CONTROLCENTER-IP 2.0 INCL. 20 LICENSES

KVM matrix systems, Article number A2300129



Front



Back

With the central module ControlCenter-IP, you can operate a larger number of computers from a greater number of workplaces. KVM-over-IP™ matrix systems assist you in managing complex IT infrastructures in a simple and intuitive way while leveraging the advantages of a flexible network. Especially in mission-critical environments such as control rooms, military command centers, data centers, or facilities for managing critical infrastructures, users benefit from this secure, reliable, and flexible solution for decentralized operation and administration. The ControlCenter-IP is integrated into the standard IP-based network along with KVM-over-IP™ end devices (computer modules, RemoteAccess-IP-CPUs, and console modules). While the central routing is handled via standard network switches, the ControlCenter-IP manages the mediation logic within the network, optimizes the accessibility of all devices, and enables switching to the connected computer modules.

SCOPE OF DELIVERY

Quantity	Description	Article number
2	PowerCable-2 Standard cable 2m	A6300057
1	19" RM-Set-436-1RU	A7000003
1	Safety instructions flyer - FCC class B	A9100371

DETAILS

TRANSMISSION

- At least one Layer-2-managed switch with Gigabit Ethernet is required, offering features such as QoS, VLAN, multicast, IGMP, IGMP snooping, and IGMP snooping querier. Additionally, adequate performance (forwarding bandwidth, switching bandwidth, forwarding performance, and uplinks) must be ensured, especially when using multiple network switches
- KVM-over-IP™ via IP-based networks (layer 3)
- Transmission distance between two active network components is up to 100 meters over CAT cables

DEVICE

- Improved security through physical separation between workplaces and computers
- Access to standard interfaces of the computer, with no software installation required
- Users can switch between different sources almost in real-time, without noticing interruptions or delays
- The device manages the mediation logic within the network, optimizes the accessibility of all devices, and enables switching to the connected computer modules.
- The ControlCenter-IP series is compatible with the ControlCenter-IP-XS series and the KVM-over-IP™ end devices for computer and workplace connections

WARRANTY

- A 3-year, free of charge product guarantee
- For an additional fee guarantee extension possible

FEATURES

SECURITY FEATURES

- Permanent encryption of all communication and data transmissions, as well as sensitive information such as login credentials and passwords, guarantees a high level of security in critical environments
  - AES256-GCM for keyboard/mouse and control data
  - AES128-CTR for video, audio, GenericUSB and RS232
- Bootloader, operating system, and firmware form a "Trusted Computing Platform" with automatic integrity checks during system startup
- Integrated Trusted Platform Module (TPM) protects all access and configuration data from being spied on or tampered with by third parties
- Comprehensive rights management and user administration, allowing precise control over which user can access which resources
- Option for disablable access protection (OpenAccess mode), in which all connected workstation modules can access all released computer sources immediately and without prior authentication
- Support for external directory services (Active Directory, Radius, LDAP) to meet company security policies
- To comply with individual password policies and improve security, password complexity can be configured system-wide
- Configurable login options, such as displaying terms of use or setting the maximum acceptable number of failed login attempts, can enhance system security
- Emergency direct connection (extender mode) between console and computer module ensures continuous operation even during unexpected events at the central module
- The optional UID-Locking restricts the usable end devices, ensuring that no additional devices can be added or replaced after activation
- Redundant internal power packs
- Redundant network interface
- Monitoring of system states such as status, power supply, temperature and computer modules and console modules are monitored as well
- Each monitoring value can be enabled individually; critical states raise an alarm, which authorized users can acknowledge to downgrade it to warning level
- Syslog logging locally and to up to two servers, via TCP or UDP, with configurable port, eight severity levels per the syslog standard and ISO 8601 timestamps
- Logged events include user logins, failed login attempts, changes to user rights, connections to remote targets and failed backups
- SNMP agent supporting SNMPv2c and SNMPv3; for SNMPv3, authentication via SHA-1 through SHA-512, encryption with AES128, AES192 or AES256, and security levels up to authPriv

