

MANUAL

**VISUNET GMP KM
HARDWARE MANUAL**





With regard to the supply of products, the current issue of the following document is applicable: The General Terms of Delivery for Products and Services of the Electrical Industry, published by the Central Association of the Electrical Industry (Zentralverband Elektrotechnik und Elektroindustrie (ZVEI) e.V.) in its most recent version as well as the supplementary clause: "Expanded reservation of proprietorship"

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1 Safety

1.1 Validity

The chapter "Safety" is valid as instruction manual.

Specific process and instructions in this document require special precautions to guarantee the safety of personnel.

1.2 Symbols used

This document contains information that you must read for your own personal safety and to avoid property damage. The warning signs are displayed in descending order depending on the hazard category, as follows:

Safety-relevant symbols



Danger!

This symbol indicates a warning about a possible danger.

In case of ignoring the consequences may range from personal injury to death.



Warning!

This symbol indicates a warning about a possible fault or danger.

In the event the warning is ignored, the consequences may course personal injury or heaviest property damage.



Caution!

This symbol warns of a possible fault.

In case of ignoring the devices and any connected facilities or systems may be interrupted or fail completely.

Informative symbols



Note!

This symbol brings important information to your attention.



Action

This symbol marks an acting paragraph.



1.3 System Operator and Personnel

The operator of the system is responsible in terms of planning, mounting, commissioning, operating, maintenance and dismounting.

Mounting, commissioning, operation, maintenance and dismounting of any devices may only be carried out by trained, qualified personnel. The instruction manual must be read and understood.

1.4 Pertinent Laws, Standards, Directives, and further Documentation

Laws, standards, or directives applicable to the intended use must be observed. In relation to hazardous areas, Directive 1999/92/EC must be observed.

The corresponding data sheets, declarations of conformity, EC Type-examination certificates, certificates and Control Drawings if applicable (see data sheet) are an integral part of this document. You can find this information under www.pepperl-fuchs.com.

1.5 Intended use

The devices are only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

The devices must not be repaired, changed or manipulated. If there is a defect, the product must always be replaced with an original device.

1.6 Installation and commissioning

The device must only be operated in the ambient temperature range and at the relative humidity (non-condensing) specified.

Use shielded cable

To connect interfaces only use shielded cable.

Screwing/locking connectors

To advance the cable shield screw/lock the connectors.

Leading of data cables and power circuit lines

Lead data cable and power circuit line in separate cable channels.

Check cables and connectors

Before commissioning the system check all cables and connectors.



2 Product Specifications

2.1 Overview

GMP (“Good Manufacturing Practice”) is a set of guidelines for assuring the quality of production processes in controlled industries and closely follow the guidelines issued by the European Commission or the FDA in the US. GMP applications are typically used in the pharmaceutical and food industries. However, products that conform with GMP guidelines are also required for the manufacture of cosmetics and flavour and nutrition.

The materials selected, design of the surfaces and architecture of the overall system should prevent the accumulation of fluids and dirt. Cleaning, maintenance, inspection and servicing must be as safe and easy as the processes employed for the disinfection, pasteurization and sterilization of mechanical components. The VisuNet GMP product portfolio extends from simple direct monitors and remote monitor systems with Ethernet connection to a host, to complete PCs available with single or dual monitor systems and various mounting options. All models feature a 48,2 cm (19 inch) or 55,8 cm (22 inch) display with an optional touch screen. The stainless steel housings have an IP65 degree of protection. Remote monitors and PCs are equipped with Ethernet-, USB-, PS/2- and RS232 interfaces.



Figure 2.1: Several models



The VisuNet GMP product family guarantees a perfect fit for every system infrastructure. Four models are available depending on the functions required, the display and input unit and the distance over which the data is transferred. This manual describes the following model:

VisuNet GMP KM are stainless steel industrial monitors with integrated KVM extender. You can bridge a distance up to 300 m between host PC and monitor with the KVM model.

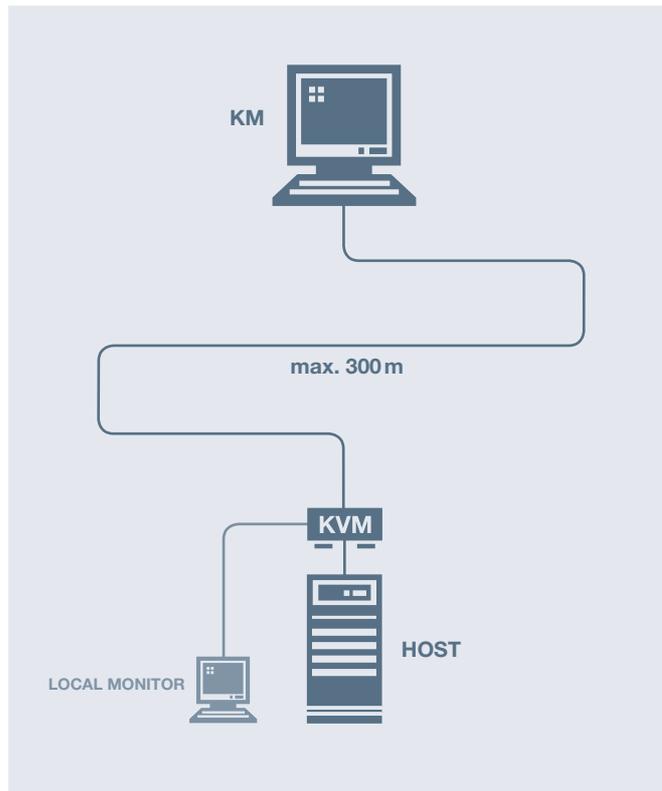


Figure 2.2: System topology VisuNet GMP KM

Overview of features

- Connection to host PC via KVM extender
- Distance between KM and host PC up to 300 m
- Adapted for long distances between KM and host PC



2.2 Technical Data

	VisuNet GMP KM219	VisuNet GMP222
General specifications		
Type	KVM Monitor	
Supply		
Rated voltage	24 V DC	
Input voltage range	20 ... 30 V DC	
Power consumption	50 W	75 W
Indicators/operating means		
Display		
Type	TFT, LCD	
Screen diagonal	48.3 cm (19 inch)	55,9 cm (22 inch)
Resolution	1280 x 1024 Pixel	1680 x 1050 pixel
Color depth	16.7 Mio.	
Brightness	300 cd/m ²	
Input devices	Analog resistive touchscreen (optional) , Keyboard with integrated mouse functionality: optical trackball/touchpad/joystick versions available	
Interface		
Interface type	2x USB (for keyboard/mouse connection) 1 x RS 232 (optional) 1x RJ45 (KVM transmission)	
Ambient conditions		
Ambient temperature	0 ... 40 °C (32 ... 104 °F)	0 ... 35 °C (32 ... 95 °F)
Mechanical specifications		
Protection degree	IP65	
Material		
Surface	stainless steel 1.4301 / AISI 304	
Surface quality	R _a ≤ 0.8 µm	
Mounting type	slim line housing several mounting types (pedestal, wall bracket, wall arm - each turnable or fix) available	
Mass	approx. 13 kg	14.5 kg
Dimensions	568 mm x 450 mm x 73 mm	625 mm x 450 mm x 73 mm



