KVM Innovations

G&D **IF IT'S KVM**

G&D

Cubes labeled:
- DP1.2-MUX-NT
- DL-DVI-Vision
- Control Center-Compact
- DL-DVI-MUX2-NT
- KVM-over-IP-Extender
- Control Center-IP
- DP1.2-MUX3-ATC
- G&D

Highlights 2018/2019

KVM extenders | KVM switches | KVM matrix systems

ControlCenter-IP: Versatile functionalities of G&D matrix systems combined with the flexibility of KVM–over–IP™

The high-end G&D portfolio has been expanded with a new product for IP transmission. In addition to the previously introduced extender system based on G&D's KVM-over-IP™ technology, the new ControlCenter-IP is now conquering the network world.

This centralised KVM matrix allows, in addition to the existing point-to-point connection of IP extender systems, switching of all connected computer and workstation modules and extends the ease of use and flexibility.

The ControlCenter-IP scores with innovative technology for user-friendliness in the network.

The ControlCenter-IP enables the switching of the following signals

- DP 1.2a and DP 1.1a
- Single link and dual link DVI
- Audio stereo bidirectional
- Support of PS/2 and USB keyboard/mouse
- RS232 transparent
- Generic USB HID with a view to other USB classes

Device properties

- The device takes over the central system logic
- Redundant power supply
- Redundant network interface
- Access protection and user administration (can be switched off)
- Boot loader, operating system and firmware form a trusted computing platform to protect the system against third-party manipulations

The features and enhancements of ControlCenter-IP

- TradeSwitch function
- CrossDisplay Switching incl. support for multi-head graphic
- Push-Get function
- IP-Control-API incl. Scripting function
- Support for AMX or Crestron control systems
- Channel grouping
- Monitoring, SNMP, Syslog
- Authentication
- Hotkeys, select buttons
- User rights management
- MultiUser access

Integrate IP Matrix into the network

In order to use the full functionality of the ControlCenter-IP, this appliance is incorporated into the network in addition to each extender systems (CON and CPU).

While the central routing itself is handled via standard network switches, the ControlCenter-IP takes over the logic in the network and optimises the accessibility of all devices among each other by allowing the switching between the CON and CPU modules. The user moves in a high-performance G&D matrix environment while leveraging the benefits of the flexible network.

Easy to use and compatible

G&D has taken the features of the classic ControlCenter series and integrated it into the KVM-over-IP matrix. The resulting Control-Center-IP combines the advantages of both worlds.

This includes the basic administration with extensive user and rights management. Many helpful and popular control room features such as monitoring, scenario circuits, push-get for optimal cooperation and incorporation of video walls to the CrossDisplay switching for absolutely intuitive operation of multi-monitor workstations are also available. The G&D IP devices are compatible with each other and allow optimisations in the customer-side system and its extension at any time.

Function of the ControlCenter-IP

The ControlCenter-IP supplements the series of Vision-IP of G&D with a variety of matrix functions. These functions use G&D's KVM-over-IP™ for the transmission of signals. Using bandwidth management, the user can adjust the transmission to a variety of bandwidth requirements.

The transmission length is almost unlimited, two active network components can be connected to each other over a length of up to 100 m via CAT or up to 10,000 m via optical fibers.

Our IP-based KVM extender modules offer the right solution for working in network structures

Mix and match in the IP extenders

In order to be able to use the ControlCenter-IP application in the network, G&D workstation and computer modules are integrated into the network. Select the appropriate IP extender system from our product portfolio.

The modules are compatible with each other and thus the technical possibilities are limitless. In all devices, the transmission takes place as compressed and pixel-perfect; the video quality is lossless and features near-zero latency.

Common features of IP extender for signal transmission

- Support of PS/2 and USB keyboard/mouse
- Permanent keyboard and mouse emulation
- Permanent monitor emulation (CPU)

- Audio stereo bidirectional
- RS232 transparent
- Cross compatible (DVI <-> DP)

KVM matrix support

DP1.2-Vision-IP-CAT-CON

- DisplayPort 1.2a and 1.1a
- Supports 4K and UltraHD resolutions @ 60 Hz
- Resolution up to 4096 x 2160 @ 60 Hz*
- Embedded Audio

DP-Vision-IP-CAT-CON

- DisplayPort 1.1a
- Resolution up to 4096 x 2160 @ 30 Hz* or 2560 x 1600 @ 60 Hz
- Embedded Audio

DL-DVI-Vision-IP-CAT-CON

- Single link and dual link DVI video
- Resolution up to 2560 x 1600 @ 60 Hz*

DVI-Vision-IP-CAT-CON

- Single link DVI video
- Resolution up to 1920 x 1200 @ 60 Hz*

* Further resolutions are possible within the respective interface standards.

KVM over IP™

With KVM-over-IP™ devices you overcome the limits of dedicated cabling. You can control multiple computers on a network (LAN) over TCP / IP protocols. You can access the configuration interface via web browser.

KVM-over-IP™ solutions work across operating systems and are available as compact stand-alone devices.

