULAR

POWERFUL

SAFE

Ready for any application

Whenever large, distributed installations with local administration and operation of computers are required, the ControlCenter-Digital is the perfect solution.

Thanks to its modular design, the latest member of the G&D matrix switch family perfectly matches the requirements of large installations in any control center or studio, broadcast etc.

Technical data

Switchable signals	• *DP1.2, DP High Resolution + DP* • *HDMI video sources* • *Single link DVI* • *VGA video sources* • *Signals bidirectional* • *Keyboard/mouse (USB & PS/2)* • *USB 2.0 transparent* • *USB 3.0* • *RS232*
Video resolution	• *DisplayPort up to 4096 x 2160@60Hz (4K / UHD) incl. 2K x 2K resolution (2048 x 2048@60Hz)* • *DVI single link up to 1920 x 1200@60Hz + VGA* • *All video resolutions with video bandwidths of up to 600 MP/s*
Operation	• *Mixed operation of CAT cables and fibre optics*
Expansion	• *Up to 4,096 computers manageable* • *Channel grouping* • *Cascadable to up to three levels* • *Szenario switching* • *Expandable to a fully redundant system* • *KVM Matrix-Grid™ interconnecting complex installations to enable bidirectional transmission* • *Bridge function to analog constructions* • *CrossDisplay-Switching* • *Multi-monitor consoles (TS function)* • *Moving/getting own or external screen contents (Push-Get function)* • *Remote Control over IP (IP-Control-API)* • *Monitoring and SNMP*

The new I/O-Card-Multi – Choose from even more signals

The ControlCenter-Digital offers maximum flexibility. With its modular design, you can adjust all system components precisely according to your requirements. This way, your ControlCenter-Digital consists exactly of the parts you need – no more no less.

As standard, the ControlCenter-Digital I/O cards exclusively support the wide range of signals available in the G&D portfolio. However, today's IT landscape offers many more standards. Discontinued computers switched using a matrix system often require more variety and therefore more flexibility.

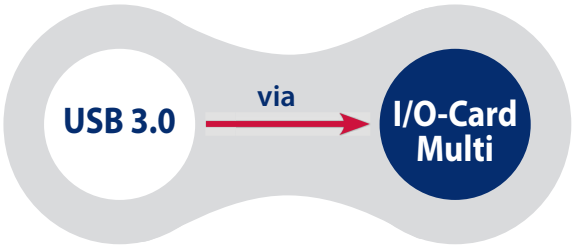
Discover flexibility

With the modular KVM matrix switch ControlCenter-Digital, users can operate multiple computers over a number of simultaneous consoles. The broad variety of supported signals and transmission media provides highest flexibility and performance for all applications.

An aspect the I/O-Card-Multi takes into account: Independent devices can be connected and their signals are switched and transmitted transparently. Thus, the new generation of cards allows users to benefit from an even wider variety of signals. To increase the matrix's flexibility even further, the supported data rate is 6.5 Gb/s (data rate for CCD-288 up to 3.2 Gb/s).

How to switch the I/O-Card-Multi

Devices connected to multifunctional ports of the I/O-Card-Multi can be grouped and switched with KVM end devices connected to regular KVM ports. Here, users can establish independent switching states for devices connected to the I/O-Card-Multi (pinning).
As an alternative, the devices connected to the ports of the I/O-Card-Multi can be switched via external control (requires IP-Control-API).



Functions of the I/O-Card-Multi

- Independent signal transmission to many end devices
- Signals can be switched together with standard KVM signals
- Transmission via copper cables or optical fibers

The I/O Multi-Card supports the following signals

- SDI, HD-SDI, 3G-SDI and 6G-SDI*
- USB 2.0 Ranger line
- USB 3.0 Spectra*
- 1Gb Ethernet
- MADI
- A selection of the G&D extender systems

* only ControlCenter-Digital-160 and -80

Reducing the number of grid lines with the I/O-Card-Trunk

An ever-growing installation also requires more cables to connect all components. Therefore, G&D has developed the I/O-Trunk-Card to combine the grid lines required within a KVM matrix grid. The card is placed in one of the I/O slots of the ControlCenter-Digital where it combines 4 of the 16 channels on one line.

Transmission between two I/O-Card-Trunk is carried out by even more powerful components compared to the standard. These components let you use the fourfold of the bandwidth at the same time – thus saving you one fourth of cabling efforts.

ControlCenter-Compact

Maximum performance in a small package - the ControlCenter-Compact

Our range of digital matrix systems is completed by the ControlCenter-Compact. Its functions and features make it the ideal successor for the compact DVICenter matrix range. The ControlCenter-Compact offers even more high-performance database management so that large installations can be optimally used, especially with the KVM Matrix-Grid™.

