











Your KVM application – Your trusted partner

KVM Matrix Switches

2008

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from planning through to support!

KVM Matrix Switches
Matrix Switches for the operation
and administration of multiple servers
across distributed workstations

-  KVM Extender
-  KVM Sharing
-  KVM Switches
-  KVM Matrix Switches
-  KVM IP-Access
-  Power Switches
-  KVM Connectivity
-  KVM Add-On



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Intelligent solutions

Company profile

Video-Net Systems (Pty) Ltd was established in 1997. We specialise in display technologies for server rooms, data centres, NOC, operational rooms and disaster recovery sites. We combine large LCD screens with KVM switches, KVM extenders and KVM over IP technologies. We develop customised software applications using touch-screen technology to pilot our hardware. From 1 September 2008, we decided to rename Video-Net Systems (Pty) Ltd to KVMTech (Pty) Ltd, to reflect our new vision.

Our solutions are unique in that they are considered leading-edge technology worldwide. We provide our clients with tangible and immediate results.

Distribution

After a full consultation to assess our clients' needs and requirements, KVMTech supplies the hardware and the software solutions, designed and manufactured in Germany.

Direct Sales Model

KVMTech operates in South Africa using the Direct Sales method. This eliminates the middle man and has important benefits in terms of pricing and support. Our business model is high capital expenditure costs and virtually no running costs.

Our slogan

KVMTech - Install & forget!

Summary

To every client, we ask simply two questions:

- Is your application mission critical to running your business?
- Can you ONLY afford uptime?

If both your answers are YES, then buy from us.

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Taric Code

Devices: 85176200

Cables: 85442000

Waste Electrical and Electronic Equipment

WEEE register no. DE30763240

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Descriptions normally reflect the max. expansion depth.

Using the KVM matrix switches you can control multiple servers simultaneously across several different workstations.

The systems essentially consist of three main components: the target modules (server link), the central modules (the matrix switch itself) and the workstation modules (link to the operating peripherals).

The access to the servers are carried out simultaneously across up to 64 workstations, which can be connected locally, remotely via CAT-x cable or via IP using the matrix switches.

The reference product of G&D – the CATCenterX8 – allows you to connect to 8 workstations and 32 servers in a 19" rack with only 1 U of height.

CATCenter system

- Compact system for 2/4/8 workstations and 16/32 servers
- 1 U of height required (8 workstations and 32 servers)
- Workstation and server connection entirely using CAT-x cable
- Up to 16 workstations; extendable for up to 64 workstations
- Workstations either via IP, remotely via CAT cable or local
- In cascade, up to 2048 servers
- Numerous network functionalities such as LDAP support, IP configuration, Syslog, etc.

Summary

The CAT-based, compact all-rounder with network functionality

Areas of application

Our customers use these products in the areas of control rooms, server rooms, data centres and outside broadcast vehicles, to give a few examples.

Flexibility

Due to the variety of signals in the field of IT and the connection variants involved, the products cannot support all types. To be able to offer a wide range despite these issues, we offer the relevant converters and dongles which can be used to integrate even "exotic devices" into your KVM solution.

Combinability

Virtually all products in our range can be combined with one another. If you are setting up a complex system or if the performance of a particular product does not match the needs of your specific application, our sales team will be pleased to advise you on the relevant combined solutions to produce the overall functionality.

KVM Matrix Switches

The CATCenter forms part of the group of KVM matrix switches and switches over the following signals: analogue video, keyboard and mouse.

The system consists of three main components, the central modules, the target modules (server, computer connection) and the workstation modules.

The modules are interconnected via CAT-x cable.

The system facilitates the operation of 16 to 2048 targets across 2 to 8 simultaneous workstations.

By combining these components with other G&D products, the number of simultaneous access workstations can be increased to 64.

A functional system contains a minimum of one CATCenter X, an UCON, a CATpro2 and the necessary connection cables.

Highlights

- Resolution up to 1920 x 1440 @ 75 Hz
- Automatic video setting with customisation options
- Redundant power supply (optional)
- Automatic detection and display of the CATCenter system architecture
- Support for external authentication via directory services LDAP, Active Directory, TACACS+, Radius (with CATCenter X8) with failover technology
- Syslog message output can be configured in different facility levels (for CATCenter X8)
- Up to 300 metre distance between the target and workstation
- Optional power switchover integration (switch on/off target via OSD)
- Optional trade switch function (release function)
- Optional push/get function (release function)
- Hot-plug and hot-swap of the system components
- Stay-alive function

Central module
CATCenter X8

The CATCenter central module is available in the following configuration levels:

- 2 workstations/16 targets (CATCenter X2)
- 4 workstations/32 targets (CATCenter X4)
- 8 workstations/32 targets (CATCenter X8).



Front view

Article no.
A230 0021

The UCON (UserConsole) workstation module has the following variants:
UCON-a (local workstation directly to the CATCenter)
UCON (remote workstation, e.g. in the admin office)
UCON-s (remote workstation with additional link-up of two workstation computers)
UCON-IP-eco (IP workstation with system access via Ethernet)

Workstation module
UCON



Front view

Article no.
A112 0031

Server module
CATpro2-USB

The server module CATpro2 is available in the following basic variants:

- PS/2 keyboard/mouse and VGA graphics (CATpro2-PS/2)
- DEC-PS/2 keyboard/mouse and VGA graphics (CATpro2-DEC)
- USB keyboard/mouse and VGA graphics (CATpro2-USB)
- SUN-USB keyboard/mouse and VGA graphics (CATpro2-SUN-USB)
- VT-100 terminal emulation (CATpro2-VT100)



Article no.
A232 0010

Operating the main components

The CATCenter system is operated via keyboard hotkeys or the OSD AdonIS. These two components are available on all UCON workstation modules and ensure fast and easy operation across the entire system (see OSD features). The IP workstation module UCON-IP-eco also offers an operating client which is used both to set up the IP session and also to offer system operation via a graphical interface. This client is available as a native application for Windows and GNU-Linux or as an operating system-independent JAVA version.

OSD
(AdonIS)

Configuration

Three access points are available for configuring the system. You can change settings from all workstations via the AdonIS as a central interface. The additional IP configuration client CATCenter Xview allows you to do this independently from a workstation module via a network (with CATCenter X8 only). The configuration of the IP workstation module UCON-IP-eco is carried out via its web interface.

