

KVM and DVI Matrix Switch System

Provides highest quality video display and distributed control functionality, at an extremely competitive price point



ihse.
Draco™ major
DVI & USB Matrix System

Key Features at a Glance

- Combined matrix switch and extender solution
- Crystal-clear DVI video operation up to 1920 x 1200 /1080p (single-link)
- Instantaneous video switching
- Real-time: no video or mouse latency
- Configurable as a KVM matrix switch or DVI video router
- CatX or Fibre interconnect (mixed operation possible)
- Long extension distance (on either side of the switch):
 - CatX: 120 metres
 - Multimode: 400 metres
 - Singlemode: 10 km
- No video signal degradation over distance
- Supports USB HID devices as standard
- USB 2.0, audio, and serial support options
- Easily interfaces to 3rd party control systems and macro keypads
- Full user management (to device level)
- Each 2U chassis can be populated to provide a maximum 32 x 16 flexible matrix:
 - KVM Single-Head: 32 CPUs to 16 users
 - KVM Dual-Head: 16 CPUs to 8 users
 - KVM Quad-Head: 8 CPUs to 4 users
 - Video: 32 sources to 16 monitors
16 sources to 32 monitors
- Highly scaleable (to 1024 CPUs from 16 consoles)
- Numerous operational modes for maximum flexibility
- System control and administration via OSD, serial, network or web
- Instant switch reconfiguration using stored profiles and user macros
- Front panel status display screen (with IR remote control)
- Modular construction in 2U rack mount format
- Available pre-configured or unpopulated chassis
- Redundant PSU option for greater reliability

Draco Major KVM and DVI Matrix Switch

The Draco Major system sets a new milestone in high quality KVM and DVI switching. For the first time, sources to 1080p (and beyond) may be switched instantaneously and distributed to remote points over long distances using CatX or fibre cables.

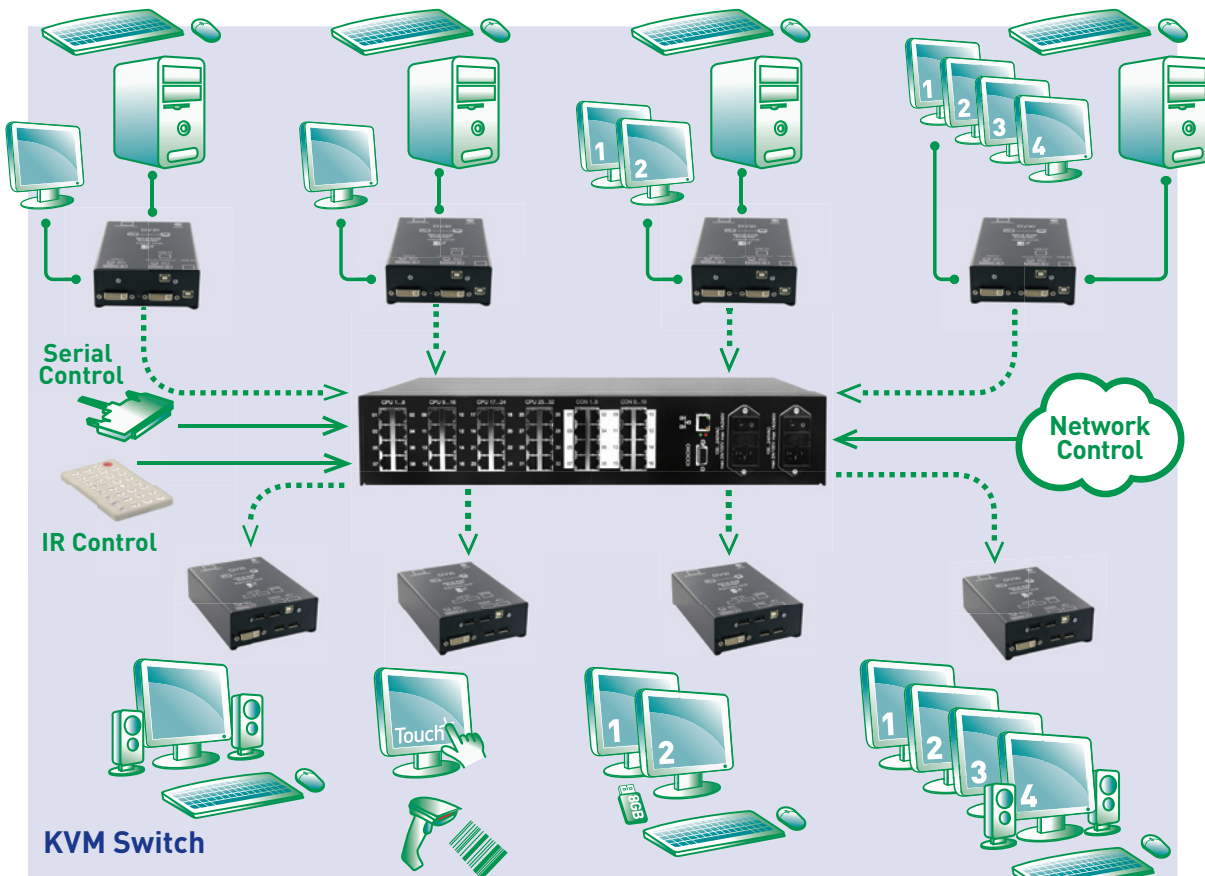
The Draco Major solution offers various modes of KVM and video operation, enabling switching of up to 32 CPUs or real time video sources to 16 monitors within a single chassis, with simultaneous handling of USB HID, audio and serial devices. Direct interfacing to copper and fibre cabling allows sources and displays to be located at great distances without quality degradation: up to 120 metres either side of the switch unit using CatX cables, and 10 km with singlemode fibre. Draco Major's modular construction allows mixing of input and output formats to suit individual application requirements.