The ControlCenter-Compact range is fully compatible with the DVICenter, ControlCenter-Digital and end components for computer and workplace connections. This also includes DP1.2 vision systems that facilitate the latency-free signal transfer of 4K video at a full 60Hz repetition rate through the matrix.

Advantages for more flexibility

- Signal transmission via CAT cables and fibre optics even in mixed operation
- Variable port assignment and automatic device detection
- Maximum flexibility through high adaptability and compatibility with existing G&D equipment
- Even largest installations with thousands of servers can be implemented
- Hot-pluggable and hot-swappable system parts
- **Stay-alive function**
- Optional **TradeSwitch function, KVM Matrix-Grid™, Push-Get function, CrossDisplay-Switching** as well as optional **remote control over IP switching (API)**
- Devices can be configured, backed up and restored via web interface
- Firmware updates over network (web interface): matrix system and its peripherals
- Cascadable up to three levels (full cascade)
- bidirectional cascading via KVM MatrixGrid™

ControlCenter-Compact 176C

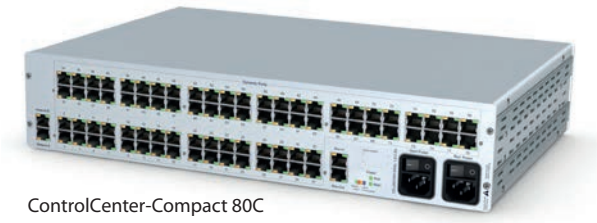
ControlCenter-Compact 128C

Technical data

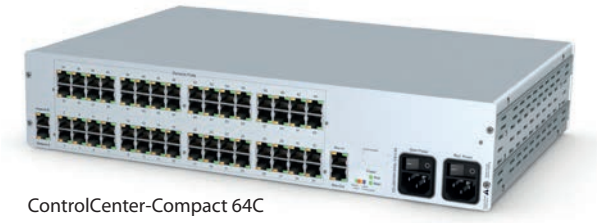
Ports	• *Variants from 8 to 176 dynamic ports (CAT, fiber, mixed operation)* • *automatic device detection for computer and user modules*
Range	• *Via CAT cables: up to 140 m between DVI-CPU & Matrix as well as Matrix & DVI-CON* • *Via fibre optics: up to 10,000 m between DVI-CPU & Matrix and Matrix & DVI-CON*
Compatibility	• *All devices of digital matrix series (CCD, CCC, DVICenter as well as their CPU & CON modules)*
System parts (Minimalsystem)	• *1 × central module ControlCenter-Compact 1 × computer module (e.g. DVI-CPU)* • *1 × user module (e.g. DVI-CON)*
Switchable signals	• *DP1.2, DP High Resolution + DP* • *HDMI video sources* • *Single link DVI* • *VGA video sources* • *Signals bidirectional* • *Keyboard/mouse (USB & PS/2)* • *USB 2.0 transparent* • *RS232*

Technical data

Video resolution	• *DisplayPort up to 4096 x 2160@60Hz (4K / UHD) incl. 2K x 2K resolution (2048 x 2048@60Hz)* • *DVI single link up to 1920 x 1200@60Hz + VGA* • *All video resolutions with video bandwidths of up to 600 MP/s*
Operation	• *Mixed operation of CAT cables and fibre optics*
Expansion	• *Channel grouping* • *Cascadable to up to three levels* • *Szenario switching* • *Expandable to a fully redundant system* • *KVM Matrix-Grid™ interconnecting complex installations to enable bidirectional trans-mission* • *Bridge function to analog constructions* • *CrossDisplay-Switching* • *Multi-monitor consoles (TS function)* • *Moving/getting own or external screen contents (Push-Get function)* • *Remote Control over IP (IP-Control-API)* • *Monitoring and SNMP*



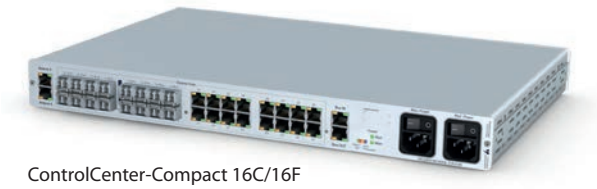
ControlCenter-Compact 80C



ControlCenter-Compact 64C

ControlCenter-Compact 48C

ControlCenter-Compact 32C



ControlCenter-Compact 16C/16F

ControlCenter-Compact 16C

ControlCenter-Compact 8C

ControlCenter-Compact application areas

Thanks to its dynamic port allocation, ControlCenter-Compact is suitable for use in all applications where a large number of computers need to be operated by several simultaneous workplaces.
Thanks to the wide range of different computer and work-place modules, the ControlCenter-Compact can easily adapt to changing needs.
Areas of application include control centres, surveillance vans or any kind of control room.