2.3 Dimensions VisuNet GMP KM219

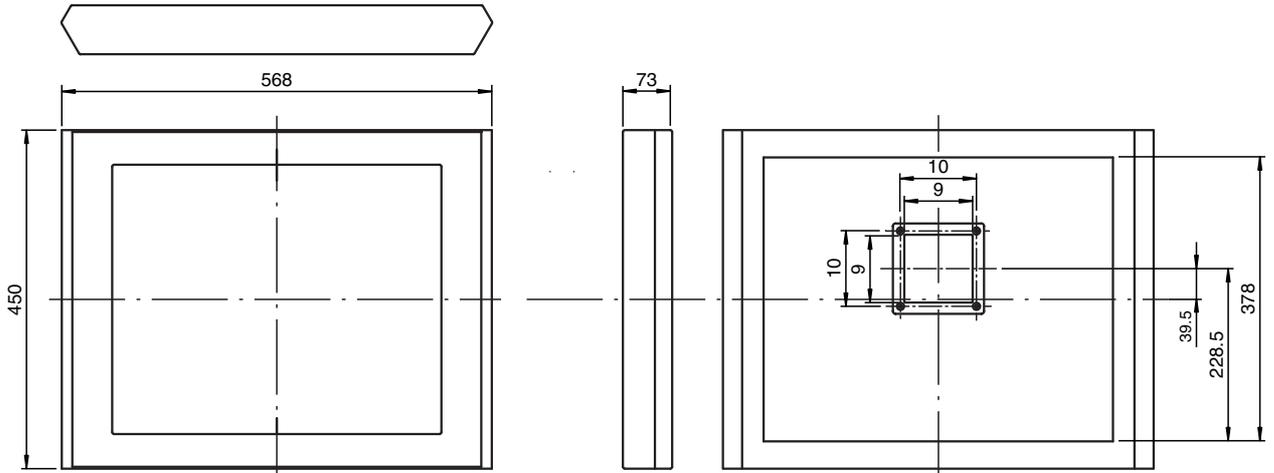


Figure 2.3: Dimensions VisuNet GMP KM219

2.4 Dimensions VisuNet GMP KM222

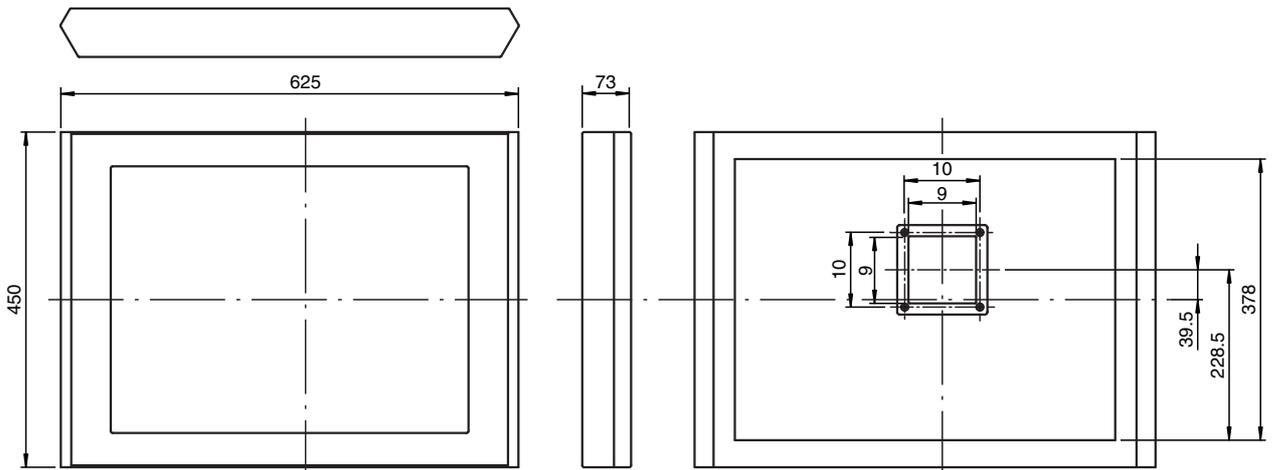


Figure 2.4: Dimensions VisuNet GMP KM222



2.5 Interfaces and connections VisuNet GMP KM

The interfaces and connections of the VisuNet GMP are located within the VESA mounting bracket at the back of the housing.

The following interfaces are available:

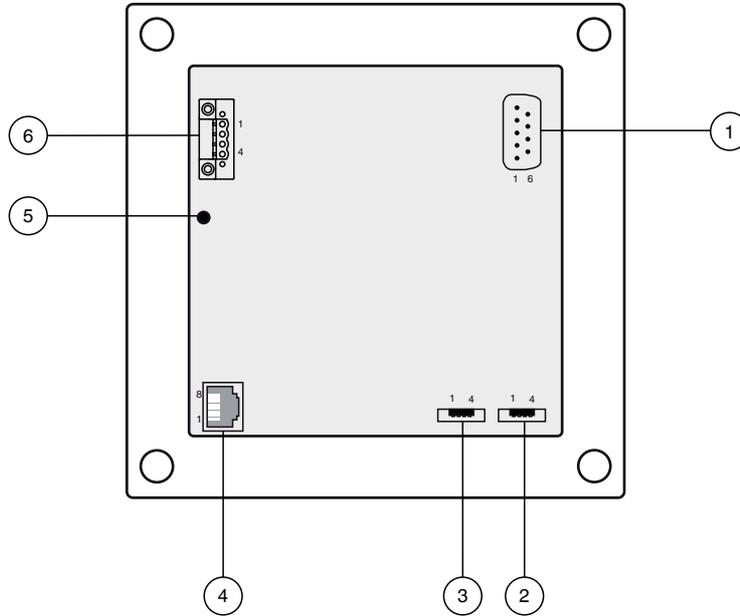


Figure 2.5: VESA mounting bracket at the back of the VisuNet GMP housing

- 1 Serial RS 232 interface
- 2 Mouse (USB interface)*
- 3 Keyboard (USB interface)*
- 4 KVM transmission (RJ45 interface)
- 5 Ground connection (M4)
- 6 Supply voltage (Phoenix DFK-MSTB 2,5/ 4-GF-5,08)

* Only for use with keyboard/mouse!

2.5.1 USB Interface (Mouse/Keyboard)

4-pin USB socket (type A) required for keyboard/mouse.

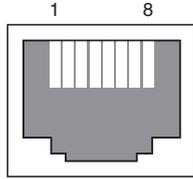
Picture	Pin	Signal	Description
	1	VCC USB	power supply
	2	USB-	data
	3	USB+	data
	4	GND	grounding



2.5.2 RJ45 Interface (KVM Transmission)

8 pin RJ45 socket for KVM communication.

Use Cat.5e cable (AWG24) or better for wiring.



VisuNet GMP	Resolution	Min. Cable Category	Max. Distance	Max. Baud Rate RS 232	Model Number
KM219	1280x1024 @ 60 Hz	Cat.7 (AWG22)	300 m	19200	DATL-C7TP-2-1RJ45
KM222	1680x1050 @ 60 Hz	Cat.7 (AWG22)	200 m	38400	DATL-C7TP-2-1RJ45
KM219	1280x1024 @ 60 Hz	Cat.5e (AWG24)	100 m	57400	DATL-C7TP-2-1RJ45



Note!

We recommend to use KVM extender with delay adjustment / screw compensation (e.g. SK-KVM-CPU-DR-10-...) if the Cat.X cable is longer than 50 m.

2.5.3 Serial RS 232 Interface

The RS 232 interface allows you to connect external serial devices to the VisuNet GMP KM. The following criteria must be fulfilled by the external devices:

- Transmission rate: 200 m max. 38400 bit/s, 100 m max. 57600 bit/s
- Transmittable signals: TxD, RxD, RTS, CTS, DTR, DSR

Picture	Pin	Signal	Pin	Signal
	1	(Data) Carrier Detect	6	Dataset Ready
	2	Receive Data	7	Request to Send
	3	Transmit Data	8	Clear to Send
	4	Data Terminal Ready	9	Ring Indicator
	5	GND		



Note!

Models with touchscreen do not have an RS 232 interface.



2.5.4 Ground Connection

For connecting to a low resistance grounding point at the housing: see chapter 3.3

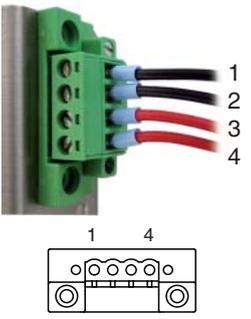
For connecting to a low resistance grounding point at pedestal/wall arm: see chapter 3.2

2.5.5 Supply Voltage 24 V

4-pin socket required for supply voltage connection (Phoenix Contact DFK-MSTB 2,5/ 4-GF-5,08).

The VisuNet GMP KM has inverse-polarity protection.

Matching plug: Phoenix Contact MSTBT 2,5/ 4-STF-5,08

Picture	Pin	Signal
	1	GND
	2	GND
	3	+ 24 V DC
	4	+ 24 V DC



2.6 Accessories

The following accessories are available.

2.6.1 Keyboards

There are several keyboard models available. All keyboards have an antibacterial coating. For this reason the keyboards are perfectly suitable for environments with high hygienic standards.

Keyboard TA3-K4

Keyboard with touchpad for controlling the mouse pointer.

2 separate buttons below the touchpad assume the function of left and right mouse button.