Built-in flexibility and instantaneous video switching expands the potential use of the

Draco Major to a wide variety of applications. On-screen control combined with flexible user administration enables connected devices to be configured in groups to meet individual application requirements including dual and quad-head configurations. Web and serial interfaces further the capability of the switch for efficient integration with users' custom control equipment (such as macro keypads and touch screens)

KVM Switch

The Draco Major solution provides full KVM functionality for the remote control and display of distributed computers by 16 independent users. Each user selects the CPU they wish to control or monitor using the on-screen display (OSD) or keyboard hot-keys. Within a single chassis up to 32 CPUs can be fully controlled. Multiple chassis may be linked to support more CPUs or ports. Optional support is available for audio, serial and USB 2.0 interfaces.



DVI Matrix Switch

Draco Major is ideally suited for use as a high-quality HD audiovisual distribution network. In this mode, a single chassis allows up to 32 sources to be distributed to 16 remotely located screens (or vice-versa). A flexible serial/network control interface allows the system to become the hub of a full AV distribution system using common third party control devices for instant video switching over a wide area. Linking further chassis enables the matrix to be scaled to support more sources and screens.

System Overview

The Draco Major Switch is used in conjunction with Draco's extensive range of CatX and fibre extenders offering numerous interface options and formats to connect CPUs and other video sources to monitors, projectors, video walls and other high quality displays. The range includes options for single, dual and quad-head video, analogue/digital audio, serial ports and transparent USB 2.0. These devices are compatible with today's high specification DVI (single-link) video formats, including 1080p, with new versions being introduced regularly to further enhance the application of the Draco system.

System Design

System design and configuration is straightforward: simply select the appropriate size of Draco Matrix Switch based on the number of inputs and outputs and the type of interconnection. Add local and remote units to suit and connect together using standard CatX or fibre cables. Then access the system and configure it exactly the way you want.