Wide variety:

The ControlCenter-Compact is available in the variants 8C, 16C, 32C, 48C, 64C and 80C with 8, 16, 32, 48, 64 or 80 CAT ports. Fiber and mixed variants with the same number of ports are available or currently in develop-ment. Thanks to its dynamic ports, each interface can be used either as input or output to connect computers or simultaneous workstations.
The fast and consistent operation/configuration of the ControlCenter-Compact systems is carried out via OSD + hotkeys or web interface. Both, OSD and hotkeys are available for all user modules; the web interface can be used over network.

Unlimited growth

Only when encountering the most challenging tasks you recognise the best of the best. Large number of servers or simultaneous workstations, a sophisticated system to assign access rights, intuitive and user friendly configuration and operation regardless of signal complexity and indiscriminately of preferred transmission media - the new ControlCenter series is ready to face highest demands.

The ControlCenter-Digital allows fast and easy expansion of your existing installations. Thus, more analog and digital KVM matrix systems can be seamlessly implemented in the ControlCenter-Digital system, which allows for a cascade of up to six levels.

Enable progress

288 ports are not enough? Do you need even more ports for large and powerful IT installations? Cascaded to up to three levels via CAT cables or fibre optics, the Control- Center-Digital provides thousands of ports and lets you expand the system according to your requirements. With the help of fibre optics workstations across different floors and buildings can be implemented into the installation.

The ControlCenter series helps you control complex IT installations in control centres, optimising processes and increasing efficiency.

Scenario switching to simplify the operation of matrix systems

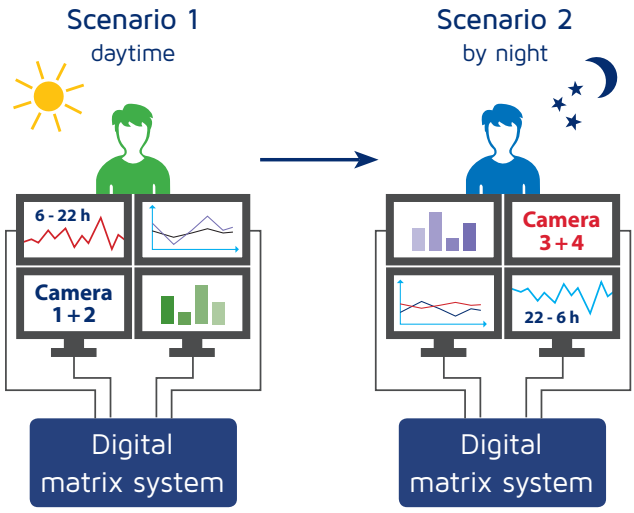
Digital KVM matrix systems from Guntermann & Drunck let users access numerous computers from distributed workplaces. Since such installations tend to be rather complex and, due to the many features included, lead to an extremely powerful but complex infrastructure, intuitive operating concepts are key. This is where scenario switching comes into play. Scenario switching lets you store the switching condition of one or multiple workplaces or even of the entire system. The selected switching states are saved in a script in the matrix system and can be accessed and executed via the OSD of workplaces assigned with the required rights.

Adapting the entire system to changing user behaviour

Global scenarios are best applied on occasions that require that the use of all consoles included in a system has to be changed at the same time. These scenarios change the switching conditions of the entire matrix installation and can be applied in many ways. Thus it is possible to use only one command to switch all consoles of a control room from day to night shift, for example. When applied in OB vans, scenarios allow users to switch the parameters of the entire setup of a location to another location. This way, the intended use of an installation can be changed within seconds.

Fast reaction to changing tasks

Whether as emergency scenario at workplaces in control rooms or as a simple, less critical change of applications: Local scenarios are used when computers at individual workplaces need to be rearranged. Scenario switching is useful to apply whenever switching conditions need to be changed at once. Especially when it comes to multi-monitor consoles accessing multiple computers at the same time, the manual and therefore sequential selection of computers for every single monitor does not only prove to be complicated, but takes extremely long, too. Here again, the scenario allows users to store switching states for local consoles which are then available for future applications.



Example for day/night scenarios:
One single command switches all computers required at the console from day to night shift.

Of course, any login or access rights of KVM matrix systems remain the same when using scenarios.

Requirements:

Scenario switching requires the additional function „IP-Control-API“.

