

## Max-KVM MK-348 Digital and Analog Firewall-KVM



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### Highlights

- 48 server ports, 1U rack mount box
- Superb quality video
- Integrated Firewall
- Digital KVM/IP and Analog
- UXGA 1600 X 1200 pixels / 200 Mhz analog video
- Dual NIC, Gigabit Ethernet interface
- Tight mouse synchronization
- 3 digital (over IP) users
- 8 remote analog user
- 1 local user
- Platform independent
- Install unneeded remote client
- Intuitive full feature GUI
- Easy and straight forward to use

### Product Overview

The Max-KVM MK-348 is an enterprise-class digital/analog Keyboard, Video, Mouse (KVM) solution that features an integrated firewall and an enhanced security suite with a state-of-the-art remote IP and analog 48-port KVM switch. By controlling up to 48 servers, providing superb quality video performance to the remote IP and analog users and combining a unique embedded firewall and security schemes, the Max-KVM MK-348 is the perfect KVM solution for demanding customers.

Hosting an industry record with 48 server ports in one compact 1U rack-mount box, the MK-348 improves scalability and modularity in multi-server environments and satisfies growing computing needs. Higher KVM switch scalability achieves an easy hardware expansion, simplifies administration and management and enables straightforward topology. The Max-KVM MK-348 provides all of these in addition to other scalability benefits such as saving costly space and power, easier maintenance, improved performance; lower per server investment and operation cost, and better investment protection.

The Max-KVM MK-348, a new and advanced design comprised of the best available components, delivers a superb quality video with a high update rate to provide a clear, high fidelity screen image. It supports nearly all computer screen options up to an industry record UXGA (1600X1200 pixels) to ensure that there is no practical limitation for connecting a server to the MK-348. Low intrinsic video delay and minimal latency in mouse commands result in tight local and remote mice synchronization, hence enabling a more realistic operation.

## Datasheet

The integration of a firewall into a digital KVM, a unique feature of the MK-348, provides a new level of security for the control servers and the KVM switch itself. The encryption of video, control and management data ensures security and privacy over the network, while exposing only a single TCP/IP port for minimal vulnerability. Supporting a wide set of authentication standards ensures safe, easy and flexible assimilation into the IT environment. Equipped with dual networks connections; the Max-KVM MK-348 provides enhanced security schemes, resiliency and flexibility.

To ensure simple and intuitive usage, the MK-348 offers a highly flexible and secure administration of servers, anywhere from a remote desktop and a web browser without the need for frequently problematic software installations. Additionally, maintaining other servers and administrating the KVM can be performed via the direct connection port or via an analog connection.

The secure, extensive high performance yet very efficient, intuitive and easy to use Java based Orion client run over Windows, Linux, Solaris, Mac OS or any other Java supported platform. Moreover, the Orion client does not need to be installed and so a secure access to any device connected to the MK-348 is simply achieved by simple IP connection through virtually any web browser. The Orion client enables the true freedom of accessing your organization resources from anywhere using any platform and operating system.

Unlike most other KVM switches, which oblige the customer to compromise and pick only part of their wish list, the Max-KVM MK-348 was designed to feature a secure, scalable and comprehensive architecture, remarkable hardware abilities and performance, efficient yet simple to use software, thus being extremely adaptive and able to answer all requirements. The Max-KVM MK-348 is the right KVM choice to meet enterprise and data center requirements.

## Main Features

### Hardware

- 48 server ports (highest port density in the industry)
- 1U rack-mountable form factor
- 3 digital (over IP) users, 1 direct access at the rack, 8 remote analog users (8 total)
- UTP (CAT-5) cabling for longer distance connectivity, reliability and easier logistics
- Multi-platform CAT-5 adapter; support PS/2, USB and Sun devices
- Dual network interface, including Gigabit Ethernet interface
- Integrated power supply

### Performance

- Support all common resolutions up to UXGA 1600x1200 (over IP and analog users)
- High frame/Sec video (up to the refresh rate)
- Superb, low noise video quality
- Tight mouse synchronization, low control and video intrinsic delays
- High color (16 bit) palette, mid (8 bit), low (6 bit) and gray-scale support
- Fast, configurable video synchronization and efficient auto-calibration

### Security

- Integrated firewall, including configurable access lists for advanced security
- Configurable security police for each network connection allows enhanced security schemes
- Management, control and keyboard/mouse data secure (128-bit SSL) communication
- Video encryption
- Local and remote authentication