KVM Matrix Switches

System expansions

The functions of the CATCenter system can be expanded with the following options:

Central:

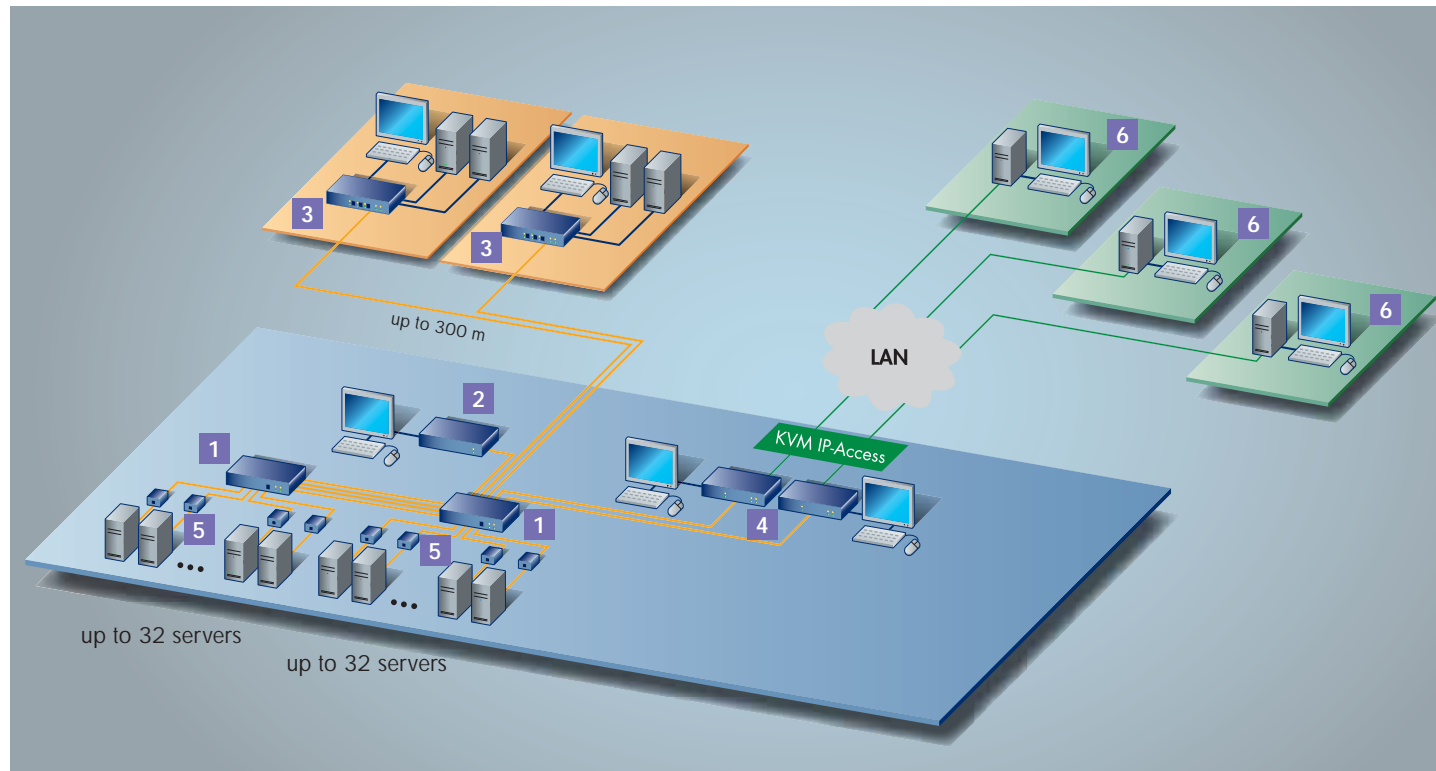
- Remote power switching with add-on component "HardBoot CCX"
- > 32 servers via cascading with other CATCenters

Server-side:

- Telescopic rail support with target module "CATpro2-extended"
- 8 – 16 simultaneous workstations with target module "CATpro2-UC" + no. of UCON
- 16 – 64 workstations with add-on component "UserCenter CAT8" + no. of UCON

Workstation-side:

- CATCenter remote control with "IP switching" see page 22
- UCON interaction with "Push-Get" see page 22
- UCON pooling with "TS function" see page 22



System diagram

- 1 CATCenter X8
- 2 UCON-a
- 3 UCON-s
- 4 UCON-IP-eco (+ local workstation)
- 5 CATpro2
- 6 IP client

Example

The server room at an industrial company is equipped with 64 servers. These servers are managed by the administration team via various workstations. Both in the computer centre itself (UCON-a) and via the network (UCON-IP-eco), the servers are accessible by the admins up to the BIOS level. In addition, via a dedicated CAT-x link, the administrators' offices are also integrated into the operating concept (UCON-s). Here the UCON-s offers the additional benefit of being able to connect the two workstation computers as well. The admin can either switch directly to the computer centre or to his own workstation computer. Two CATCenter X8 (1 x master, 1 x slave) are used to connect the workstations and the servers. The CATCenter X8 can be integrated into the network (configuration, syslog, directory services etc.).

Features system

The design of the system hardware offers a range of benefits; just a few of these benefits are outlined below.

Field:

Video	VGA resolutions up to 1920 x 1440 @ 75 Hz can be selected. Automatic video optimisation for any target/workstation combination.
Operating environment	Temperature: +5 to +45 °C Air humidity: < 80 %, non-condensing
Connection	No set activation sequence. Targets do not need to be switched off (exception: initial installation of SUN servers). Stay-alive function; when switching on and off or when "moving" a switching component, the servers remain unaffected. Hot plug capability; servers and system components can be connected during operation (Exception: initial installation of SUN servers). Auto acknowledge; added components are automatically initialised and configured. Hot swap capability; system components can be plugged in, unplugged or moved while the servers are in operation, and will still be detected automatically.
Expansion	System can be expanded flexibly on all module levels. Expansion is carried out using the standard system ports. Expansions can be carried out while the servers are in operation and do not require a system restart. Extension of the system architecture is detected automatically and updated dynamically.
Network access	The network ports on individual modules facilitate operation, configuration and KVM-IP access via Ethernet.