Figure 2.6: Keyboard with touchpad

	TA3-K4
General specifications	
Type	Keyboard with touchpad
Supply	
Rated voltage	via data line
Indicators/operating means	
Keyboard	105 short stroke keys Keyboard layout: US international, German, French, (further keyboard layouts on demand)
Touchpad	
Active Principle	capacitive
Resolution	40 Pts./mm
Dimensions	66 x 50 mm
Driver	Microsoft Mouse ® , USB
Interface	
Interface type	USB



	TA3-K4
Conformity	
Protection degree	IP65
Ambient conditions	
Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	max. 85 % , non-condensing
Mechanical specifications	
Material	anodized aluminium , Polyester foil
Mass	1.2 kg
Dimensions	482.6 mm x 177.8 mm x 45 mm
Cable length	1.8 m , wire end ferrule

Tastatur TA3-K6

Keyboard with joystick for controlling the mouse pointer.

2 separate buttons below the joystick assume the function of left and right mouse button.



Figure 2.7: Keyboard with joystick

	TA3-K6
General specifications	
Type	Keyboard with joystick
Supply	
Rated voltage	via data line
Indicators/operating means	
Keyboard	105 short stroke keys Keyboard layout: US international, German, French, (further keyboard layouts on demand)
Joystick	
Driver	Microsoft Mouse ® , USB



	TA3-K6
Interface	
Interface type	USB
Conformity	
Protection degree	IP65
Ambient conditions	
Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	max. 85 % , non-condensing
Mechanical specifications	
Material	anodized aluminium , Polyester foil
Mass	1.2 kg
Dimensions	482.6 mm x 177.8 mm x 45 mm
Cable length	1.8 m , wire end ferrule

Tastatur TA3-K8

Keyboard with optical trackball for controlling the mouse pointer.

2 separate buttons below the trackball assume the function of left and right mouse button.



Figure 2.8: Keyboard with optical trackball

	TA3-K8
General specifications	
Type	via data line
Supply	
Rated voltage	via data line
Indicators/operating means	
Keyboard	105 short stroke keys Keyboard layout: US international, German, French, (further keyboard layouts on demand)



	TA3-K8
Trackball	
Diameter	50 mm
Material	Phenolic resin, polyester, epoxide resin (grey)
Driver	Microsoft Mouse ® , USB
Interface	
Interface type	USB
Conformity	
Protection degree	IP65
Ambient conditions	
Ambient temperature	0 ... 50 °C (32 ... 122 °F)
Storage temperature	-10 ... 70 °C (14 ... 158 °F)
Relative humidity	max. 85 % , non-condensing
Mechanical specifications	
Material	anodized aluminium , Polyester foil
Mass	1.2 kg
Dimensions	482.6 mm x 177.8 mm x 45 mm
Cable length	1.8 m , wire end ferrule



2.6.2 Pedestals

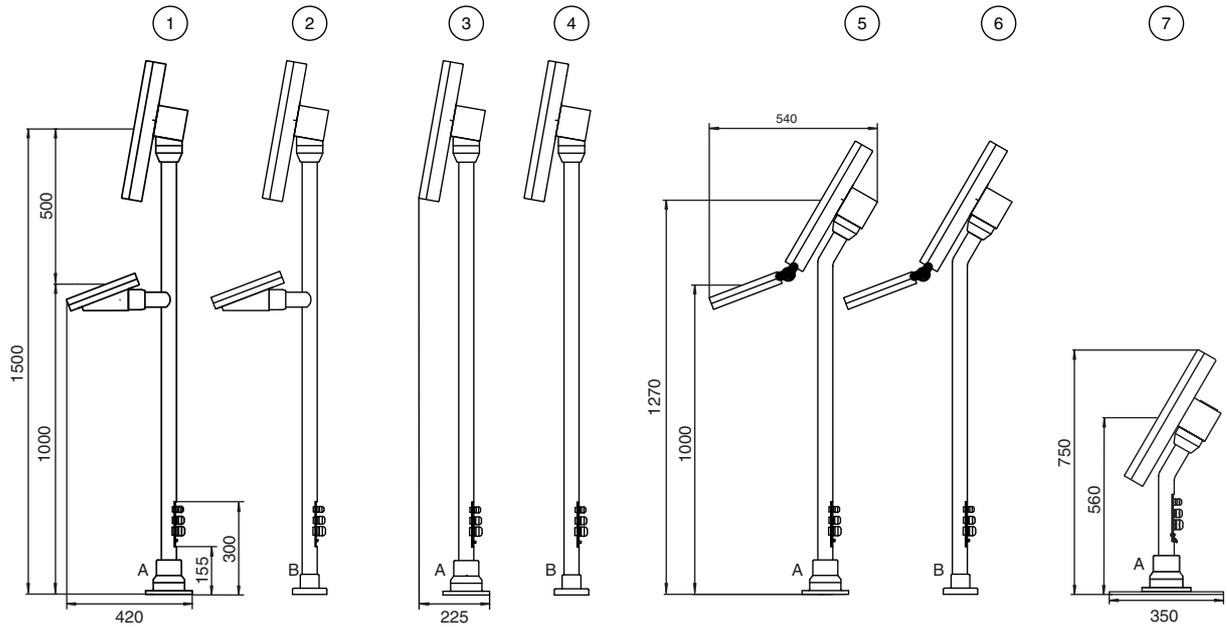


Figure 2.9: Pedestal models for VisuNet GMP

	Model number	Description
1	PEDESTAL1-150-1V-KP-G-T-304	Pedestal, turnable 330°, inclination of monitor 10°, with pipe for keyboard
2	PEDESTAL1-150-1V-KP-G-F-304	Pedestal, fix mounted, inclination of monitor 10°, with pipe for keyboard
3	PEDESTAL1-150-1V-NP-G-T-304	Pedestal, turnable 330°, inclination of monitor 10°
4	PEDESTAL1-150-1V-NP-G-F-304	Pedestal, fix mounted, inclination of monitor 10°
5	PEDESTAL1-130-3V-NP-G-T-304	Pedestal, turnable 330°, inclination of monitor 30°
6	PEDESTAL1-130-3V-NP-G-F-304	Pedestal, fix mounted, inclination of monitor 30°
7	PEDESTAL1-56-3V-NP-G-T-304	Pedestal turnable 330°, inclination of monitor 30°



2.6.3 Wall arm versions

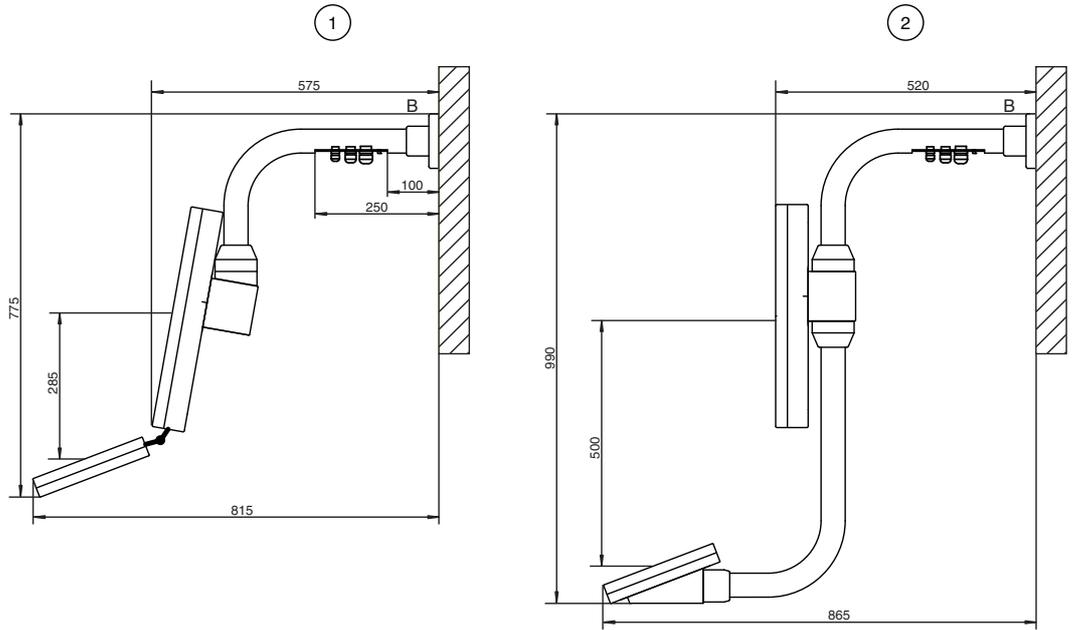


Figure 2.10: Wall arms for VisuNet GMP

	Model number	Description
1	WALL-ARM1-55-1V-NT-G-*-304	Wall arm, inclination of monitor 10°, without pipe for keyboard 2 models available: <ul style="list-style-type: none"> • WALL-ARM1-55-1V-NT-G-F-304: fix • WALL-ARM1-55-1V-NT-G-T-304: turnable
2	WALL-ARM1-55-0V-KT-G-*-304	Wall arm, without inclination of monitor, with pipe for keyboard 2 models available: <ul style="list-style-type: none"> • WALL-ARM1-55-0V-KT-G-F-304: fix • WALL-ARM1-55-0V-KT-G-T-304: turnable