- Transmission via standard IP-based networks (OSI layer model 3)
- 1 Gbit bandwidth per port, reducible

- HDIP level 1-3
- Secure and trouble-free operation through pairing and encryption with AES-128 (not manipulable)
- Transmission length unlimited, max. 100 m (CAT) or up to 10,000 m (optical fibers) between two active components
- Support of Quality of Service with configuration option by the user
- User-configurable network ports of the respective communication channels
- Additional independent management interfaces (front)

ControlCenter-Compact - Extension of the expansion stages

The ControlCenter-Compact matrix system enables distributed switching and extension of computer signals and thus the remote operation of several computers via different workstations. En: In order to provide you with even more options for your individual applications, the ControlCenter-Compact portfolio has been extended by further expansion stages.

Transmission and highlights:

■ Expansion stages with 8/16/32/48/64/80/112/128/176 Dynamic Ports
■ DisplayPort™ up to 4096 x 2160 @ 60 Hz (4K / UHD)
■ DVI single link up to 1920 x 1200 @ 60 Hz + VGA
■ Audio stereo bidirectional
■ Transmission via CAT cables, fiber optics and mixed mode
■ RS232 and USB 2.0 transparent
■ Generic USB HID

Due to the powerful database administration, large installations can be used optimally, especially in combination with the KVM Matrix-Grid™. The entire ControlCenter-Compact series is compatible with the matrix switches DVICenter, ControlCenter-Digital and the components to connect computer and user modules. Among them are the new DP1.2-Vision systems, which allow the matrix to transmit 4K video with a refresh rate of 60 Hz without any latency.

Versatile variations

Up to now, the ControlCenter-Compact was available in six expansion levels providing between 8 and 80 dynamic ports, which can be used either as input or as output. The systems are available in CAT, fiber and mixed versions. Six new versions with 176 CAT ports, 128 CAT ports, 32 fiber ports and mixed versions with 32 fiber ports and optionally 16/32/48/80 CAT ports have been added to G&D's portfolio.

Application areas

Thanks to its dynamic port allocation, the ControlCenter-Compact is suitable for use in all applications where a large number of computers need to be operated by several simultaneous workplaces. The up to 176 ports can be allocated in any way.

Thanks to the wide range of dierent computer and workplace modules, the ControlCenter-Compact can easily adapt to changing needs. Areas of application include control centres, surveillance vans or any kind of control room.

ControlCenter-Compact-32F-48C

Expansions

The ControlCenter-Compact impresses with features for mission-critical applications and the possibility to design an ideal working environment and accelerate workflows:

■ CrossDisplay-Switching to switch to another computer simply by moving the mouse cursor
■ KVM Matrix-Grid™ to improve control of large installations through bidirectional operation
■ Multi-monitor workstations (save peripherals by use of TradeSwitch function)
■ Move/get your own or other users' screen contents (Push-Get function)
■ Remote control via IP (IP-Control-API)
■ Monitoring & SNMP

The digital matrix system ControlCenter-Compact　　　　　　　*Matrix terminals mounted in G&D DeviceCarrier*

DP1.2-MUX3-ATC – fast switching for more security

The KVM switch DP1.2-MUX3-ATC enables the operation of up to three computers via one workstation. The high-performance system supports 4K resolutions at 60 Hz and allows you to switch sources without the hassle of delays or image interruptions. The switch is designed to meet the needs of the ATC environment for mission-critical applications – providing 100% secure, 24/7 operation at full performance.

The devices switch DisplayPort™ 1.2 video signals (backward compatible) and are available in both single-channel and multi-channel 2 versions. It is also possible to switch transparent USB 3.0 and analog as well as embedded audio.

With network connection, web interface and monitoring function, the DP1.2-MUX3-ATC offers numerous features for mission-critical applications.

DP1.2-MUX3-ATC

The DP1.2 MUX3 ATC switches the signals:

- DisplayPort™ 1.2a + 1.1a
- Embedded audio in DisplayPort
- Keyboard/Mouse (USB & PS/2)
- USB 3.0 transparent
- Analog audio stereo bidirectional

Instant switching of DP1.2 signals using unique G&D technology

DP1.2-MUX2-NT & DL-DVI-MUX2-NT

D1.2-MUX-NT

DL-DVI-MUX2-NT

As successors of the DL-MUX series, MUX-NT systems also offer numerous security features. In contrast to DP1.2-MUX3-ATC, the video signal is switched purely on hardware basis. MUX-NT systems comprise the following variants:

DP1.2-MUX2-NT for resolutions up to 4096 x 2160 @ 60 Hz (4K @ 60 Hz) at 24 bit color depth*

DL-DVI-MUX-NT for resolutions up to 4096 x 2160 @ 30 Hz (4K @ 30 Hz) or 2560 x 1600 @ 60 Hz at 24 bit color depth*

KVM extenders: New variants offer even more possibilities

DL-DVI-Vision-CON

The new DL-DVI-Vision-CON expands the portfolio of KVM extenders and enables the transmission of dual-link DVI video in addition to single-link DVI video. The DL-DVI signal is output on the console side, which allows the use of monitors with a DVI interface, for example.

DL-DVI-Vision-CON

Expanded module variants

All compressing G&D KVM extenders are now also available as **CPU-UC and CON-2 variants**. This makes it possible to set up redundant clusters for matrix operation.

In addition to mere matrix modules, the extenders offer the possibility of transmitting RS232 signals and provide a local console on the computer side.

* Further VESA and CEA standardised resolution possible for video bandwith/pixel rate and horizontal/vertical frequency.

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From professionals to professionals:

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

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