KVM Matrix-Grid™ for complex infrastructures

The KVM Matrix-Grid™ allows for bidirectional communication of digital KVM matrix systems.
The usage of a KVM Matrix-Grid™ optimizes applications in which:

- Bidirectional access between two or more KVM matrix switches is required
- Interconnectivity is mandatory due to system size
- Important accesses have to be distributed across multiple KVM matrix switches

Bidirectional communication between matrix systems

The matrix grid establishes a bidirectional communication between individual matrix switches. Now systems can be interconnected even more directly to facilitate larger installations. Thus, users are able to operate the system bidirectionally at multiple locations.

For transmission between two matrix systems, the devices are directly connected via I/O ports. Each simultaneous KVM connection going beyond a matrix requires a connection to the grid. To establish communication between the matrices, they are connected to a network that provides access to a shared database.

Direct connection

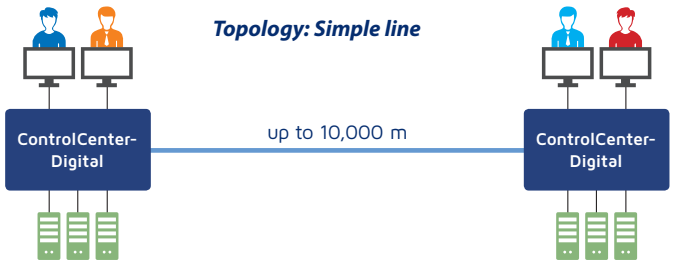
The systems included in a grid are virtually combined to form one large matrix for the users. Thus, all connected user consoles are able to access all connected computers within a grid. The system automatically takes over the routing of KVM signals by selecting the ideal path through the grid.

Connect various systems

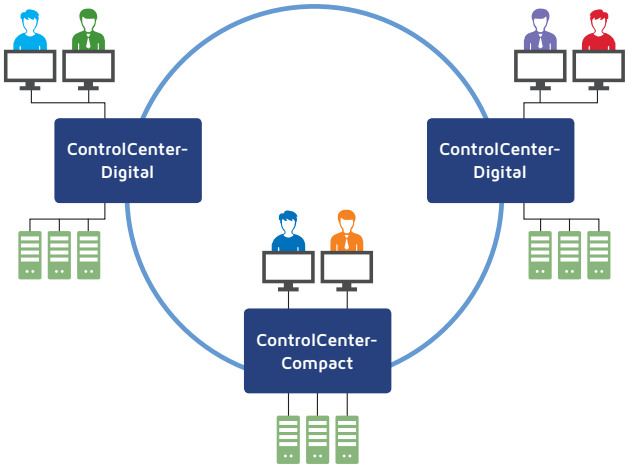
At all expansion stages, digital matrix systems from G&D can be integrated into the matrix grid. This includes the entire DVICenter and ControlCenter-Digital series. Up to 24 matrices can be part of one grid. Within this framework, any topologies are possible (e.g. strand, tree, ring, star, meshed network).

The systems included in a grid are virtually combined to form one large matrix for the users. Thus, all connected user consoles are able to access all connected computers within a grid. The system automatically takes over the routing of KVM signals by selecting the ideal path through the grid.

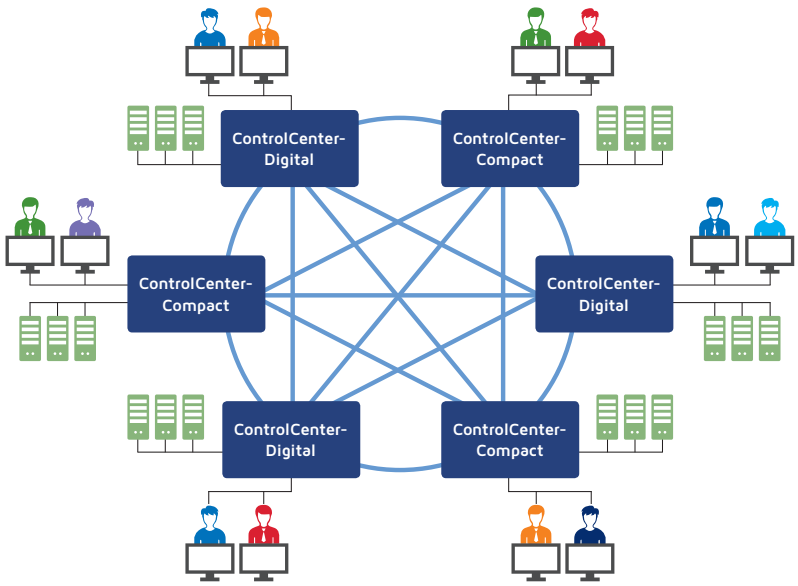
Topology: Simple line



Topology: Ring



Topology: Fully connected network



Your advantages:

- Bidirectional operation from multiple locations
- Distributed access to a great number of computers
- Direct connections
- Even larger installations possible