2.6.4 Wall bracket

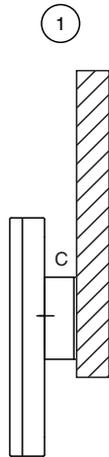
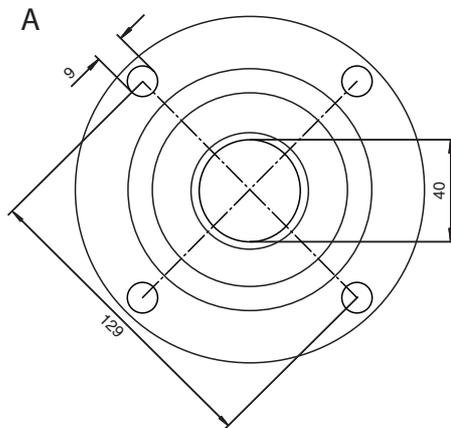


Figure 2.11: Wall bracket for VisuNet GMP

	Model number	Description
1	WALL-BRACKET1-0-0V-G-304	Wall bracket

2.6.5 Hole pattern for mounting versions turnable/fix

Mounting version turnable, fastening at front:





Angle of turn for turnable mounting version

The first stop plate is premounted for a max. angle of turn of 330°.

With the second enclosed stop plate you can define an individual angle.

The angle of turn can be divided with 6 screws in 60° steps.

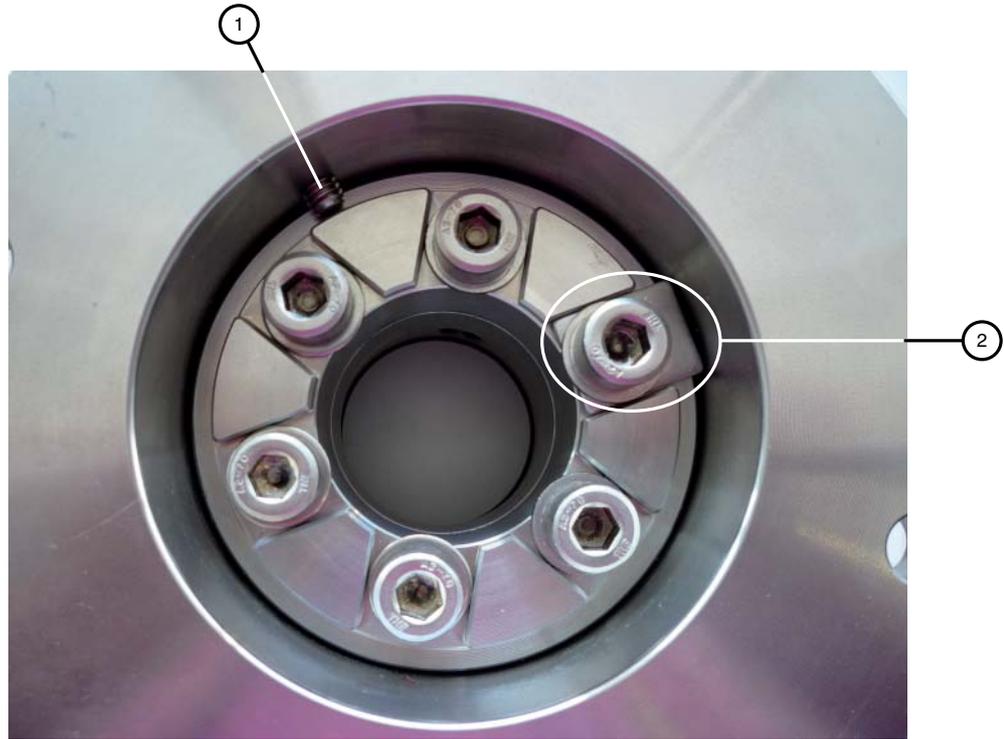
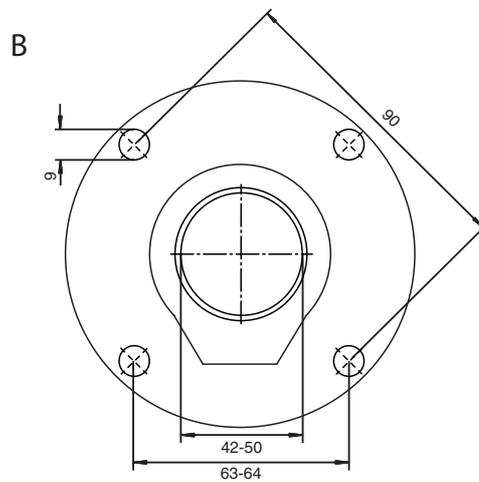


Figure 2.12: Turnable mounting version

- 1. Locking screw
- 2. premounted stop plate

Mounting version fix:



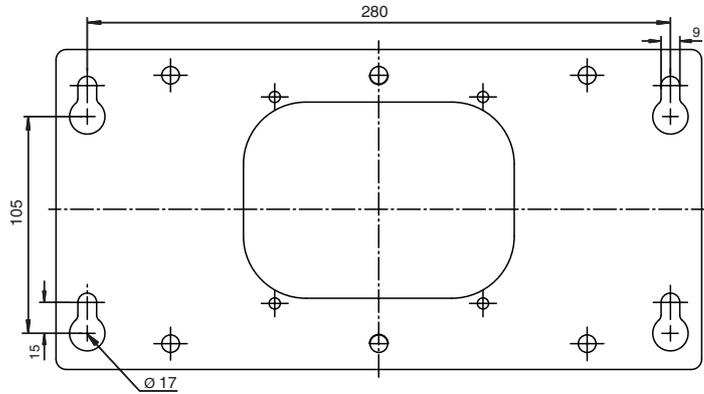
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2.6.6 Hole pattern for the wall bracket

Wall Bracket:

C



2.6.7 KVM transmission units

The VisuNet GMP KM has an integrated KVM receiver unit. In addition you need a KVM transmission unit, for connection the VisuNet GMP to a host.

Depending on the intended use the following KVM transmission units are available:

Model number	GuD model number (see appendix)	Description
SK-KVM-CPU-NN-10-DT-N	CATVision-CPU	Transmission unit required for PC connection Desktop housing cable length up to 50 m
SK-KVM-CPU-NN-10-R1-N	CATVision-CPU-RM	Transmission unit required for PC connection 19 " rack mount cable length up to 50 m
SK-KVM-CPU-NN-10-R2-N	Twin-CATVision-CPU	2 transmission units required for PC connection 19 " rack mount (1 rack unit, 84 horizontal pitches) cable length up to 50 m
SK-KVM-CPU-DR-10-DT-N	CATVision-RD-CPU	Transmission unit required for PC connection Desktop housing additional RS 232 interface Cable length adjustment cable length up to 300 m

Model number	GuD model number (see appendix)	Description
SK-KVM-CPU-DR-10-R2-N	Twin-CATVision-RD-CPU	Transmission unit required for PC connection 19 " rack mount (1 rack unit, 84 horizontal pitches) additional RS 232 interface Cable length adjustment cable length up to 300 m
SK-KVM-CPU-DR-10-R1-N	CATVision-RD-CPU-RM	2 transmission units required for PC connection 19 " rack mount (1 rack unit, 84 horizontal pitches) additional RS 232 interface Cable length adjustment cable length up to 300 m

2.6.8 Additional Accessories

Power Supply

Model Number	Description
BN-24/5000-HS-10	Power supply, DIN rail mounting
DATL-A2-4.0N/2.5F-2	Power cable 2x 2.5mm ² , wire end ferrule, max. length 80 m
DATL-A2-2.5-1	Power cable 2x 4.0mm ² +2.5m 2.5mm ² , wire end ferrule, length: 110 m

Network

Model Number	Description
SK-FX-100-1-8	Switch DIN rail mounting, power supply 9-24 V DC, terminal connection, 1x fibre optics (SC-D), 8x Ethernet
DATL-C7TP-2-1RJ45	Cat.7 cable
RJZ2-SWITCH-5-10-AB	RJ Switch, Power Supply 10-30V DC, IP67, 5x Ethernet
DATL-C7TP-1-1RJZ2	Cat.7 cable consistent with RJ Switch (2 pieces needed)

Touchscreen/Serial Device

Model Number	Description
S-TERM/RS232-PC-M9-F9	1.8 m RS232 cable KVM transmission unit to Host PC for Touchscreen connection or optional serial interface



3 Installation and Commissioning

3.1 Preparation



Unpacking the unit

1. Check that all package contents are present and undamaged.
If anything is damaged, inform the shipper and contact the supplier.
2. Check that all items are present and correct based on your order and the shipping documents.
If you have any questions, please contact Pepperl+Fuchs.
3. Keep the original packing material in case you need to store or ship the unit at a later time.