KVM Matrix Switches

CATCenter X2



Rear view

Article no.
A230 0023

CATCenter X4



Rear view

Article no.
A230 0025

CATCenter X8



Rear view

Article no.
A230 0021

Individual features of the modules

Technical data		CATCenter X2	CATCenter X4	CATCenter X8
Workstation ports per device		2	4	8
Workstation ports max. per cluster		16	32	64
Transmission type to workstation module		dedicated CAT-x link	dedicated CAT-x link	dedicated CAT-x link
Server ports		16	32	32
Server ports Cascade level 1		128	256	128
Server ports Cascade level 2		1024	2048	512
Transmission type to server module		dedicated CAT-x link	dedicated CAT-x link	dedicated CAT-x link
Update process		local service socket	local service socket	via network
Network connection		no	no	yes
Power supply	Main Type	internal power pack	internal power pack	internal power pack
	Connection	Connector for non-heating device (IEC-320 C14)	Connector for non-heating device (IEC-320 C14)	Connector for non-heating device (IEC-320 C14)
Redundant (optional)	Voltage	AC100-240V/60-50Hz 130-80 mA	AC100-240V/60-50Hz 180-110 mA	AC100-240V/60-50Hz 280-150 mA
	Type	external power pack	external power pack	external power pack
Casing	Material	anodised aluminium	anodised aluminium	anodised aluminium
	Dimensions (W x H x D)			
Weight	Desktop	435 x 44 x 286 mm	435 x 44 x 286 mm	435 x 44 x 286 mm
	Rackmount	19" x 1HU x 286 mm	19" x 1HU x 286 mm	19" x 1HU x 286 mm
Interfaces				
to workstation module		RJ45 socket	RJ45 socket	RJ45 socket
to server module		RJ45 socket	RJ45 socket	RJ45 socket
for network		-	-	RJ45 socket
for update		2.5 mm jack	2.5 mm jack	via network port
for power switch		RJ11 socket	RJ11 socket	RJ11 socket
Conformity		CE, RoHS	CE, RoHS	CE, RoHS

x = 5, 6, 7

KVM Matrix Switches

CATpro2-PS/2



Article no.
A232 0009

CATpro2-VT100



Article no.
A232 0021

Rear view

CATpro2-USB



Article no.
A232 0021

CATpro2-SUN
USB-us



Article no.
A232 0012

CATpro2-DVI
AC-USB



Article no.
A232 0035

Individual features of the modules

		Server modules CATpro2			
		Standard	VT100	DVI	
Technical data					
Signal type/video		analogue video	serial, VT100	digital video (DVI-D)	
No. of interfaces to central module		1	1	2	
Total length incl. cable		0.3 m	2.0 m	2,0m	
Transmission rate RS232		-	max. 115200 bps	-	
Power supply	Main Type	via keyboard-Interface of server	external power supply	via USB interface of target	
	Connection	Mini-DIN 6 / USB	Mini-DIN 4 power socket	USB	
	Voltage	+5VDC	+12VDC	+5VDC	
Casing	Material	Plastic	anodised aluminium	anodised aluminium	
	Dimensions (W x H x D)	45 x 20.7 x 65 mm	105 x 26 x 84 mm	105 x 26 x 84mm	
	Design	Converter	Converter	Converter	
Weight		approx. 120 g	approx. 200 g	approx. 200 g	
Interfaces	to server	CATpro2-PS/2	2 x Mini-DIN 6 plug, 1 x D-Sub HD 15 plug	-	
		CATpro2-PS/2-DEC	2 x Mini-DIN 6 plug, 1 x D-Sub HD 15 plug	-	
		CATpro2-USB	1 x USB-A, 1 x D-Sub HD 15 plug	-	
		CATpro2-SUN-USB (de)	1 x USB-A, 1 x D-Sub HD 15 plug	-	
		CATpro2-SUN-USB (us)	1 x USB-A, 1 x D-Sub HD 15 plug	-	
		CATpro2-VT100	-	1 x D-Sub 9 socket	
		CATpro2-DVI-AC-USB	-	1 x USB-A 1 x DVI-D socket	
		for updates	-	1 x 2.5 mm jack	
		to central module	RJ45 jack	RJ45 jack	RJ45 socket
	Conformity		CE, RoHS	CE, RoHS	CE, RoHS

KVM Matrix Switches

UCON-a



Rear view

Article no.
A112 0035

TwinUCON-a



Rear view

Article no.
A112 0066

UCON



Rear view

Article no.
A112 0031

UCON-s



Rear view

Article no.
A112 0033

Individual features of the modules

Technical data		UCON-a	TwinUCON-a	UCON	UCON-s
Signal type/video		analogue video	analogue video	analogue video	analogue video
Video resolution (dependent on cable length)		1920 x 1440 @ 75Hz	1920 x 1440 @ 75Hz	1920 x 1440 @ 75Hz	1920 x 1440 @ 75Hz
Transmission length		100 m	100 m	300 m	300 m
Workstation module to server module					
Transmission type to workstation module		dedicated CAT-x link	dedicated CAT-x link	dedicated CAT-x link	dedicated CAT-x link
Workstations		1	2	1	1
Delay compensation		no	no	yes	yes
Update process		local service socket	local service socket	local service socket	local service socket
Assigned workstation connections to central module		1	2	1	1
Additional connectable workstation computer		-	-	-	2
Power supply					
Main	Type	internal power pack	internal power pack	internal power pack	internal power pack
	Connection	Connector for non-heating device (IEC-320 C14)	Connector for non-heating device (IEC-320 C14)	Connector for non-heating device (IEC-320 C14)	Connector for non-heating device (IEC-320 C14)
Voltage		AC100-240V/60-50Hz 130-70 mA	2xAC100-240V/60-50Hz 130-70 mA	AC100-240V/60-50Hz 0.2-0.1A	AC100-240V/60-50Hz 0.2-0.1A
Redundant (optional)	Type	external power pack	external power packs	external power pack	external power pack
	Connection	2 pole hollow socket	2 pole hollow socket	Mini-DIN 4 power socket	Mini-DIN 4 power socket
Voltage		+5VDC/1.3A	2 x (+5VDC/1.3A)	+12VDC/0.7A	+12VDC/0.8A
Casing					
Material		anodised aluminium	anodised aluminium	anodised aluminium	anodised aluminium
Dimensions (W x H x D)					
Desktop		210 x 44 x 211 mm	435 x 44 x 211 mm	270 x 44 x 211 mm	270 x 44 x 211 mm
Rackmount		19" x 1HU x 211 mm	19" x 1HU x 211 mm	19" x 1HU x 211 mm	19" x 1HU x 211 mm
Weight		approx. 1.1 kg	approx. 2.2 kg	approx. 1.3 kg	approx. 1.3 kg
Interfaces					
for workstation	Video	D-Sub HD 15 socket	D-Sub HD 15 socket	D-Sub HD 15 socket	D-Sub HD 15 socket
	Keyboard/mouse	2 x Mini-DIN 6 socket	2 x (2 x Mini-DIN 6 socket)	2 x Mini-DIN 6 socket	2 x Mini-DIN 6 socket
	USB keyboard/mouse	-	-	2 x USB-A socket	2 x USB-A socket
	TradeSwitch-LED	-	-	D-Sub 9 socket	-
to central module		RJ45 socket	RJ45 socket	RJ45 socket	RJ45 socket
	for local workstation computer (with CATpro2 variant)	-	-	-	2 x RJ45 socket
for update		2.5 mm jack	2.5 mm jack	2.5 mm jack	2.5 mm jack
Conformity		CE, RoHS	CE, RoHS	CE, RoHS	CE, RoHS