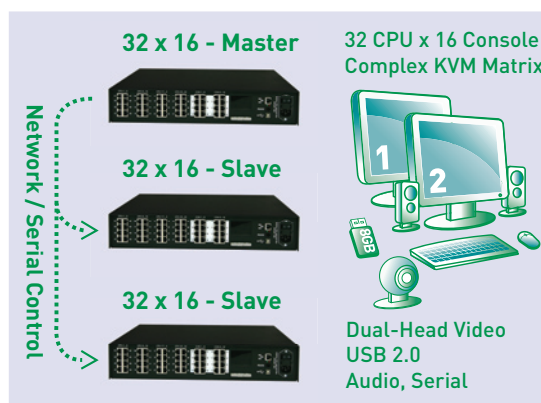
Ideal for:

- Control rooms
- Broadcast
- Financial and commercial
- Education
- Conference facilities

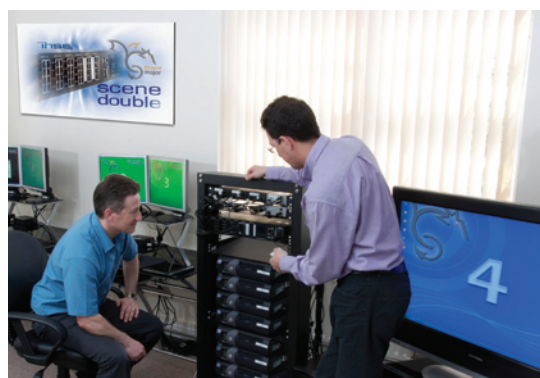
System Description

Extensive flexibility is achieved using the Draco Major solution at the centre of a full KVM or audiovisual network through the use of separate KVM and media units. These are small standalone devices that are placed close to the source CPU and video equipment (Local Units) and at the display points (Remote Units). These devices perform the task of converting signals within the system and their combination and duplication where appropriate. An extensive range of devices is available for system designers to configure a full solution based on their specific requirement.

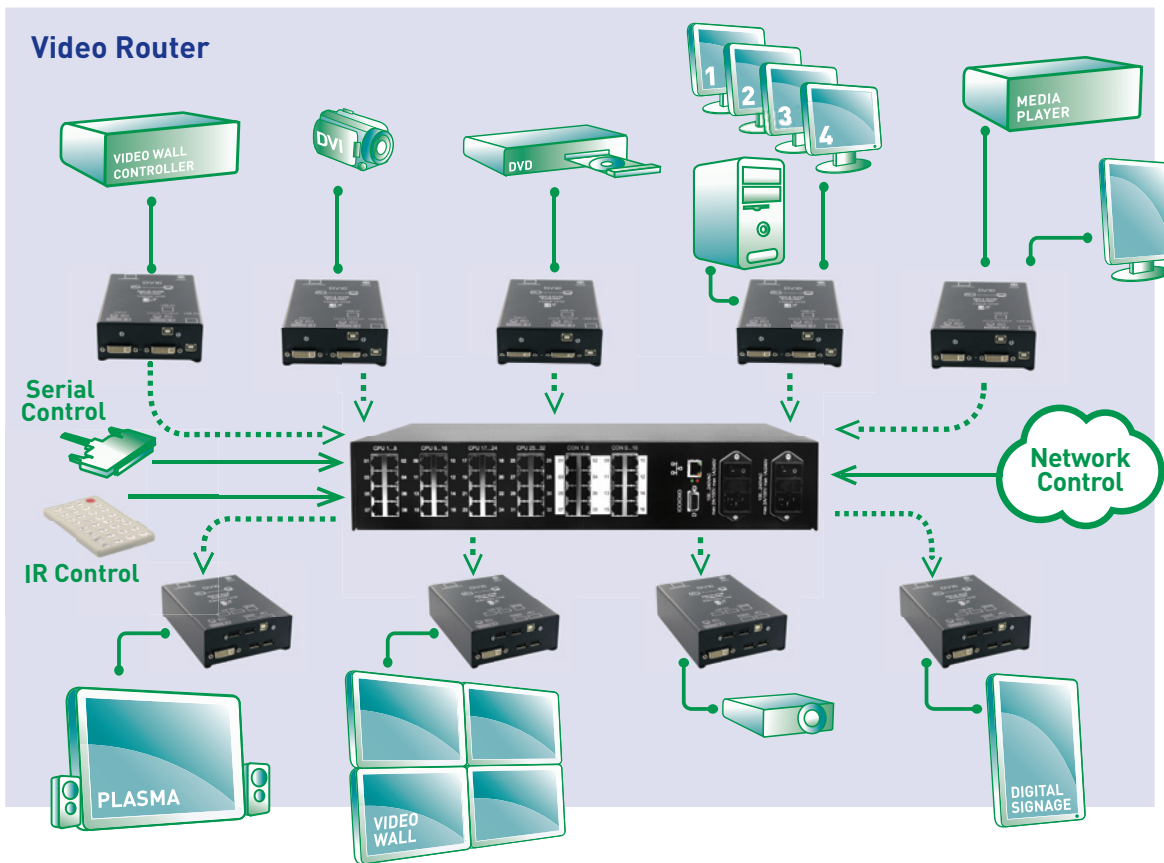
Interconnection between the Local and Remote Units and the matrix switch is either by CatX cable or single or multimode fibre. Individual input modules on the switch permit a mixture of types in groups of 8 inputs or outputs; a cost-effective way of achieving both local and long distance transmission within the same system.