3.2 Grounding at pedestal and wall arm



Note!

Pepperl+Fuchs recommend to use a cable with a core-cross section of 4 mm² for grounding.



Figure 3.1: Ground connection at pedestal/wall arm



Grounding VisuNet GMP at pedestal and wall arm



Note!

Depending on the grounding cable you need the adequate cable lug (not included in delivery).

1. Insert the grounding cable into a cable lug (4).
2. Unscrew the M4 screw on ground connection.
3. Insert the cable of the cable lug between the 2 washers (1).
4. Tighten the screw.

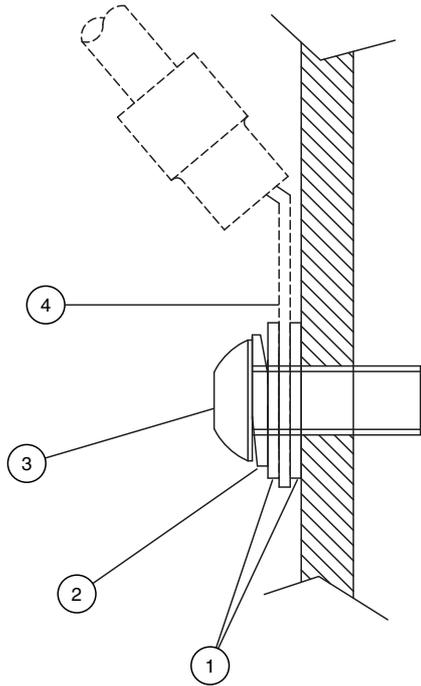


Figure 3.2: Grounding at Pedestal/Wall Arm

- 1 washer
- 2 lock washer
- 3 M4 screw
- 4 cable lug

3.3 Grounding at housing



Note!

Pepperl+Fuchs recommend to use a cable with a core-cross section of 4 mm² for grounding.

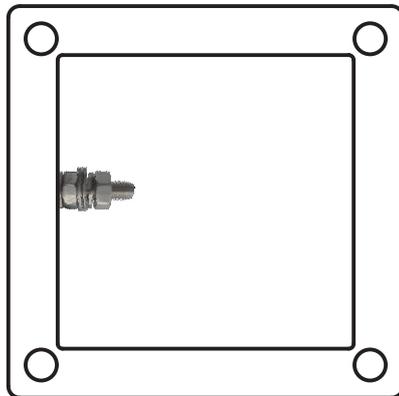


Figure 3.3: Ground connection at housing



Grounding VisuNet GMP at housing



Note!

Depending on the grounding cable you need the adequate cable lug (not included in delivery).

1. Insert the grounding cable into a cable lug (4).
2. Unscrew the M4 screw nut on ground connection.
3. Insert the cable of the cable lug between the 2 washers (1).
4. Tighten the screw nut.

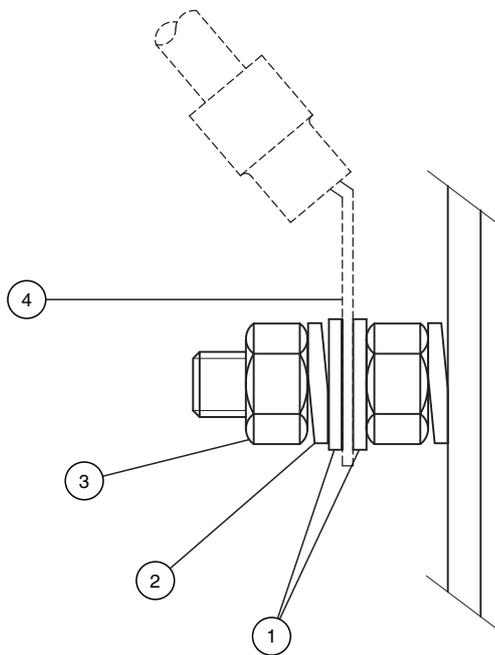


Figure 3.4: Grounding at housing

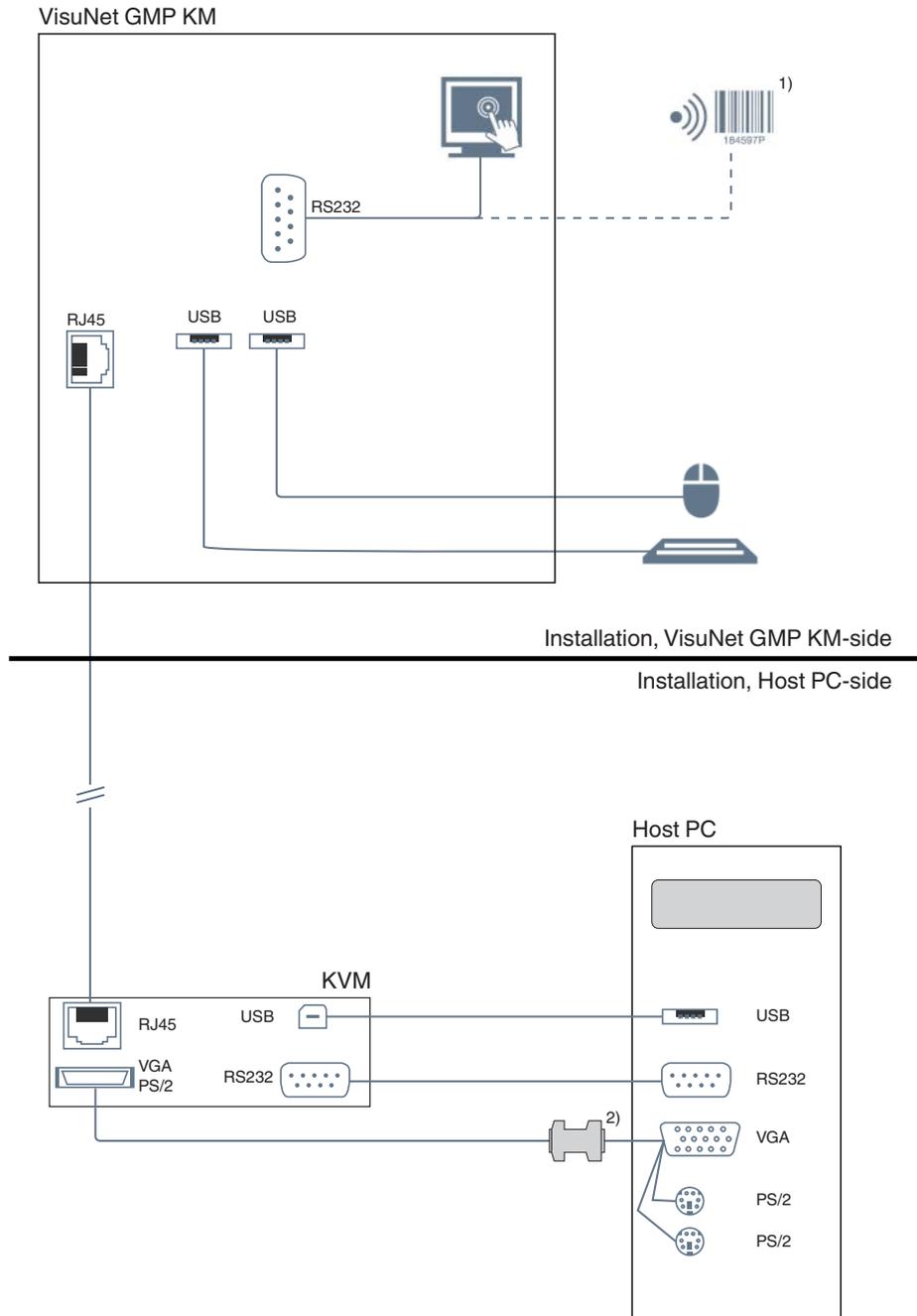
- 1 washer
- 2 lock washer
- 3 screw nut
- 4 cable lug



3.4 Overview

The installation of VisuNet GMP KM is a 2-step process:

1. VisuNet GMP KM-side installation and connection (pedestal/wallarm/wall bracket, connection of cables etc.)
2. Host PC-side connection (cables between KVM extender and Host PC)



1. Models with touchscreen do not have an RS 232 interface.
2. Models with 22" monitors require a DDC adapter (included in the delivery).