x = 5, 6, 7

KVM Matrix Switches

UCON-IP-eco



Rear view

Article no.
A100 0005

TwinUCON-IP-eco



Rear view

Article no.
A100 0007

Individual features of the modules

Technical data		UCON-IP-eco	TwinUCON-IP-eco	
Signal type/video		analogue video	analogue video	
Video resolution (dependent on cable length)				
	local connection	1920 x 1440 @ 75Hz	1920 x 1440 @ 75Hz	
	via IP native	1280 x 1024 @ 75Hz	1280 x 1024 @ 75Hz	
Transmission length		300 m	300 m	
Workstation module to server module				
Transmission type to workstation module		dedicated CAT-x link	dedicated CAT-x link	
Transmission type to KVM-IP client		TCP/IP protocol	TCP/IP protocol	
Communication		Ethernet 10/100 Mbit/s	Ethernet 10/100 Mbit/s	
Workstations		2 (1 x IP; 1 x local; concurrent)	2 x 2 (1 x IP; 1 x local; concurrent)	
Delay compensation		yes	yes	
Update process		via network	via network	
Assigned workstation connections to central module		1	2	
Power supply	Main			
	Type	internal power pack	internal power pack	
	Connection	Connector for non-heating device (IEC-320 C14)	Connector for non-heating device (IEC-320 C14)	
	Voltage	AC100-240V/60-50Hz 0.3-0.2A	AC100-240V/60-50Hz 0.5-0.3A	
Redundant (optional)	Type	external power pack	external power packs	
	Connection	Mini-DIN 4 power socket	Mini-DIN 4 power socket	
	Voltage	+12VDC/1.1A	2 x (+12VDC/1.1A)	
Casing	Material	anodised aluminium	anodised aluminium	
	Dimensions (W x H x D)	Desktop	435 x 44 x 356 mm	435 x 44 x 356 mm
		Rackmount	19" x 1HU x 356 mm	19" x 1HU x 356 mm
Weight		approx. 3.0 kg	approx. 3.4 kg	
Interfaces	for workstation	Video	D-Sub HD 15 socket	2 x D-Sub HD 15 socket
		Keyboard/mouse	2 x Mini-DIN 6 socket	2 x (2 x Mini-DIN 6 socket)
	to central module		RJ45 socket	2 x RJ45 socket
		for network		RJ45 socket
	for update		via network port	via network port
Conformity		CE, RoHS	CE, RoHS	

x = 5, 6, 7



Central module expansion

via power switching

"Power switching" functionality can be added to the system using the HardBoot CCX module. The HardBoot CCX are serial-connected to the CATCenters and switched via the CATCenter OSD. Each server

can have three power sources with different phases assigned to it, and these are switched using one command (grouping). By cascading the HardBoot CCX, up to 128 power sources are available per CATCenter.

Technical data		HardBoot CCX	
Power outlets per unit		8 (2 x 4)	
Max. no. of cascaded devices		16	
Max. available power ports per CATCenter		128	
No. of parallel switchable power ports (across all devices)		3	
Cascading		RS485 bus	
Cascade interface		RJ12 socket	
Switching current		2 x 10A	
Permanent current per port		10A	
Peak current per device		120A	
Power supply	Main Type	2 x internal power pack	
	Connection	2 x connectors for non-heating device (IEC-320 C14)	
	Voltage	AC230V/50Hz	
Current delivery	Connection	2 x 4 x socket for non-heating devices (IEC-320 C14)	
	Voltage	AC230V/50Hz	
		2 x 10A	
Casing	Material	Metal	
	Dimensions (W x H x D)	Desktop	437 x 42 x 107 mm
		Rackmount	19" x 1U x 107 mm
Weight		approx. 2.0 kg	
Temperature		+0 to +40 °C	
Operating environment		Air humidity: 10 % - 80 %, non-condensing	
Interfaces		to central module: D-Sub 9 socket	
Conformity		CE, RoHS	

Central module expansion

Cascading for connecting additional targets

The CATCenter system can be expanded to offer connectability for more servers via cascading. To do this, any CATCenter central modules are interconnected. When cascading different CATCenter types, the most powerful device should be the master in the cascade.

The master undertakes all the control tasks. If a CATCenter X8 is used as a master, the entire cascade can then be configured via the network (network-compatibility of the CCX8 is effectively 'transferred over').

	CATCenter X2	
	No. of available server ports	No. of CATCenter in total
Server ports native	16	1
Cascade level 1	128	9
Cascade level 2	1024	73
	CATCenter X4	
	No. of available server ports	No. of CATCenter in total
Server ports native	32	1
Cascade level 1	256	9
Cascade level 2	2048	73
	CATCenter X8	
	No. of available server ports	No. of CATCenter in total
Server ports native	32	1
Cascade level 1	128	5
Cascade level 2	512	21



KVM Matrix Switches

Expansion on target-side

to increase the number of workstations from 8 up to 16 / Support for moveable, integrated servers

Using the target modules CATpro2-UC, a target can be accessed from two CATCenter clusters. This doubles the number of access from 8 (CATCenter X8) to 16 (2 x CATCenter X8), for example. The extended variant is used to link-up moveable, integrated servers (telescopic rails) thanks to its longer connection cable.

