



FLEXIBLE, MODULAR, SCALABLE MATRIX SWITCHING

IHSE has been known in Germany for decades to bring real-time interaction at a distance between high-end computers and high-definition consoles. Now with the Draco Major HD-KVM Switch, users can leverage existing copper and fiber infrastructure to locate computers and consoles throughout the building, campus or city, up to 80 km away. Such mixed media flexibly is unmatched in the industry and the Draco Major's infrastructure provides real time HD access without the limitations and overhead of Ethernet and the IP protocol.

At the core of the modular Draco Major HD-KVM Switch is a 100-Gbit backplane, which provides more than enough bandwidth to handle as many HD-KVM sessions as the switch provides with resolutions up to 1920 x 1200 or 2048 x 1152 at 60 Hz with no latency in mouse, keyboard, tablet, or other HID device. Couple high definition real time access with instantaneous switching, and the Draco Major is ready to tackle the most mission critical work.

Using a wide range of available extender choices, the Draco Major HD-KVM Switch can offer features such as digital or analog audio, serial, multiple HID, and full high-speed transparent USB 2.0 for mass storage, web cams, printers, scanners, biometric security devices, and more.

The multiple modes of operation provide maximum flexibility. As an HD-KVM switch, Draco Major users can access any computer through a keyboard command or an OSD (On-Screen Display). ACLs (Access Control Lists) maintain security so users access only the allowed consoles and computers. Sharing screens and control is seamless with no limitation up to the total number of screens. Single-head DVI, dual-head DVI and quad-head DVI consoles and computers are seamlessly supported without any special actions or programming on the user.

Features

- Unmatched video performance over CATx cabling
- Instantaneous switching
- Modular and scalable design
- View and control up to 1,024 computers with up to 16 Consoles
- Built-in extension over copper and/or fiber up to 80 km
- Real-Time experience of HD video, keyboard, mouse, and tablet
- HD resolutions to 1920 x 1200 and 2048 x 1152 at 60 Hz.
- 24-bit color depth
- DVD-D, DVI-I, USB HID, and transparent high-speed USB 2.0 options
- Bidirectional Digital Audio, Analog Audio, and RS-232 options
- Controllable by Crestron, AMX, and other external controllers
- Enhanced Wacom tablet support
- Built-in support for single-, dual-, and quad-head DVI consoles and computers
- Easy switching via keyboard, OSD (On Screen Display), Web Interface, or external controller for flexible usage
- Redundant power supply option
- Rack mountable in only 2U of space (rack mount kit included)

HD-KVM Switch DVI-D Crosspoint Switch 474 Series

Crosspoint HD Switch

As a crosspoint switch, the Draco Major is an excellent solution for conference rooms, command centers, and NOCs (Network Operations Center) where inputs and outputs can be managed, controlled, and switched either at a console or externally via a serial or IP-based controller such as Crestron or AMX.

Draco Major Applications

Post Production and Broadcast

Broadcasters and Post Production studios keep their expensive editing and rendering computers and software in machine rooms. With the Draco Major, multiscreen editing suites can be located anywhere in the building or campus. This flexibility with the outstanding video performance allows editors, artists, directors, and audio technicians to collaborate instantly in real time. The project can also be monitored in real time by supervisors.

Some companies dedicate rooms to one type of process, thus tying up millions of dollars of equipment in one room. The Draco Major HD-KVM switch eliminates this situation by allowing the creation of multipurpose rooms where any of the editing suites can access any of the computers in the machine room. This flexibility provides ROI through increased productivity and reduced costs of duplicate hardware.

Multi-screen consoles with special keyboards, trackballs, mice, and digitizing tablets work flawlessly and without the latency seen in DVI over IP solutions. The Draco Extender Console units have a very small footprint and run cool and quiet (no fans or moving parts).

The bottom line is the Draco Major HD-KVM Switch improves workflow and saves time and money by keeping operators at their consoles instead of unproductively moving between server locations.