Bridge function – Uniting the world of digital and analog KVM

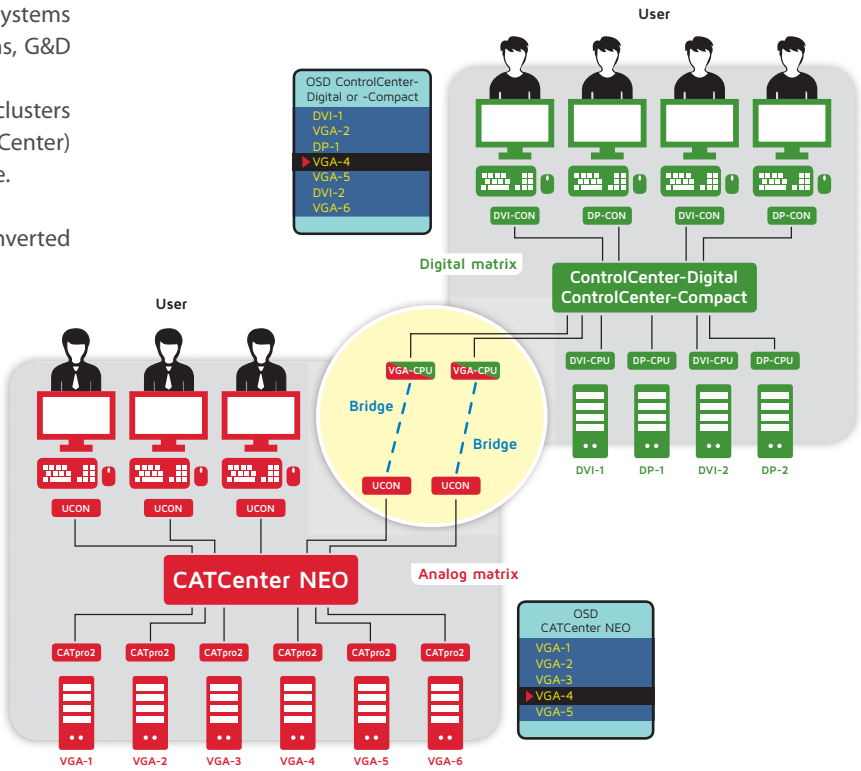
To be able to continue using VGA-based KVM matrix systems and integrate them into digital state-of-the-art solutions, G&D developed the Bridge function.
With the function, users can integrate CATCenter NEO clusters into digital matrix systems (ControlCenter range or DVICenter) and operate the entire system over a single user interface.

When connecting both systems, analog signals are converted into digital ones. To achieve this, the UCON (the CATCenter NEO's user console) grabs the signal and transmits them via a VGA-CPU to provide them to the digital matrix.

As always, G&D put usability first. The logical connection between both matrix systems saves users from clicking through various OSDs. Both systems need to connected to a network for communicating via the IP-Control-API of the CATCenter NEO. Consequently they can both be operated by a single OSD.

Users of analog KVM matrix systems do not realise any difference while operating the system. Thanks to the Bridge function, users of the digital matrix are also able to access analog targets via the OSD. The system manages all processes running in the background so that users are able to completely focus on their work instead of having to worry about infrastructure issues. Therefore, the way to the source becomes secondary.

Of course, user rights can still be managed as easily as before. Access rights to individual targets can be assigned to individual users or to groups, independently from the matrix into which a target is integrated.



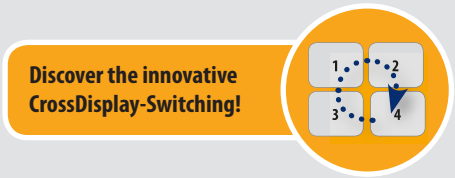
- No complex reconstructions necessary
- Easy selection of computers via OSD
- Sophisticated rights assignment
- Overview of all connected computers
- High return on investment through long life cycle of analogue KVM systems
- Expansions with entirely digital systems possible
- Future-proof installation
- Expansions (Push-Get, external media control etc.) can still be used.