- Access to the SNMP agent can be restricted to defined source IP addresses or network segments (IPv4 and IPv6)
- SNMP notifications to multiple receivers, sent either as traps or as acknowledged informs, with a configurable severity threshold
- Auto Backup Function: Automates backups at user-defined intervals and replaces manual intervention – ensuring reliable, timely data protection without the need for continuous monitoring
- Configurable exclusive access control for USB, audio, and RS232 ensures that access is granted only to console modules and authorized users
- End devices (computer modules, RemoteAccess-IP-CPUs and console modules) do not store security-relevant information such as login credentials, which could be extracted in the event of device loss
- Freeze function: If the video signal is lost, the last displayed image is frozen and highlighted with a colored frame and timer

OPERATION FEATURES

- Operation via multilingual on-screen display (OSD) or a graphical interface and hotkeys
- auto-recognition and display of the system structure
- Configuration and central update of all components via the multilingual HTML5 web interface “Config Panel 21” (Java-free)
- Support for Wake-on-LAN Function: A standardized method for powering on a shut-down or sleeping computer via a network command, provided the target system supports this functionality
- With configurable select keys, computers can be made available to each user individually via quick access
- Configurable view filters enable efficient sorting of large lists of computer modules
- The configurable multi-user access allows multiple users to access a real or virtual computer simultaneously
- With channel grouping, multiple computer modules or multiple console modules can be grouped together into a channel group
- USB pinning: In grouped channels, transparent USB transmission remains linked to the currently connected computer – even when switching to another system – and continues seamlessly until the transfer is complete
- Easy integration of new end devices via the built-in device finder, eliminating the need for manual IP address entry

EXTENSIONS

SECURITY FEATURES

- DirectRedundancyShield (DRS) – premium software feature that ensures continuous operation in case of unexpected disruptions in the active system by seamlessly switching to the previously passive system:
  - requires a second matrix switch with the corresponding number of licenses
  - each console and computer module establishes two permanent connections to both the active and passive KVM-over-IP matrix but uses only one transmission path at a time
  - if the primary connection is interrupted, the previously passive connection automatically and immediately takes over
  - the transition is seamless and without any delay in video transmission
- MatrixGuard Function – premium software feature for ensuring continuous operation against unforeseen disruptions.
  - requires additional matrix switches with the corresponding number of licenses
  - Redundancy concept with failover functionality: In the event of unforeseen disruptions, console modules and computer modules automatically connect to an alternative matrix switch
  - restoration of switching states enables rapid resumption of operations
  - Note: Function not compatible with U2-LAN devices
- 2-Factor-Authentication (2FA) – premium software feature to enhance security by using a second possession-based factor during user authentication:
  - The traditional password authentication is combined with a time-limited, single-use code (Time-Based-One-Time-Password - TOTP)
  - You can choose between using the internal authentication server provided in the device or an external directory service
  - Authenticator apps or hardware token can be used
  - This additional layer of protection prevents unauthorized access and ensures the highest level of security, particularly in sensitive IT environments
- SecureCert feature – premium software feature that ensures compliance with the strict security standards FIPS 140-3, DoDIN APL, and CC EAL2+
  - Federal Information Processing Standard (FIPS) 140-3 is a U.S. government standard designed to protect sensitive and valuable data in IT systems. It defines security requirements for cryptographic modules and provides a secure framework for cryptographic operations in IT infrastructures
  - The Department of Defense Information Network Approved Products List (DoDIN APL) is a consolidated list of products approved for use in the technology infrastructure of U.S. government agencies. To be listed, products must meet specific requirements within defined categories, including technical, functional, and security-related criteria

- Common Criteria (CC) is an internationally recognized standard for evaluating and certifying the security of IT products. It ensures that products meet defined security requirements and are protected against identified threats. Certification is granted at Evaluation Assurance Level (EAL) 2+, an internationally acknowledged level that guarantees a fundamental and reliable security assessment