Command Center/Network Operation Center (NOC)

With the ability to have local and remote consoles, even on multiple video heads, the Draco Major allows you to take command of mission-critical computers at up to 80 km away and still support a video wall. As the only HD-KVM Switch on the market today that can mix and match copper and fiber extension technologies in the same chassis without media converters, the Draco Major offers unprecedented flexibility in leveraging existing structured cabling infrastructure. Control can be shared, private, or broadcast to any or all consoles in view-only mode. Users can work locally while simultaneously displaying their work in the Command Center/NOC, again increasing productivity by keeping operators where they are most productive.



Photo courtesy Michael H. Amundson / FRONTLINE



Medical Imaging and Physician Consulting and Collaboration

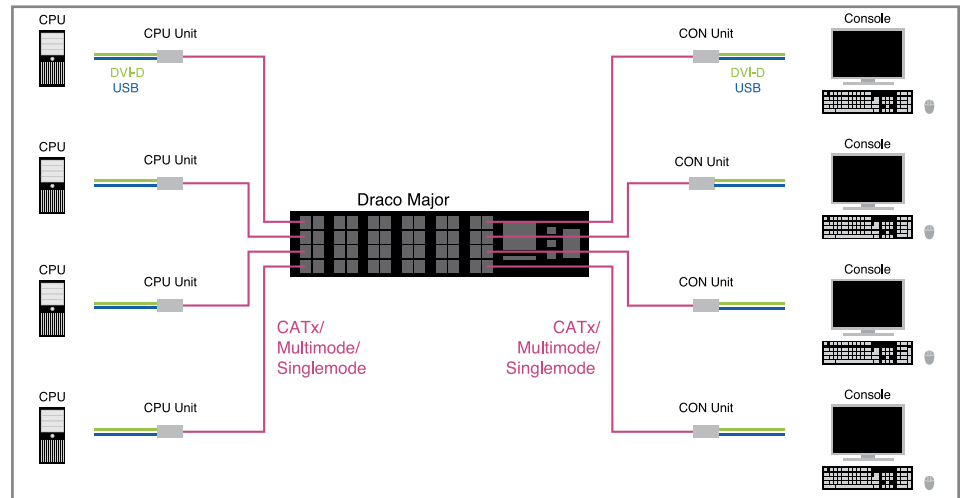
Hospitals and medical specialists can now share high definition images and collaborate throughout the building, campus or even the city at distances up to 80 km. Instant access to the same medical image and data can make the difference in proper medical diagnoses and care. The Draco Major Extender units are small and have no moving parts or cooling fans, perfect for sterile and quiet environments.

Education and Training

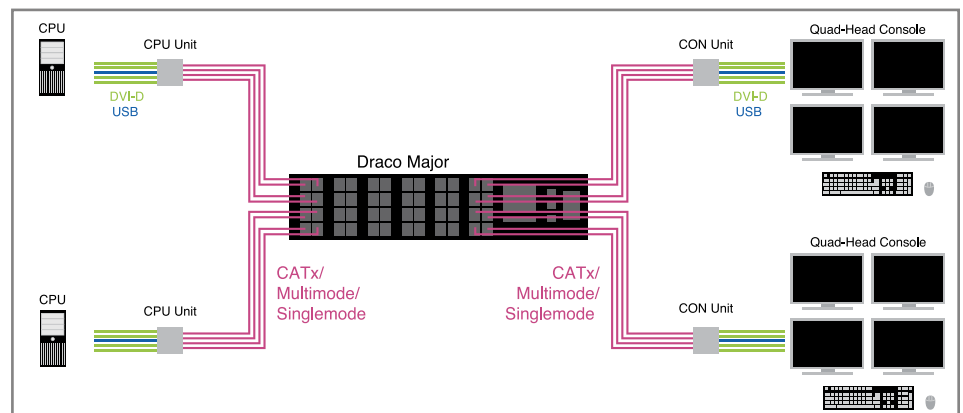
In educational environments, the Draco Major HD-KVM switch allows a teacher to switch to the monitor of each student for observation. In this configuration, for up to 15 students, the teacher can additionally switch his screen content or that of any student to any other students. In a configuration for up to 31 students, a teacher can switch his screen or that of any student to a common monitor or projector.