		Target module CATpro2 variants	
		UC	extended
Technical data			
Signal type/video		analogue video	analogue video
No. of interfaces			
to central module		2	1
Total length incl. cable		0.3 m	1.2 m
Power supply			
Main Type		via keyboard interface on the target	via keyboard interface on the target
Connection		PS/2 / USB	PS/2 / USB
Voltage		+5VDC	+5VDC
Casing			
Material		Plastic	Plastic
Dimensions (W x H x D)		65 x 20.7 x 65 mm	45 x 20.7 x 70 mm
Design		Converter	Converter
Weight		approx. 130g	approx. 120g
Interfaces			
to target			
CATpro2-UC-PS/2		2 x Mini-DIN 6 plug,	2 x Mini-DIN 6 plug,
CATpro2-extended PS/2		1 x D-Sub HD 15 plug	1 x D-Sub HD 15 plug
CATpro2-UC-PS/2-DEC		2 x Mini-DIN 6 plug,	2 x Mini-DIN 6 plug,
CATpro2-extended PS/2-DEC		1 x D-Sub HD 15 plug	1 x D-Sub HD 15 plug
CATpro2-UC-USB		1 x USB-A,	1 x USB-A,
CATpro2-extended-USB		1 x D-Sub HD 15 plug	1 x D-Sub HD 15 plug
CATpro2-UC-SUN-USB (de)		1 x USB-A,	1 x USB-A,
CATpro2-extended-SUN-USB (de)		1 x D-Sub HD 15 plug	1 x D-Sub HD 15 plug
CATpro2-UC-SUN-USB (us)		1 x USB-A,	1 x USB-A,
CATpro2-extended-SUN-USB (us)		1 x D-Sub HD 15 plug	1 x D-Sub HD 15 plug
to central module		RJ45 jack	RJ45 jack
Conformity		CE, RoHS	CE, RoHS

Expansion on server-side

to increase the number of workstations from 16 up to 64

The UserCenter CAT8 is positioned between the server module and the central modules. The UserCenter CAT8 is connected to the server module (all CATpro2 variants except "UC") and simplifies the number of connections in the direction of the central module for this server. This means that the server can be accessed from 8 CATCenter clusters. As each CATCenter (when using type X8) can connect 8 workstations,

the server can be accessed from 8 clusters via 8 workstations (= 64 workstations). A UserCenter CAT8 achieves this for 4 servers. For example, if 20 targets are to be accessible via more than 16 workstations, 5 UserCenter CAT8 are required, plus the relevant number of CATCenters and UCON.

		UserCenter CAT8
Technical data		
Ports to central module		32 (4 blocks of 8)
Transmission type		dedicated CAT-x link
to central module		
Server ports		4 (per block 1)
Transmission type		dedicated CAT-x link
to server module		
Update process		local service socket
Power supply		internal power pack
Main Type		
Connection		Connector for non-heating device (IEC-320 C14)
Voltage		AC100-240V/60-50Hz 0.4-0.2A
Redundant (optional) Type		external power pack
Connection		Mini-DIN 4 power socket
Voltage		+12VDC/3A
Casing		
Material		anodised aluminium
Dimensions (W x H x D)		
Desktop		435 x 44 x 210 mm
Rackmount		19" x 1U x 210 mm
Weight		approx. 2.3 kg
Interfaces		
to server module		RJ45 socket
to central module		RJ45 socket
for update		2.5 mm jack
Conformity		CE, RoHS