OPERATION FEATURES

- TradeSwitch Function (TS Function) – premium software feature providing convenient operation and seamless restoration of individual working environments at consoles with multiple console modules, including the most recently connected sources:
  - optimizes usability for consoles tasked with simultaneous monitoring or control of multiple computers via several console modules
  - provides a central keyboard and mouse for operating the entire workplace
  - both input devices can switch to any console module using a hotkey
  - CrossDisplay switching additionally offers an especially user-friendly switching method: simply moving the mouse pointer from one monitor to another automatically transfers keyboard and mouse focus to another module and thus another computer
  - The FreeSeating function automatically restores a user's personalized working environment, including previously used sources, at any workplace within the group. A single login is sufficient to register all console modules and activate the respective sources, while a single logout will log out the entire group
- Push-Get Function – premium software feature for moving/retrieving connections from own or other devices:
  - optimizes collaboration within control rooms by improving team communication, flexibility, and responsiveness
  - allows users to "push" the connection status of their console module to another console module or "get" it from there

CONTROL OPTIONS

- IP-Control-API – premium software feature enabling remote control, scenario switching, and retrieval of switching states via an API interface:
  - allows text-based XML control of a KVM matrix system over the network
  - optional encryption of communication:
    - Encryption of login passwords (partial encryption)
    - Complete encryption of the data stream
    - Additional certificate check when establishing a connection
  - provides the capability to create custom control applications, send switching commands, and retrieve selective information on switching states as well as computer statuses
  - flexible and scalable solution for seamless integration into IT infrastructures from various vendors

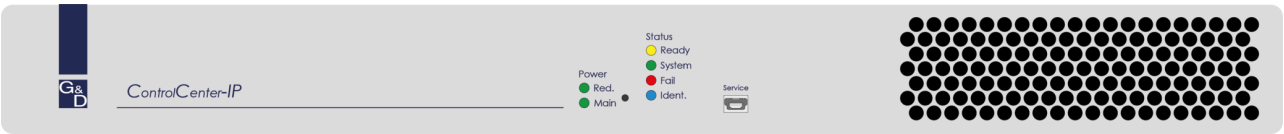
- Includes a scripting function for creating, managing, and executing scripts, automating scenarios such as changing the switching state of individual consoles, multiple consoles, or the entire system
- Enables control of external devices via HTTP requests

SYSTEM EXTENSION

- Support for all common video signals, thanks to a wide selection of matrix-compatible KVM-over-IP™ extenders, which can be integrated as end devices in matrix operation in a “mixed” configuration (Mix & Match). Video transmission is performed using bluedec™ – G&D’s advanced, multi-stage, lossless compression – delivering pixel-perfect, lossless video quality with near-zero latency.
- The RemoteAccess-IP-CPU lets you seamlessly integrate virtual machines into your KVM-over-IP installation. This way, hybrid systems with real and virtual computer infrastructure can be optimally implemented.
- U2-LAN-04 – integrate high-speed USB 2.0 into your KVM-over-IP matrix installation: The U2-LAN-04 is an USB 2.0 high-speed extender and enables the integration of high-speed USB 2.0 signals into a KVM-over-IP matrix installation.
- Expansion of system size: Due to the flexible system topology, installations can be scaled arbitrarily and expanded easily via standard network elements. The system sizes of the matrix application are easily enabled for this via license key. Using this, the system can then subsequently expand as needed.

INTERFACES

FRONT



Aperture designation	Design	Description
Service	Mini-USB socket	Port for service purposes

BACK



Aperture designation	Design	Description
Main Power	IEC plug 320 C14	Power supply AC
Red. Power	IEC plug 320 C14	Power supply AC redundant
Network A	RJ45 socket	Port for IP network
Network B	RJ45 socket	Port for IP network

TECHNICAL DATA

General	Brand	G&D
	Product group	KVM matrix switches
	Product Family	ControlCenter-IP
	Country of origin	Germany
	KVM matrix system component	Central module (digital)
	Number of included licenses	20
	Maximum number of end devices	600
	Power Supply	Redundancy without load balancing
Transmission	Number of transmission channels	1
	Redundant transmission channels	Redundant KVM transmission available
	Range	100 m
	Medium	CAT7 CAT6 CAT5e
	Data rate	1 Gbit/s
Network	Quantity	2
	Medium	CAT5 CAT6 CAT7
	Data rate	10 Mbit/s 100 Mbit/s 1 Gbit/s