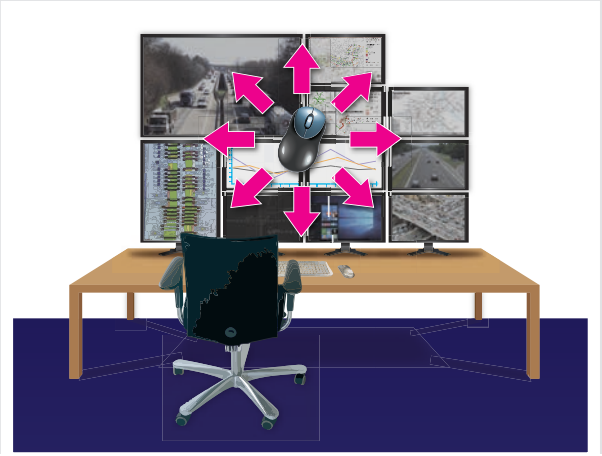
CrossDisplay-Switching

With the innovative CrossDisplay-Switching as part of the TS-function (digital matrix system), users can use the mouse to easily switch between channels.
The mouse acts as if on a „virtual desktop" and can be moved seamlessly across the connected displays. Moving the cursor from the active to another display, the keyboard-mouse focus automatically switches to the connected computer. Now users can create a multi-monitor console and need only one keyboard and one mouse to operate all computers. The mouse becomes the ultimate intuitive switching tool.

Your advantages:

- easy switching by using the mouse, in addition to switching between channels using hotkeys or the OSD
- intuitive operation and more efficiency at the workstation
- Computers with multi head graphics can be included





DP1.2-Vision extender - transmission of DisplayPort™ 1.2 signals via CAT or fibre optics

The system consists of a computer module (transmitter) and a user module (receiver) and enables you to operate a computer on a local or remote console.

DP1.2-Vision uses CAT-x cables or fibre optics to transmit signals up to 10,000 m. The devices use DisplayPort™ 1.2 video and are available as single and multi channel variant.
It is also possible to transmit transparent USB 2.0, RS232 and audio signals.

With its network port, the web interface and monitoring functions, the DP1.2-Vision system offers important features for mission-critical applications.

Embedding extenders in digital matrix systems

To be prepared for growing installations, the integrated matrix support turns the DP1.2-Vision into a future-proof investment.

This way, it is possible to include extenders into a digital G&D matrix system. Thus, users benefit from more flexibility through distributed access.

Digital matrix system

DP1.2-Vision

Mix & Match

DisplayPort „High-Resolution" (DP-HR-CPU und DP-HR-CON)

DP-HR components let you integrate graphics cards and monitors with DisplayPort connectors at high resolutions into KVM matrix systems (ControlCenter range and DVICenter).

A bandwidth up to 300 Mpixels/s allows resolutions up to 2560 x 1600/60Hz. The transmission takes place via CAT cables or optical fibers) thus allowing transmission distances of up to 10,000 m. DH variants use the bandwidth to optionally transmit two video signals over one line, saving not only transmissionlines but ports at the central module, too.

The computer modules DP-HR-CPU and the user modules DP-HR-CON are available in different expansions and differ based on the number of video channels, the transmission medium, the transparent USB transfer and the possibility of controlling redundant matrix switch clusters.

Transmission

- DisplayPort 1.1a
- Supported resolutions up to 2560 x 1600@60Hz or 3840 x 2160@30Hz
- Transmission over optical fibers up to 10,000 m
- Integrated transparent USB 2.0 (optional)

Variations

- e.g. DP-HR-CPU, DP-HR-CPU-DH, DP-HR-CON, DP-HR-CON-DH, DP-HR-U-CON, DP-HR-U-CON-DH, DP-HR-CPU-MC2... extensive range of variants fitting your requirements

DP-HR-CPU-DH-F-UC (front view)

DP-HR-CPU-UC (front view)

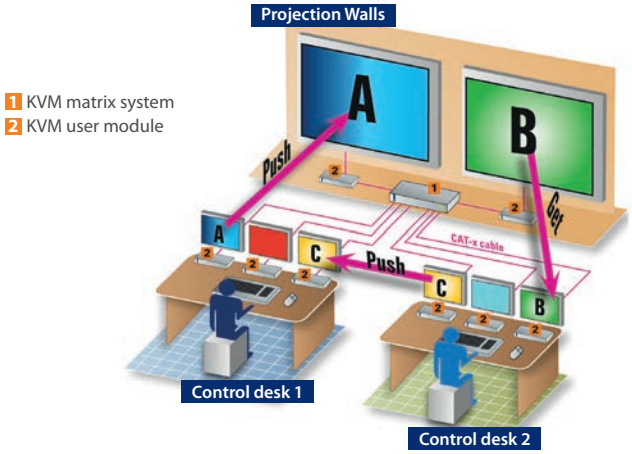
DP-HR-U-CON-DH (rear view)

DP-HR-U-CON (rear view)

Push-Get-Funktion

With the Push-Get function, users can move the screen contents of a target to (push) - or get it from - the display of another console. This display can be a large screen projection, for example.

Using this function facilitates the communication, flexibility and speed within a team since operators can work together on solving issues.



Generic HID USB

HID, short for Human Interface Device, describes a device class of the USB standard. The support of this device class has been integrated into digital matrix systems as "Generic HID".