Easily expand Draco I/O with Multiple Chassis



Expert technical training and support



Operational Modes

Draco Major can be configured in the following modes.

Matrix Switch

As a matrix switch, it can be used to connect up to 32 DVI input ports to 16 output ports (or vice-versa), with optional audio connectivity. Each port operates with full DVI capability up to 1920 x 1200 resolution (24-bit), and includes auto-detection for automatic resolution setting of video formats. In this mode, each input can be switched to any output under system control (serial/network/web) and any input may be copied to several output ports, allowing point-to-point, narrowcast and broadcast configuration.

KVM Switch

Draco Major supports several modes to meet any type of KVM switch configuration requirement. To support multiple-head CPUs, or USB 2.0 options, Draco ports may be grouped and switched as a single entity. For single-head video a chassis can be configured with up to 16 User ports and 32 CPU ports. When used with dual-head CPUs the switch can be configured with 8 grouped user ports and 16 CPU ports. Mixed mode operation is allowed.

Each user can switch to CPUs with authenticated access using OSD, keyboard keys, user macros, or other 3rd party control device. The Draco system may be configured in a variety of ways to control how access to CPUs is granted, blocked or shared. Timeouts may also be set to log out inactive users or disconnect them from any CPU.

Special features provide additional flexibility and capability, including:

Follow Me: Enables the video displayed on a 'master' console to be replicated to any number of 'slave' monitors (even during switching). Ideal for use with projection systems or in training rooms.

CPU Allocation: Allows users to access the next available CPU.

Video Overview: Monitor what is displayed on another user's console without taking control. Invaluable for control room supervisors or IT training.

Control Room – The Draco 'Trader Switch' accessory allows instant switching of keyboard and mouse amongst a group of CPUs, where each video stream is permanently displayed on a bank of monitors.

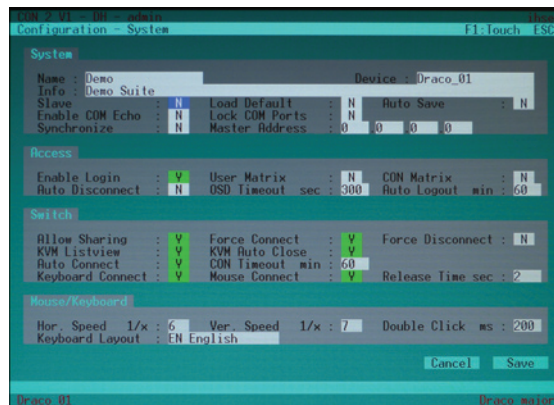
Administration

Draco Major has a powerful and flexible in-built control mechanism accessible via on-screen display (OSD) or network interfaces. This allows full administrator control of setup and configuration with levels of access control and grouping of displays. Basic control of the unit is also possible by use of the supplied IR remote control and LCD status screen. Switch configurations are saved in files and may be applied instantly at any time. In addition the system may be fully controlled from any location using the supplied JAVA application tool.