3.5 Installation, VisuNet GMP KM-side

3.5.1 General Mounting Information



Note!

Mounting with 2 persons

The following mounting requires 2 persons.

Tools required for assembly

Use the following tools for assembly (not included in the scope of supply):

- Allen key, 3 mm
- 4 screws (M8) for wall/floor mount
- Fork wrench for cable glands

Choose the appropriated wrench size to tighten the cable glands:

Clamping Range

	Wrench size	Cable diameter	Torque
M16	20	4,5-10 mm	10 Nm
M20	24	7-13 mm	12 Nm
M25	29	9-17 mm	12 Nm



3.5.2 Mounting the pedestal



Mounting pedestal on the ground



Note!

For fastening the pedestal, use 4 screws (M8) which suit the soil conditions.

1. To seal the pedestal against the floor, use the enclosed gasket.
2. Mount the pedestal by using the 4 screws (M8).

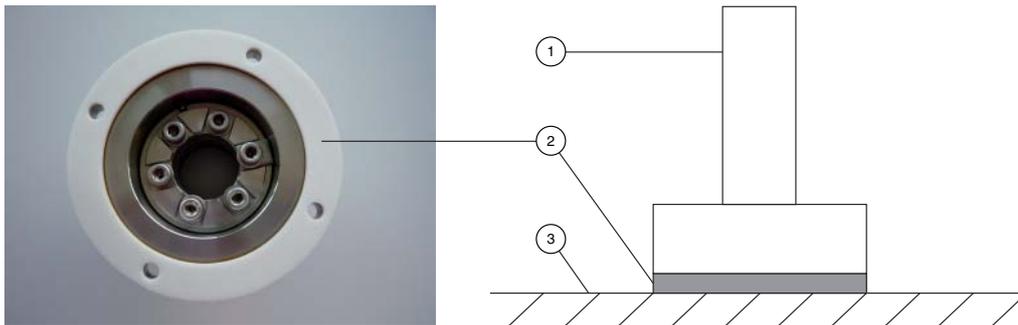


Figure 3.5: Pedestal from bottom (photo) and from side (drawing)

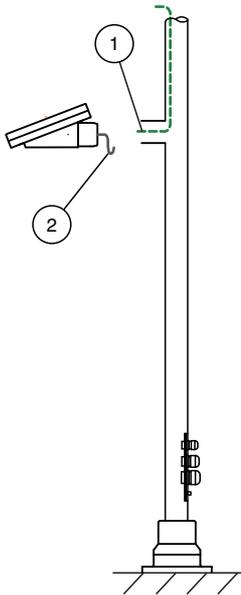
1. Pedestal
2. Gasket
3. Ground



Running the keyboard cable through the pedestal

If you use a pedestal with keyboard pipe (**Pedestal1-150-1V-KP-G-T-304**, **Pedestal1-150-1V-KP-G-F-304**, **Pedestal1-150-1K-KP-G-T-304**, **Pedestal1-150-1K-KP-G-F-304**), a wire pull is already installed for running the keyboard cable through the pedestal. Run the keyboard cable first. Run all other connection cables after that.

1. Tighten the keyboard cable (2) to the wire pull (1).
2. Carefully pull the keyboard cable up through the pedestal.
3. Remove the wire pull from the keyboard cable.
4. Attach the keyboard with 2 grub screws on the pedestal.



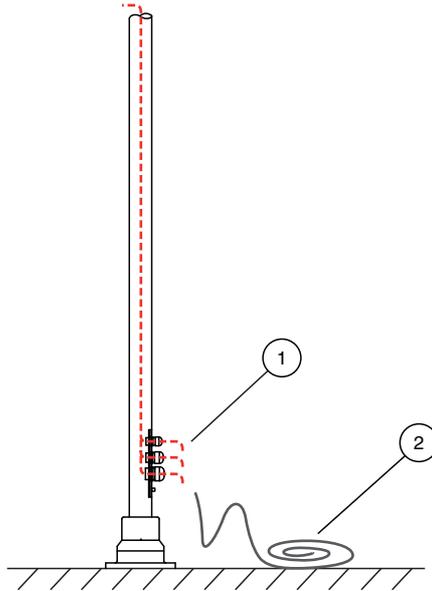
- 1 Wire pull for keyboard cable
- 2 Keyboard cable



Running cables through pedestal

For easier installation of the connection cables through the pedestal, wires are already installed through the pedestal and the cable glands (1).

1. Depending on cable diameter, choose the adequate cable gland (e.g. 1 cable gland for supply cable, 1 cable gland for network cable).
2. Attach the connection cable to the current string and pull the cable carefully up.
3. Remove the stings from the connection cables.



- 1 Wire pull for connection cables
- 4 Connection cable



Connecting Cables to VisuNet GMP (Pedestal)

Connect all cables correctly.



Figure 3.6: Example of connection



Mounting VisuNet GMP to Pedestal

1. Attach the VisuNet GMP with 4 countersunk screws with hexagon socket (M5x16). Use a allen key (3 mm).
2. Tighten the screws (torque: 5-6 Nm)



Figure 3.7: Mounting VisuNet GMP to Pedestal



Tightening/Plugging up the pedestal/wall arm cable glands



Note!

The IP protection is only ensured if either a cable is run or a plug is plugged in.

1. Screw the cable glands with a fork wrench.
2. To plug up cable glands that are not in use, lightly tighten the cable gland
3. Plug the plugs in.
4. Firmly thighten the cable gland.



Note!

Pepperl+Fuchs recommend to use a cable with a core-cross section of 4 mm² for grounding.



3.5.3 Mounting to wall arm



Fastening the wall arm



Note!

For fastening the wall arm, use 4 screws (M8) which suit the soil conditions.

1. To secure the wall arm from wall unevenness, use the enclosed gasket.
2. Mount the wall arm by using the 4 screws (M8).

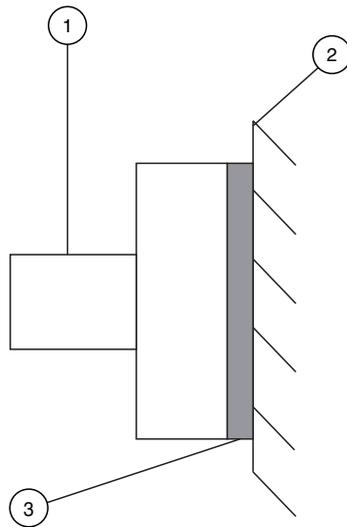


Figure 3.8: Wall arm from side

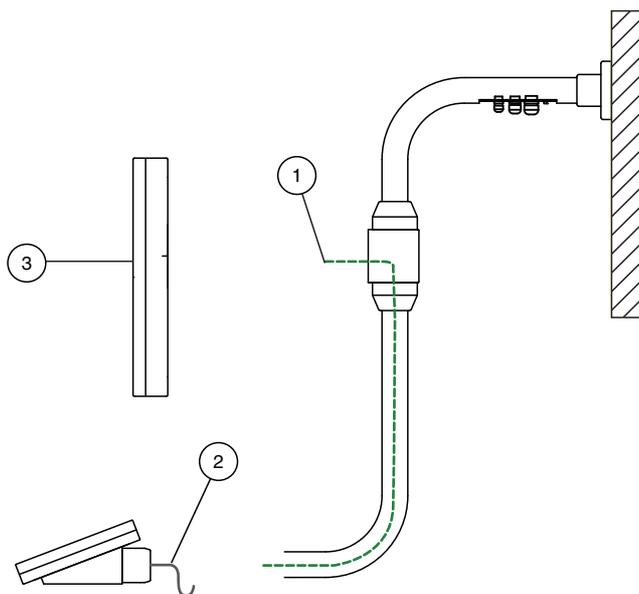
1. Wall arm
2. Wall
3. Gasket



Running the keyboard cable through the wall arm

If you use a wall arm with keyboard pipe (**Wall-Arm-1-55-1V-KT-G-F-304**, **Wall-Arm-1-55-1V-KT-G-T-304**), a wire pull is already installed for running the keyboard cable through the wall arm. Run the keyboard cable first. Run all other connection cables after that.