With this functional expansion, you can connect any USB HID (e.g. touch screens or graphics tablets) directly to a console device and operate it via matrix without emulation.

When accessing a target via console, the HID is detected by the connected computer as if it were connected directly to the computer's local USB interface.

Integrated transparent USB 2.0

Until recently, transparent USB 2.0 applications combined with our digital matrix systems required a separate transmission line as well as matching end devices. Our newly-developed end devices with the marking "U" are now able to transmit transparent USB 2.0 over the same transmission line that is used for KVM signals.

Transmitting the entire range of functions therefore only requires one cable saving peripherals, transmission lines and ports at the central matrix switch.
Support of all devices that support the USB 2.0 standard.

Advantages of Generic HID USB

- Integrated as standard
- Any HID end devices can be connected
- In addition to connecting keyboard and mouse, a third USB interface lets you connect a third input device (e.g. touch panel)

Advantages of integrated transparent USB

- Keyboard/video/mouse and USB 2.0
- Transmission over one CAT cable
- USB full speed transmission
- Additional components U2-R-CPU and U2-R-CON available for USB high speed
- Generic HID USB included in devices

Back panel of DVI-U-CON-2 with Generic USB interface and additional interface for transparent USB transmission

Front panel of DVI-U-CON-2 with interfaces for transparent USB transmission

Even older devices without the three USB interfaces labeled „Generic" can use this feature with a simple firmware update.

New CON end devices can be identified by the number of interfaces: Older devices provide two, new devices provide three USB interfaces on top of each other. Always use the top interface for Generic HID.

Versatile products of the CPU- and CON-modules

For connecting computers and consoles, a huge variant of modules is available to suite best any individual need. These modules are composed of the following characteristics:

Video signal	Description
DP1.2	*DisplayPort™ 1.2 signals up to 4K@60Hz via the --> DP1.2-Vision extender system*
HDM	*transmission of HDMI 1.4b for resolutions up to 2560x1600@60Hz on the first, 1920x1200@60 Hz on the second channel (basic module **HDM**-CPU)*
DP-HR	*transmission of high resolution DisplayPort™ video at a bandwidth of up to 300 Mpixels/s allowing for resolutions up to 2560x1600@60Hz or 3840x2160@30Hz (basic modules **DP-HR**-CPU and **DP-HR**-CON).*
DP	*transmission of DisplayPort™ 1.1 for resolutions up to 1920x1200@60Hz (basic modules **DP**-CPU and **DP**-CON).*
DVI	*transmission of single-link DVI video for resolutions up to 1920x1200@60Hz (basic modules **DVI**-CPU and **DVI**-CON).*
VGA	*on computer side the module **VGA**-CPU-UC integrates analog video into the system, on the user side the DVI modules also provide analog signals via the DVI-I interface.*
MC2 / MC4	*MC2 / MC4 modules to connect to multihead graphics / multiple displays.*
DH (Dual Head)	*Dual-head variant to integrate two video channels using one single transmission line (Basic modules **DP-HR**-CPU-DH and **DP-HR**-CON-DH).*

Transmission	Description
Fiber	*transmission via fiber optics (multi mode up to 400 m, single mode up to 5,000 m, single mode plus up to 10,000 m), fiber variants to connect with Control-Center-series only (basic modules e.g. DP-CPU-**Fiber** or DP-CON-**Fiber**).*
CAT	*transmission via CAT cable (up to 140 m) [as a standard not mentioned in the product names, e.g. DVI-CPU or DVI-CON].*
UC	*computer module for connecting to two matrix switch cluster (basic module e.g. DVI-CPU-**UC**).*
CON-2	*console module for connecting to / switch in-between two matrix switch cluster (basic module e.g. DVI-**CON-2**).*

USB transmission	Description
Generic HID	*all modules provide the capability to connect – besides standard PS/2 and USB keyboard / mouse – any USB device out of the class of Human Interface-Devices*
U	*transparent USB 2.0 transmission within the primary transmission line at USB full speed (basic module e.g. DVI-**U**-CPU or DVI-**U**-CON)-*
U2-R	*transparent USB 2.0 transmission at USB high speed and transparent transmission of RS232 via a separate transmission line (**U2-R**-CPU and U2-R-CON)-*

The fitting module for each of your requirements

Our portfolio offers you a wide range of mutually compatible product variants, which present a cross section of the features listed above, for example, z.B. DP-HR-CPU, DVI-CON-2, …
All digital modules can be easily combined (mix & match). Thanks to its matrix support, the DP1.2-Vision extender will expand your installations and create more flexibility.

For a complete overview, see www.gdsys.de or the 'Digital KVM Matrix Systems' catalogue.