**Datasheet**

- Authentication via enterprise server/Active directory using RADIUS, LDAP, TACACS+ Kerberos or NTLM protocols
- Flexible group-based security policy definition
- Communication through a single TCP port for minimal vulnerability
- Auditing and back trail analysis capabilities
- CAT5 adapter codes to allow distinct identifying of servers and enforcing consistent and accurate security policy
- Internal database integrity protection (resilient file-system)

**Usability**

- No client installation needed, easy browser-based access
- Platform-independent Graphical User Interface (GUI)
- Single-click friendly customizable server-directory GUI
- Intuitive graphical OSD
- Automatic performance tuning for client connecting over slow links
- Automatic video perfection for optimal video quality and minimal bandwidth usage
- Intelligent CAT5 adapter for easy cabling and administration
- Client full-screen mode for “local-like” experience
- Macros and customizable per user/server connection configuration
- Remote software and firmware upgradeable
- Performance analysis (statistic counters, debug logs)
- CAT5 adapter permanent serial number readable by the Orion client for ease of administration

**Specifications**

<b>Interfaces</b>	Network Interface eth1	10/100/1000 Ethernet (RJ45)
	Network Interface eth2	10/100 Ethernet (RJ45)
	Console	RS232/DB9(F) DTE
	Direct Connection: Video Keyboard/Mouse	HD15(F) VGA Mini-DIN6(F) PS/2
	Controlled servers	48 x RJ45
	Remote Analog	8 x RJ45
<b>Supported Digital (Over-IP) video modes</b>	PC Text/Graphic Modes	VGA (DOS,BIOS) 720x400 @ 70Hz VGA 640x480 @ 60,70,72,75,85,100 Hz SVGA 800x600 @ 56,60,70,72,75,85,100 Hz XGA 1024x768 @ 60,70,72,75,85,100 Hz XGA+ 1152x864 @ 60,70,72,75,85 Hz SXGA 1280x1024 @ 60,70,72,75,85 Hz WXGA 1440x900 @ 60,76 Hz WSXGA 1680x1050 @ 60 Hz UXGA 1600x1200 @ 52,58,60,65,66,70,75,76,85 Hz
	Sun® video modes	720x400 @ 85Hz 640x480 @ 60,72,75,85 Hz 800x600 @ 56,60,72,75,85Hz 1024x768 @ 60,70,75,85 Hz 1152x864 @ 75 Hz 1152x900 @ 66,76 Hz 1280x800 @ 76 Hz 1280x1024 @ 60,67,75,76,85 Hz 1440x900 @ 76 Hz 1600x1000 @ 66,76 Hz 1600x1200 @ 60,75 Hz 1600x1280 @ 76 Hz

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Specifications (continued)		
<b>Supported Analog video modes</b>	PC Text/Graphic and Sun® video modes	All modes up to UXGA 1600x1200 @ 85Hz
<b>Supported Sync modes</b>	Servers sync options	Separated Horizontal and Vertical syncs Composite Horizontal and Vertical syncs Positive or Negative H/V syncs (auto sensing)
<b>Protocols</b>	Network Protocols	TCP/IP, HTTP, RADIUS, DHCP, SSH, SNMP, LDAP, TACACS+ Kerberos
<b>Video Performance</b>	Analog BW	150 MHz
	Digital sample rate	200 Mpixels/sec (max)
	Internal delay*	50 mS (typ)
	Updates/Second**	20 (typ), server refresh rate (max)
	Synchronization time	Configurable (5 levels), 0.8 - 3 sec
	Auto-calibration time	3 sec (typ)
<b>Cabling</b>	To controlled server (CAT5 adapters), video recommendations	Up to 30 ft (~10 m): all modes Up to 100 ft (~30 m): up to SXGA @ 60Hz Up to 150 ft (~50 m): up to XGA @ 60Hz
<b>Mechanical</b>	Form Factor	1U full width, rack mountable (brackets included)
	Dimensions (WxDxH)	17.3 x 11.8 x 1.75 inch (439 mm x 300 mm x 44 mm)
	Weight	9.0 lbs (4.1 kg)
<b>Power</b>	Operating Voltage	100 – 240 V AC (auto sensing)
	Frequency	50-60 Hz (auto sensing)
	Input power	90 W maximum
<b>Environmental</b>	Operating Temp.	0° - 40°C (32° - 104°F)
	Humidity	20% - 85% RH

\* Result significantly depends on parameters such as: remote screen characteristics, remote screen activity and network behavior.

\*\* Assuming server's screen changes. Result depends on parameters such as: changes rate and characteristics, network behavior and client computer.

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