Maintenance	Update via	ConfigPanel (Network)
	Serviceport settings	115200bps (8/N/1)
Housing	Material	Anodised aluminium
	Active cooling (fan)	yes
	Width ca.	436 mm / 17.17 in
	Height ca.	44 mm / 1.73 in
	Depth ca.	210 mm / 8.27 in
	IP protection class	IP20
	Weight ca.	2 kg / 4.41 lb
Operating conditions	Operating environment temperature	5 °C to 45 °C / 41 °F to 113 °F
	Operating air humidity, non-condensing	20 % to 80 %
	Area of application	Indoor use
	Maximum operating altitude above sea level	3,048 m
	Storage environment temperature	-20 °C to 55 °C / -4 °F to 131 °F
	Storage air humidity, non-condensing	15 % to 85 %
	MTBF	146,000 h at 25°C (77 °F)

	Conformities	CE compliant (see downloads) UKCA compliant (see downloads) FCC compliant (see manual) TAA compliant (see downloads) RoHS compliant (see downloads) WEEE (reg. no. DE30763240) REACH compliant (see downloads)
Power supply	Quantity	2
	Type	Internal
	Input voltage	100-240 VAC
	Input frequency	60-50 Hz
	Current consumption	0.7-0.4 A
	Power consumption idle	17 W
	Power consumption max.	28.4-28.3 W
	Heat output idle	17 W / 58.01 BTU/h
	Heat output max.	33 W / 112.60 BTU/h

ACCESSORY PRODUCTS

Image	Description	Article number
	USB-Service-2 cable 2m Cable for system updates and configuration	A6200103
	PowerCable-3 Standard cable 3m Cable to connect the power supply type Germany	A6300066
	PowerCable-5 Standard cable 5m Cable to connect the power supply type Germany	A6300065

RELATED PRODUCTS

Description	Article number
IP-Control-API ControlCenter-IP Software feature for IP matrix systems to realize remote control by using a TCP/IP connection	A8200033
Push-Get-Function ControlCenter-IP Software feature for ControlCenter-IP systems, push/get screen contents via OSD	A8200034
TS-Function ControlCenter-IP Software feature for ControlCenter-IP systems, switches keyboard and mouse to other consoles incl. CrossDisplay-Switching	A8200035
MatrixGuard Function ControlCenter-IP Software feature for ControlCenter-IP systems and maximum safety	A8200042
DirectRedundancyShield Feature ControlCenter-IP Software feature for ControlCenter-IP systems and maximum safety	A8200055
2-Factor-Authentication Feature ControlCenter-IP Software feature for ControlCenter-IP systems to enable 2-Factor authentication	A8200056
SecureCert Feature Feature to implement certified security functions on VisionXS-IP, Vision-IP, ControlCenter-IP, ControlCenter-IP-XS and RemoteAccess-IP-CPU series devices	A8200069
ControlCenter-IP-UPG-10 10 ControlCenter-IP licenses for the use of Vision-IP/VisionXS-IP products in matrix mode	A8200036
ControlCenter-IP-UPG-50 50 ControlCenter-IP licenses for the use of Vision-IP/VisionXS-IP products in matrix mode	A8200037
ControlCenter-IP-UPG-100 100 ControlCenter-IP licenses for the use of Vision-IP/VisionXS-IP products in matrix mode	A8200038
ControlCenter-IP-UPG-200 200 ControlCenter-IP licenses for the use of Vision-IP/VisionXS-IP products in matrix mode	A8200039
ControlCenter-IP-UPG-500 500 ControlCenter-IP licenses for the use of Vision-IP/VisionXS-IP products in matrix mode	A8200040

MORE VARIANTS

Description	Article number
ControlCenter-IP-Max incl. 20 licenses KVM-over-IP matrix switch MAX for applications with up to 2,500 endpoints (Reduced number of endpoints when combined with DirectRedundancyShield)	A2300145

CONTACT

WE ARE HERE FOR YOU!

If you have any further questions, we are looking forward to advising you on your individual project requirements.

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