1. Tighten the keyboard cable (2) to the wire pull (1).
2. Carefully pull the keyboard cable up through the wall arm.
3. Remove the wire pull from the keyboard cable.
4. Attach the keyboard with 2 grub screws on the wall arm.



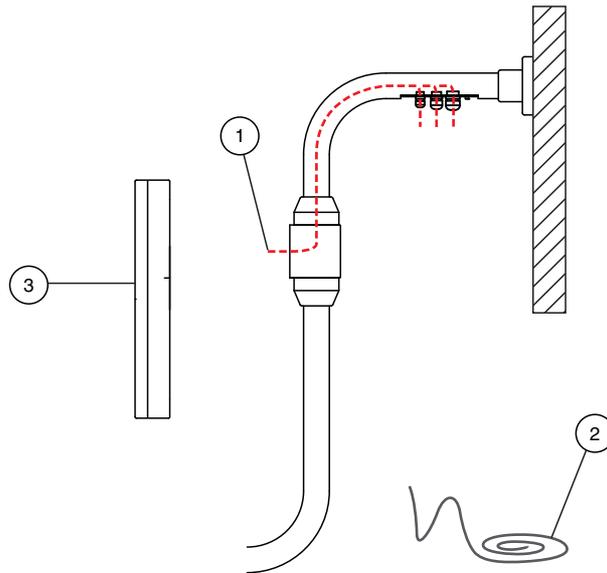
- 1 Wire pull for keyboard cable
- 2 Keyboard cable
- 3 VisuNet GMP



Running cables through wall arm

For easier installation of the connection cables through the wall arm, wires are already installed through the wall arm and the cable glands (1).

1. Depending on cable diameter, choose the adequate cable gland (e.g. 1 cable gland for supply cable, 1 cable gland for network cable).
2. Attach the connection cable to the current string and pull the cable carefully up.
3. Remove the stings from the connection cables.



- 1 Wire pull for connection cable
- 2 Connection cable
- 3 VisuNet GMP



Mounting flexible Patch Cable (in Case of using turnable Wall Arm)



Note!

In case of using a turnable wall arm apply flexible patch cable

Due to frequent monitor turning in live operation inflexible patch cable (1) is strained heavily within the wall bracket (4). That may cause cable damage. Therefore, use flexible patch cable (2).

1. Connect the network plug of the inflexible patch cable via adapter (3) to the flexible patch cable.
2. Connect the network plug of the flexible patch cable to the RJ45 interface of the monitor.

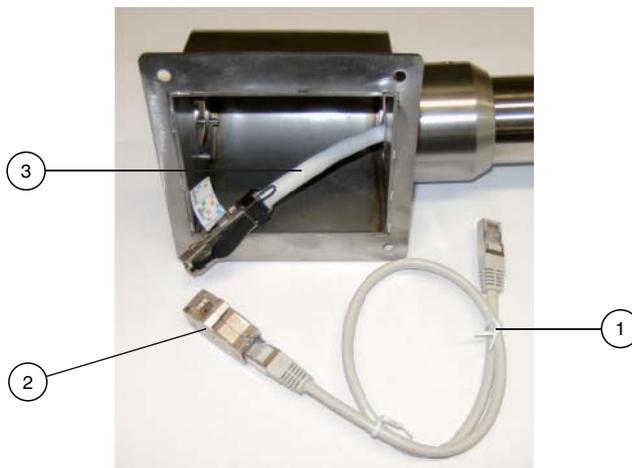


Figure 3.9: Mounting of flexible patch cable

- 1 Flexible patch cable
- 2 Adapter
- 3 inflexible network cable



Connecting Cables to VisuNet GMP (Wall Arm)

Connect all cables correctly.



Figure 3.10: Example of connection



Mounting VisuNet GMP to Wall Arm

1. Attach the VisuNet GMP with 4 countersunk screws with hexagon socket (M5x16). Use an allen key (3 mm).
2. Tighten the screws (torque: 5-6 Nm)



Figure 3.11: Mounting VisuNet GMP to Wall Arm



Tightening/Plugging up the pedestal/wall arm cable glands



Note!

The IP protection is only ensured if either a cable is run or a plug is plugged in.

1. Screw the cable glands with a fork wrench.
2. To plug up cable glands that are not in use, lightly tighten the cable gland
3. Plug the plugs in.
4. Firmly tighten the cable gland.



Note!

Pepperl+Fuchs recommend to use a cable with a core-cross section of 4 mm² for grounding.

3.5.4 Mounting to wall bracket



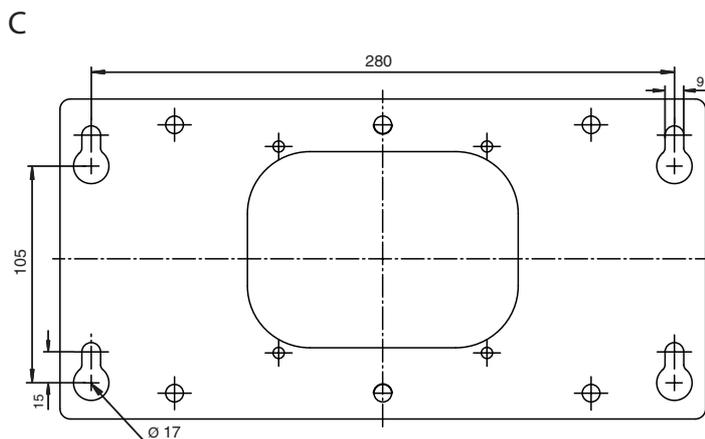
Fixing the screws for wall bracket on the wall



Note!

For fastening the wall bracket, use 4 screws (M8) which suit the soil conditions.

1. Place the drill holes on the wall. Therefore use the drilling template C.

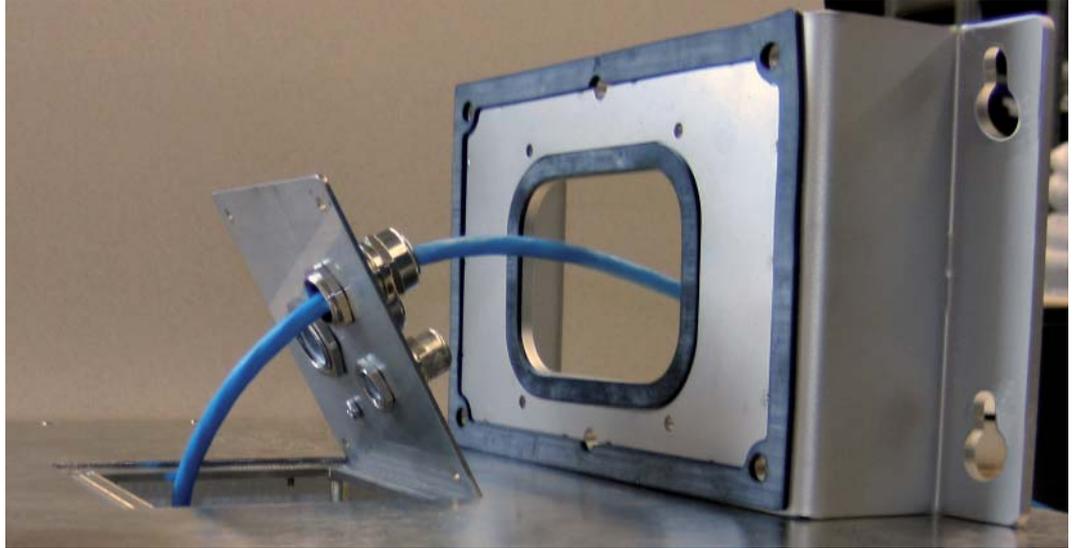


2. Attach the 4 screws (M8).



Running cable through wall bracket/VESA plate

1. Depending on cable diameter, choose the adequate cable gland (e.g. 1 cable gland for supply cable, 1 cable gland for network cable).
2. Feed the cable through the wall bracket as shown.



Connecting Cables to VisuNet GMP (Wall Bracket)

Connect all cables correctly.