Sophisticated solutions

We escort our customers anticipating future requirements. Consequently these requirements are turned into high-end solutions such as intelligent G&D rack mounting devices, computer switching and control via input devices or a central power supply for devices with external power packs.

We offer a broad selection of rack mount kits creating spacesaving installations of G&D devices.

MultiPower-12-NT (top) and MultiPower-6-NT (bottom) with network connection

Our MultiPower - central power supply for your G&D devices

The MultiPower 2, 6 and 12 provide a central power supply for G&D devices that require external power (12V) e.g. DVI-CPU. Up to twelve 12V devices can be connected. We have further optimised our MultiPower products and now offer our power devices with network interfaces for central monitoring.

These allow external monitoring of the device's status, increasing operational safety for the connected devices.

Safety first

The safety of your IT installation is paramount to us. Consequently the ControlCenter-Digital provides redundant networks interfaces and up to three power supplies. If one power pack fails, it can be replaced even during live operation.

Always on the safe side thanks to monitoring & SNMP

The 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).

Easier access with SNMP tool Zabbix

For customers who are not yet using extensive SNMP tools, G&D offer a simple way to use the functions included in the devices. Templates for the open source tool Zabbix are provided here. The program lets users monitor SNMP-capable devices in a network and, among other things, issues warning notifications about critical device states, which have been received via SNMP trap.

Advantages for more safety

- Boot loader, operating system and firmware form a trusted computing platform to protect the system against third-party manipulations
- integrated Trusted Platform Module (TPM) protects any access and configuration data against exposure with RSA encryption process
- Failover connection (if the central module fails, you can establish a direct connection between user module and computer module and still operate the system). This feature is provided with a cable length of max. 140m.
- Support of external authentication via LDAP, Active Directory, TACACS+, Radius
- Redundant power supply

Glossary

Bridge-Funktion	*With the function, users can integrate CATCenter NEO clusters into digital matrix systems (CCD, CCC or DVICenter) and operate the entire system over single one user interface.*
CON module	*(Abbr. for console) The user console (CON module) receives the KVM information at the console.*
Controller card	*The controller card manages the system's central administration, monitoring and control.*
CPU module	*(Abbr. for Central Processing Unit); Computer connection module, which taps the computer's KVM signals and transmits them to the matrix switch.*
CrossDisplay-Switching	*CrossDisplay-Switching enables users to easily switch between computers by mouse (TradeSwitch function required)*
EDID support	*A monitor's EDID information (Extended Display Information Data) inform the graphics card of a connected computer about the monitor's various technical features.*
I/O card	*I/O cards are modular cards with multiple in-/output ports to which you can connect user or computer modules via CAT cables or fibre optics.*
Channel grouping	*Channel grouping creates multi-monitor workstations for computers with multiple video channels. Multiple channels can be grouped and switched together.*
Cascading	*When cascaded, KVM matrix switches increase the number of connectable computers. For this purpose the central modules have to be connected to each other. The master device takes over all controlling tasks.*
KVM Matrix-Grid™	*Bidirectional communication through the KVM-Matrix Grid*
MC modules	*Multi-channel modules are used to implement multi-video computers or multi-monitor workstations.*
Push-Get function	*„Push" a target image from your display to the display of another workstation or video wall. „Get" a target image of another workstation or video wall to your own display.*
Remote Control over IP-Switching	*IP-Control-API enables the external control of a matrix switch (e.g. switching over a TCP/IP connection).*
Stay-Alive function	*Switching ON and OFF or „moving" a switching component the CPU modules remain unaffected preventing the „freezing" of computers whilst connection is inactive.*
Switch card	*The switch card is the central unit containing the switching logic of the matrix switch.*
Scenario switching	*Scenario switching lets you store the switching condition of one or multiple workplaces or even of the entire system. The selected switching states are saved in a script in the matrix system and can be accessed and executed via the OSD of workplaces assigned with the required rights.*
TradeSwitch function	*The TradeSwitch function operates multiple computers via one keyboard and mouse. The TradeSwitch function includes CrossDisplay-Switching (see above).*

G&D
IF IT'S KVM

From professionals to professionals:

Trust in our professional solutions - from planning through to aftersales support.

Main office

Guntermann & Drunck GmbH
Systementwicklung
Obere Leimbach 9
D-57074 Siegen

Phone +49 (0) 271/23872-0
Fax +49 (0) 271/23872-120

sales@gdsys.de
www.gdsys.de

US office

G&D North America Inc.
4001 W. Alameda Avenue
Suite 100, Burbank, CA 91505

Phone +1-818-748-3383

sales@gd-northamerica.com
www.gd-northamerica.com

Follow us on:

WEEE-Reg.-Nr. DE30763240