x = 5, 6, 7

Expansion on workstation-side

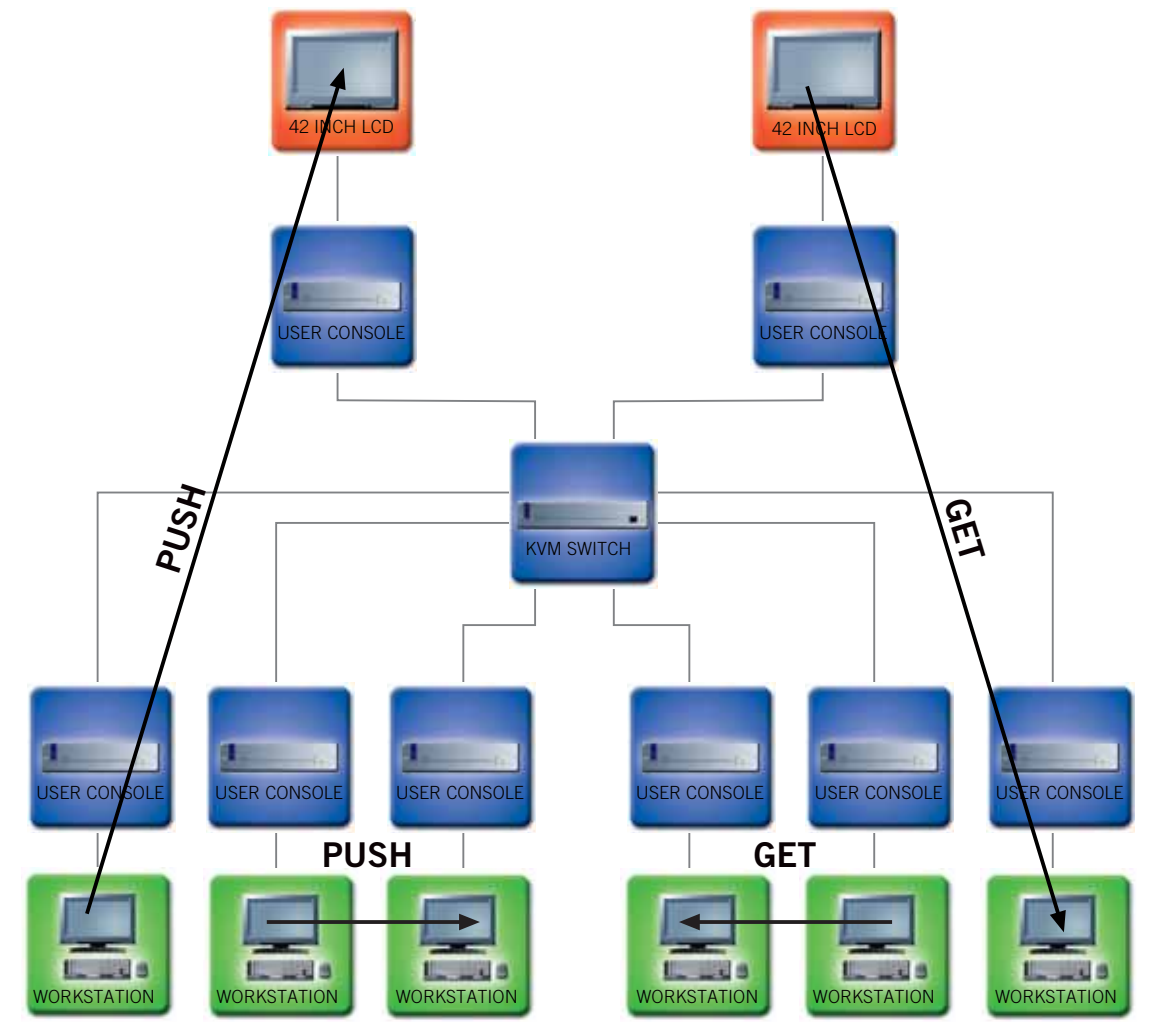
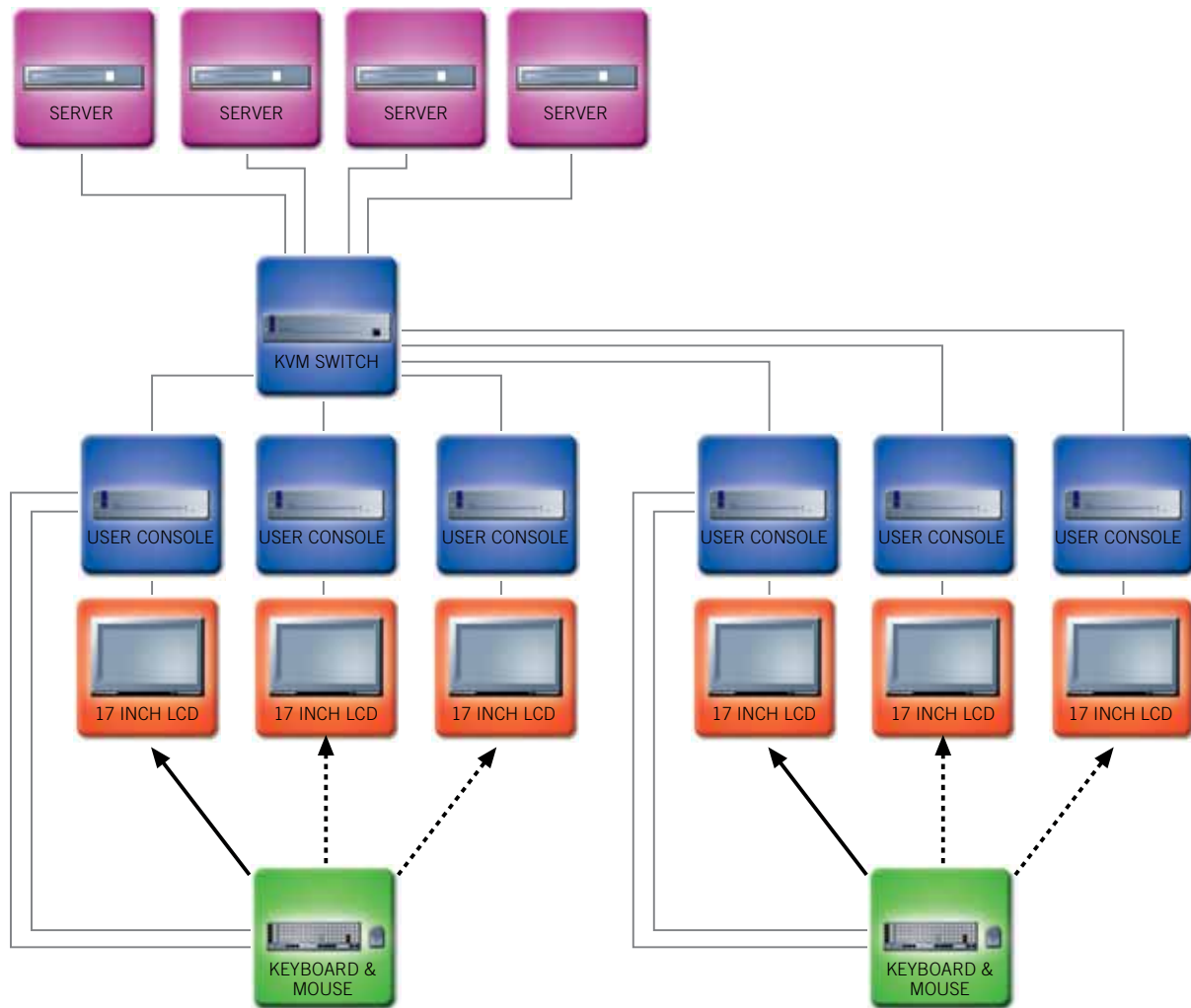
using communication modules

Function	CCX-TradeSwitch UCON-Pooling with the "TS function"
Description	The TradeSwitch function groups multiple workstation modules (UCON) into one logical workstation. This logical workstation can be operated with merely one keyboard and one mouse – but has multiple displays (multi-monitor workstation). Keyboard/mouse is assigned to the individual UCON of the logical workstation as preferred, using a holkey.
Operation via	Hotkeys
Required for use	Activation in the CATCenter master