Single-Head KVM Switch



Quad-Head KVM Switch



Dual-head configurations also available

Oil and Petroleum Exploration

The Draco Major's ability to extend high-definition control up to 80 km away on fiber allows oil companies to easily monitor mission critical computers at a long distance while at the same time providing access at the well to systems on shore or in another city. The use of CATx copper for devices local to the Draco Major (up to 140 m) allows the use to leverage existing infrastructure and provides savings in cabling and hardware



Included in the basic unit is the control board, power supply (redundant PSU is optional), display module, I/O modules and assemblies according to the OSD configuration.

Draco Major Configured with CATx Interfaces

Configuration (Users x CPUs)	Part Number
8 x 8	K474-U8/C8
8 x 16	K474-U8/C16
8 x 24	K474-U8/C24
8 x 32	K474-U8/C32
16 x 8	K474-U16/C8
16 x 16	K474-U16/C16
16 x 24	K474-U16/C24
16 x 32	K474-U16/C32

Draco Major Components for Fiber and User-Defined

Part	Part Number
Empty Chassis	K474-UX/CX
On-Screen Display Board	474-OSD
Display Board	474-DIS
CATx I/O Board	474-C8
Multimode Fiber I/O Board	474-M8
Single-Mode Fiber I/O Board	474-S8
Blank Fiber I/O Board	474-X8
CATx SFP Transceiver	459-1C
Multimode SFP Transceiver	459-1M
Single-Mode SFP Transceiver	459-1S
Upgrade to Redundant Power Supplies	474-RED

Draco Major CPU and Console Units

Cable Type	Heads	Additional Features	CPU	Console	Kit (CPU + Console Units)
CATx	Single	2 USB-HID	L477-1SHC	R477-1SHC	K477-1SHC
		Analog Audio/RS-232	L477-1S4CA	R477-1S4CA	K477-1S4CA
		Digital Audio + 4 USB-HID	L477-1S4CD	R477-1S4CD	K477-1S4CD
		VGA input	L477-1SHCV	R477-1SHCV	K477-1SHCV
		Transparent USB 2.0	L477-1STC	R477-1STC	K477-1STC
	Dual	4 USB-HID	L477-2S4C	R477-2S4C	K477-2S4C
MM Fiber	Single	2 USB-HID	L477-1SHM	R477-1SHM	K477-1SHM
		Analog Audio/RS-232	L477-1S4MA	R477-1S4MA	K477-1S4MA
		Digital Audio + 4 USB-HID	L477-1S4MD	R477-1S4MD	K477-1S4MD
		VGA input	L477-1SHMV	R477-1SHMV	K477-1SHMV
		Transparent USB 2.0	L477-1STM	R477-1STM	K477-1STM
	Dual	4 USB-HID	L477-2S4M	R477-2S4M	K477-2S4M
SM Fiber	Single	2 USB-HID	L477-1SHS	R477-1SHS	K477-1SHS
		Analog Audio/RS-232	L477-1S4SA	R477-1S4SA	K477-1S4SA
		Digital Audio + 4 USB-HID	L477-1S4SD	R477-1S4SD	K477-1S4SD
		VGA input	L477-1SHSV	R477-1SHSV	K477-1SHSV
		Transparent USB 2.0	L477-1STS	R477-1STS	K477-1STS
	Dual	4 USB-HID	L477-2S4S	R477-2S4S	K477-2S4S

Use of "K" model prefix denotes a matched Kit of one each: CPU and Console Unit.
Example: K477-1SHC may be ordered as a complete stand-alone extender kit.

Technical Data

Power Supply Information 90-240 VAC/0.5 A/47-60 Hz
Maximum Resolution DVI Single Link
1920 x 1200/2048 x 1152 @ 60Hz/24-bit

Maximum Distances
CATx 140 m
Multimode (62.5 μm) 200 m
Multimode (50 μm, OM2) 400 m
Multimode (50 μm, OM3/4) 1000 m
Single mode (9 μm) Up to 80 km