Reliability and Robustness

The modular Draco Major has been designed to perform to the highest levels of reliability and robustness. It uses a proprietary operating system that is fully supported by the manufacturer. Firmware upgrades are issued from time to time and easily uploaded to the switch. Redundant PSU operation is available for additional operational reliability

Individual OSD Control for Each User



Draco Switch Specification

Input/ Output Interfaces and maximum transmission distance (either side of switch)	CatX(Cat5e or higher, solid conductor) - RJ45 connector: 120 metres 62.5 µ multimode fibre – LC connectors: 200 metres 50 µ multimode fibre – LC connectors: 400 metres 9 µ singlemode fibre - LC connectors: 10 km
8-Port Interface Card Slots	4 x CPU/Source 2 x Console/Monitor
Maximum Resolution	1920 x1200 @ 60 Hz, up to 24-bit colour depth
Control Interfaces	Serial Port (Upgrade & Control), Ethernet RJ45 (Upgrade & Control), IR Remote
Status Display	2.5" Colour LCD
Power Supply	90 to 240VAC internal PSU 150W – optional dual redundant PSU 2x150W. IEC-320 input(s)
Operating Temperature	5 °C to 45°C
Size & Weight	440 x 85 x 443 mm (19" 2U housing). 6 kg (typical)

Basic Ordering Information

Matrix Switch

Draco Major Matrix Switch CatX (Populated) – 8 x User, 8/16/24/32 x CPU

Draco Major Matrix Switch CatX (Populated) – 16 x User, 8/16/24/32 x CPU

Redundant power supply option

For fibre and customised chassis details, please contact us.

DRACO/U8Cx

DRACO/U16Cx

DRACO/RPSU

Local and Remote Units

Available in Standard and Plus ranges.

The Plus HD range (available from Sept 2010) features enhanced 1080p video and user flash upgradeability.

	DVI-I Input (DVI-D Output)	Single-Head DVI-D	Dual-Head DVI-D	USB HID (2-port)	USB HID (4-port)	USB 2.0 Transparent	Serial Port	Analogue Audio	Digital Audio	Suffix Plus Range (HD)	Suffix Standard Range (SD)
KVM Range		●		●						/P1	/1
		●		●			●	●		/P1A	/1A
		●		●					●	/P1B	
		●		●			●			/P1T	/1T
		●		●			●	●		/P1AT	
		●		●			●		●	/P1BT	
		●				●				/P1U2	/1U2
		●				●		●		/P1AU2	
		●				●			●	/P1BU2	
				●	●					/P2	/2
				●	●			●	●	/P2A	/2A
				●	●				●	/P2B	
				●	●		●			/P2T	
				●	●		●	●		/P2AT	
				●	●		●		●	/P2BT	
				●		●				/P2U2	/2U2
				●	●			●	●	/P2AU2	
				●	●				●	/P2BU2	
	●			●						/V1	
	●			●			●	●		/V1A	
Media Range		●									/M1
		●					●	●			/M1A

	Local Unit		Remote Unit
CatX	DRACOLC5/xxx	CatX	DRACORC5/xxx
Multimode	DRACOLMM/xxx	Multimode	DRACORMM/xxx
Singlemode	DRACOLSM/xxx	Singlemode	DRACORSM/xxx

Draco® is a registered trademark of IHSE GmbH

Scene Double Limited, 7 Theobald Court, Theobald Street, Borehamwood, Herts WD6 4RN, UK

Tel: +44 (0)20 8099 3089, **Fax:** +44 (0)20 8099 3069, **Email:** sales@scene-double.co.uk