Expansion on workstation-side

using communication modules

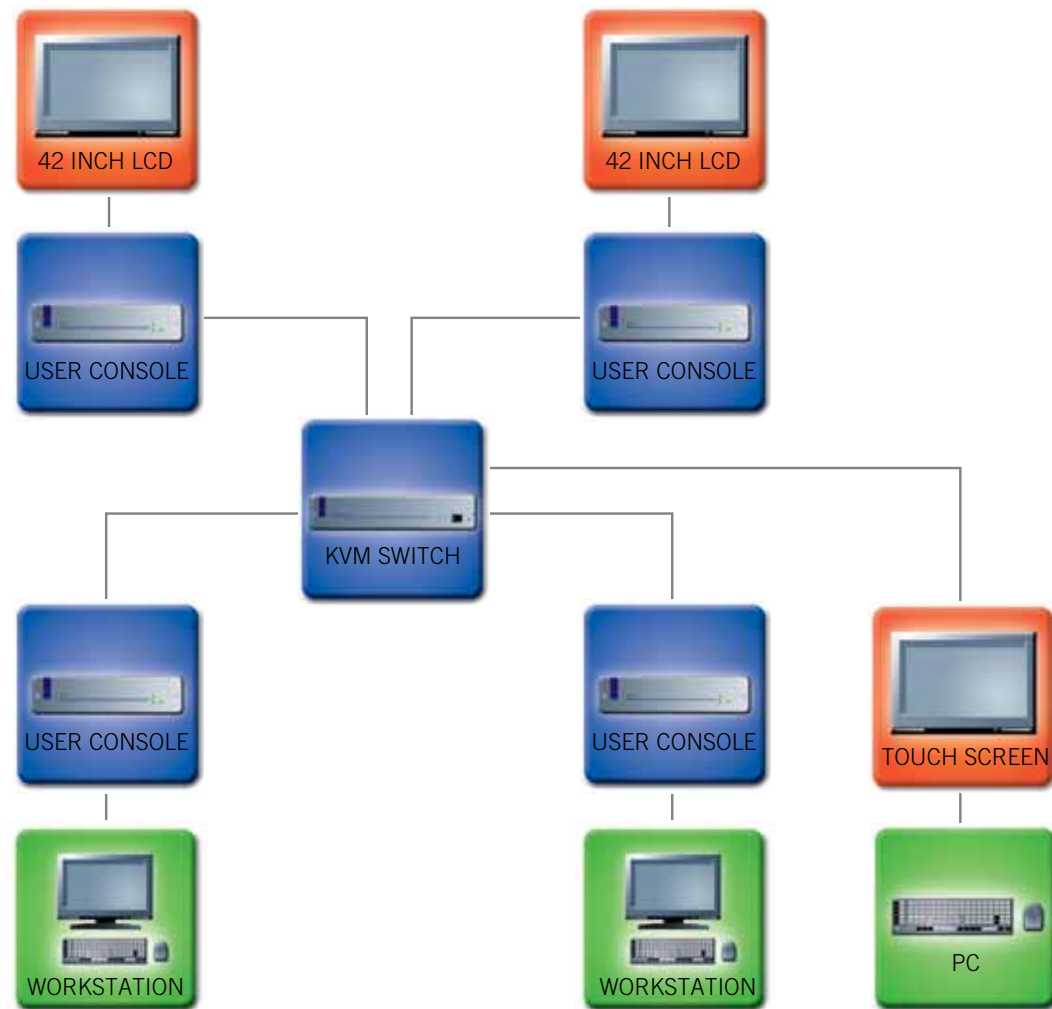
Function	CCX-Push-Get UCON interaction with the "push-get function"
Description	The push-get function permits the image on a target to be moved to the display of another workstation – or to be taken from there. This workstation can be a large screen projection, for example.
Operation via	OSD AdonIS
Required for use	Activation in the CATCenter master



Expansion on workstation-side

using communication modules

Function	CCX-IP switching CATCenter remote control with "IP switching"
Description	The IP-switching function can be used to send switching commands via network to the CATCenter X8. The system operation is therefore independent of a UCON workstation module. The UCON can then only be used to connect the displays. We provide you with the programme interfaces (Windows DLL or Linux SO) – you create the user interface.
Operation via	Operating interface to be created by the customer Activation in the CATCenter master
Required for use	CATCenter X8 as master In-house programming of an operating interface



OSD functional features

The OSD is the central operating and configuration component in the system and can be modified to fit the needs of the user and the security guidelines in place for its use. The access is simple via keyboard/mouse and configurable hotkeys.

Users	<ul style="list-style-type: none"> Create up to 128 individual accounts. Define user-specific OSD displays. Set up password protection for all workstations. Form groups for effective rights management. Assign individual configuration rights. Assign access rights for the individual servers. Activate multiuser mode for simultaneous connection of an individual server.
Servers	<ul style="list-style-type: none"> Select servers directly via the Select menu. Create, edit or delete server designations. Set the permanent display of the server designation on the screen. Form groups for effective access management. Search servers via name input. Select 3 scan modes for automatic or manual through-connection of connected servers. Display server routing, including across cascades.
Power	Switch server power supply (additional component required).
System info	<ul style="list-style-type: none"> Re-detection of components with automatic assignment of the known configuration information. Schematic illustration of the system layout from the server to the workstation. Display of all servers as a list – including across cascades; no through-switching across multiple OSDs. Display of the assigned status conditions for workstation <-> server.
Workstation	<ul style="list-style-type: none"> Integrate keyboards with special functions (optional). Set up open, direct access without password prompt. Define a preferred computer which is offered immediately after logging on. Activate access protection via auto log-off when leaving the workstation. Block OSD to prevent system access to specific consoles. Set up a video console (e.g. beamer) with remote control via other workstations (push-get and TradeSwitch module required). Optimum image thanks to the automatic calibration of each transmission path between the server module and workstation.
Updating	Firmware/OSD updates possible via the relevant interfaces.



KVM Matrix Switches

Web interface functional features

The web interface is the configuration interface for the IP workstation module UCON-IP-eco and provides you with the following selected options in the various areas:

Configuration	Easy setting of the network parameters via the graphical interface
	Activate session timeouts for IP client web interface
	Enter date and time, select NTP server
Maintenance	Backup of the configuration data
	Restore the configuration data.
	Restore the original factory status
Logging	Carry out syslog settings
	Query system information, e.g. current network settings, logs, system configurations, active IP sessions or local syslog protocol
	Forward syslog messages to up to two servers
Updates	Import firmware updates via the network
Call IP client	Calling of the Java client for IP access to the targets connected on the CATCenter, regardless of operating system
	To do this it is not necessary to install any software on the server or the workstation computer

IP client functional features

The native clients are used as a remote access tool for KVM IP access to the servers connected to the system and have the following features, for example:

Operation	Target selection via graphical interface or OSD
	Operate target with original mouse pointer and keyboard down to the BIOS level
	Run comprehensive keyboard macros on the servers (e.g. Ctrl+Alt+Del)
	Transfer temporary storage of the IP client computer to the target
Video	Automatic detection of video profiles for best performance and image reproduction
	Manual modification of the video profiles
	Activate full-screen mode
	Automatic adjustment of the client window to the resolution of the server
	Take a screenshot of the current session
Communication	Communicate with another client via the chat mode
System settings	Measurement of the bandwidth for data transmission
	Configure the mouse brake
	Activation of mouse gestures to operate the IP client

Xview functional features

The Xview client is the configuration software for the CATCenter X8 and provides you with the following options, and more:

Configuration	Simple setting of the network parameters using a graphical interface.
	Assign network filter rules which permit or reject access to the system for specific IP addresses.
	Enter date and time, select NTP server.
Maintenance	Specify session timeouts.
	Backup the configuration data.
	Restore the configuration data.
Updates	Restore the original factory status.
	Import firmware updates via the network.
Logging	Carry out syslog settings.
	Query system information, e.g. current network settings, logs, system configurations, local syslog protocol.
	Forward syslog messages to up to two servers.
Directory service	Perform authentication against LDAP, Active Directory, TACACS+ and Radius.
OSD AdonIS	Carry out all important OSD settings via a graphical interface.
	Visualisation of the CATCenter system design.



KVM Matrix Switches

Minimum system

For a functional system, the following are required as a minimum (example):

Art. no.	Designation	
A230 0023	CATCenter X2	Central module
A232 0009	CATpro2-PS/2	Server module
A112 0031	UCON	Workstation module
see KVM Connectivity	PRO-x	CPU connection cable
	K-C7-x	Ready-made cables, transmission up to 100 m

Components

Central module

Art. no.	Designation	
A230 0023	CATCenter X2	for 2 workstations / 16 targets, desktop incl. rackmount kit
A230 0025	CATCenter X4	for 4 workstations / 32 targets, desktop incl. rackmount kit
A230 0021	CATCenter X8	for 8 workstations / 32 targets, desktop incl. rackmount kit
A230 0027	CATCenter Neo	for 16 workstations / 64 targets, desktop incl. rackmount kit

Server module

Art. no.	Designation	
A232 0009	CATpro2-PS/2	for targets with PS/2 keyboard/mouse, VGA
A232 0029	CATpro2-PS/2-DEC	for targets with DEC PS/2 keyboard/mouse, VGA
A232 0010	CATpro2-USB	for targets with USB keyboard/mouse, VGA
A232 0035	CATpro2-DVI-AC-USB	for targets with USB keyboard / mouse, DVI
A232 0012	CATpro2-SUN USB-US	for targets with SUN-USB keyboard/mouse (American layout), VGA
A232 0021	CATpro2-VT100	for targets with VT100 emulation

Workstation module

Art. no.	Designation	
A112 0035	UCON-a	Local workstation module, desktop
A112 0036	UCON-a-RM	Local workstation module, rackmount
A112 0066	Twin-UCON-a	Twin local workstation module, desktop incl. rackmount kit
A112 0031	UCON	Remote workstation module, desktop
A112 0032	UCON-RM	Remote workstation module; rackmount
A112 0033	UCON-s	Remote workstation module with connection for 2 workstation computers, desktop
A112 0034	UCON-s-RM	Remote workstation module with connection for 2 workstation computer; rackmount
A100 0005	UCON-IP-eco	IP workstation module with 1 x Ethernet connection, desktop incl. rackmount kit
A100 0007	Twin-UCON-IP-eco	Twin IP workstation module with 2 x Ethernet connection, desktop incl. rackmount kit

Native clients (for UCON-IP-eco, one client is supplied free of charge)

Art. no.	Designation	
A800 0016	IP-Console Client-WIN	IP operator client Windows for UCON-IP-eco (optional)
A800 0017	IP-Console Client-Linux	IP operator client Linux for UCON-IP-eco (optional)

Cable

Art.-Nr.	Designation	Category in KVM Connectivity	Function
	PRO-x	CPU connection cable	computer connection
see	K-C7-x	Ready-made cables	transmission up to 100 m
KVM Connectivity	K-C5-OIL-x	Ready-made cables	outside transmission up to 100 m
	K-C7-LD-x	Ready-made cables	transmission over 100 m

Expansions

Power switching

Art. no.	Designation	
A410 0001	HardBoot CCX	CCX-PowerSwitch for 8 power sources, cascadable up to 128 power sources, rackmounted

Cabel

Art.-Nr.	Designation	Category in KVM Connectivity	Function
see	HB-CCX-2	Device cable	Connection of HardBoot CCX and CATCenter
KVM Connectivity	CCX-BUS	Ready-made cable	Connection of multiple HardBoot CCX among each other
	PowerCord-x	Power supply cable	power supply connection

Communication modules

Art. no.	Designation	
A820 0003	CCX-TradeSwitch	TS module for 1 CATCenter cluster
A820 0004	CCX-Push-Get	Push-get module for 1 CATCenter cluster
A820 0005	CCX-IP-switching	IP switching module for 1 CATCenter system

Server module for > 8 – 16 simultaneous workstations

Art. no.	Designation	
A232 0013	CATpro2-UC-PS/2	PS/2 keyboard/mouse, VGA, twofold access to a server
A232 0030	CATpro2-UC-PS/2-DEC	DEC-PS/2 keyboard/mouse, VGA, twofold access to a server
A232 0014	CATpro2-UC-USB	USB keyboard/mouse, VGA, twofold access to a server
A232 0035		USB keyboard / mouse, DVI, twofold access to server
A232 0016	CATpro2-UC-SUN USB-US	SUN-USB keyboard/mouse (American layout), VGA, twofold access to a server

Server module for fitting on telescopic rails

Art. no.	Designation	
A232 0017	CATpro2-extended-PS/2	PS/2 keyboard/mouse, VGA
A232 0031	CATpro2-extended PS/2-DEC	DEC-PS/2 keyboard/mouse, VGA
A232 0018	CATpro2-extended-USB	USB keyboard/mouse, VGA
A232 0020	CATpro2-extended-SUN-USB-US	SUN-USB keyboard/mouse (American layout), VGA

Additional component for 16 up to 64 simultaneous workstations

Art. no.	Designation	
A220 0013	UserCenter CAT8	Additional component for octupling the access to 4 servers

Accessories

Art. no.	Designation	
A411 0008	Power-Set 12-type 2	External power pack; redundant power supply; 12V/5A

Please quote the article number and designation when ordering.