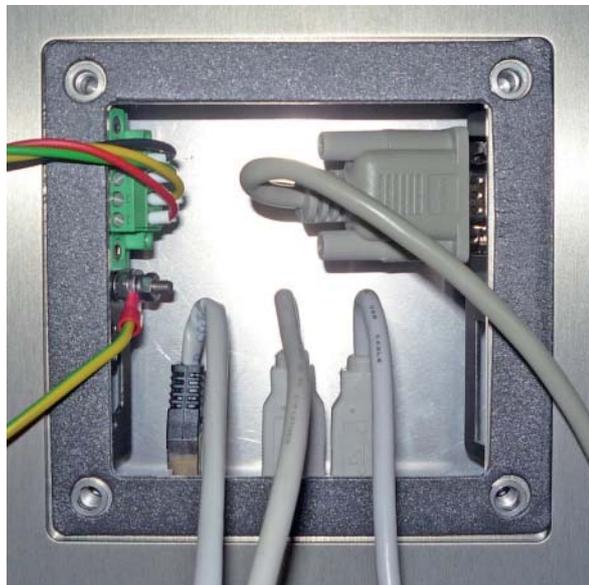


Figure 3.12: Example of connection



Tightening/Plugging up the pedestal/wall arm cable glands



Note!

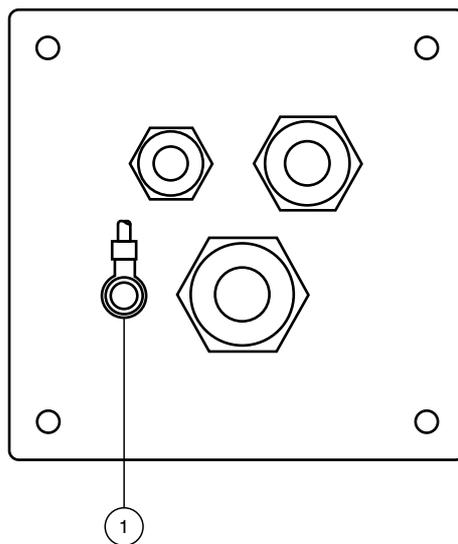
The IP protection is only ensured if either a cable is run or a plug is plugged in.

1. Screw the cable glands with a fork wrench.
2. To plug up cable glands that are not in use, lightly tighten the cable gland
3. Plug the plugs in.
4. Firmly thighten the cable gland.



Note!

Pepperl+Fuchs recommend to use a cable with a core-cross section of 4 mm² for grounding.

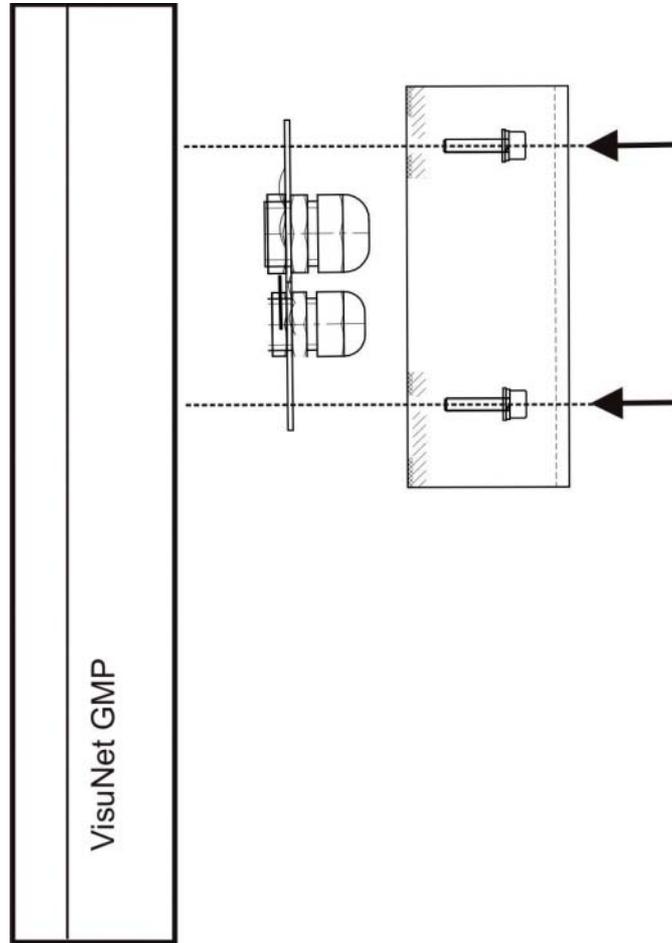


1. Grounding



Tightening the wall bracket and hooking the device

1. Tighten the 4 screws with washer and lock washer. Use the Allen Key SW4 (Torque: 5-6 Nm).



2. Hook the device at the screws on the wall.



3.6 Installation, Host PC-side

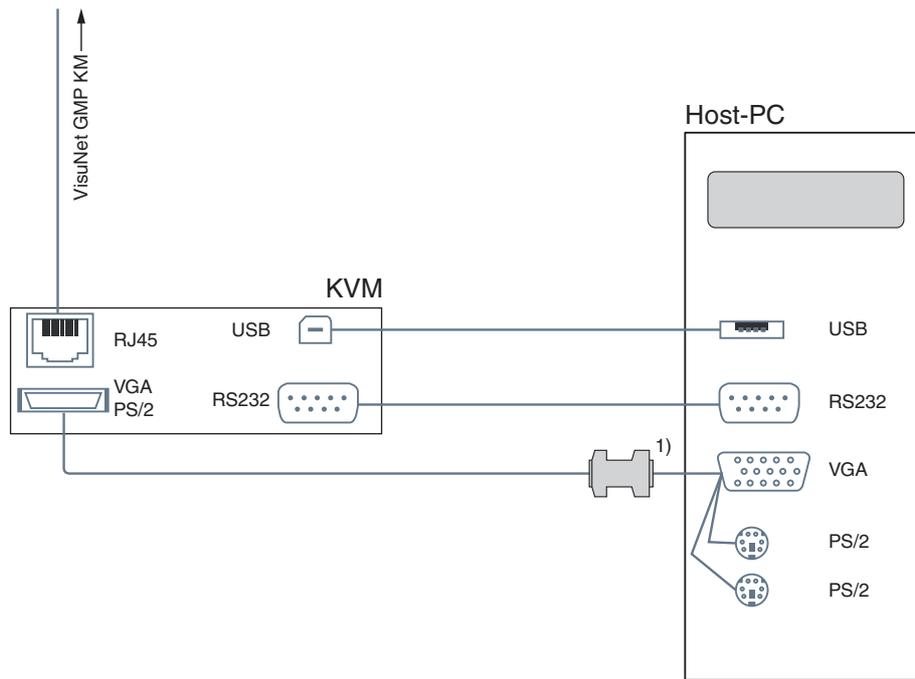


Figure 3.13: Overview of the cabling between KVM extender and Host PC (schematic diagram)

1. Models with 22" monitors require a DDC adapter (included in the delivery).



Connecting Touchscreen/Serial Device



Note!

You cannot connect additional serial devices to models with touchscreen.

Connect the RS 232 port of the KVM transmitting unit to the RS 232 port of the Host PC. A suitable RS 232 cable is available as an optional accessory. (see chapter 2.6.8).



Connecting the DDC Adapter (22" Monitor Models Only)

Using the DDC adapter, 22" monitors can display a resolution of 1680 x 1050 pixels.

Connect the DDC adapter directly to the VGA port of the Host PC. 22" monitors come with a DDC adapter.



Connecting the Monitor

Connect the VGA/PS/2 port of the KVM transmitting unit to the VGA port of the Host PC. A suitable VGA/PS/2 hybrid cable is included in the delivery.



Note!

Keyboard and mouse signals are being sent by the KVM transmitting unit to the HOST PC via PS/2, even if the keyboard is connected to the VisuNet GMP KM via USB. In case the HOST PC has no PS/2 port, the KVM can be connected via USB as an alternative, in order to transmit mouse and keyboard data.



Connecting PS/2 Keyboard/Mouse

In case you want to operate keyboard and mouse via PS/2 , use the PS/2 ports of the VGA/PS/2 hybrid cable to connect them to the Host PC.

PS/2 keyboard and mouse signals are being transmitted via the VGA/PS/2 hybrid cable.



Connecting USB Keyboard/Mouse

1. Connect the USB port of the KVM transmitting unit to the USB -port of the Host PC.
2. In case you want to operate keyboard and mouse via USB, connect the devices to free USB ports of the Host PC.

USB keyboard and mouse signals are being transmitted via the USB cable.

3.7

Installation of the Touchscreen Drivers on Windows 95/98/ME/2000/XP

Operation with touchscreen is only available after you have installed touchscreen drivers.



Finding touchscreen drivers

1. Go to www.pepperl-fuchs.com.
2. Navigate to **Download Technical Documents**.

The screenshot shows a website navigation menu with three main sections: 'Go To', 'Quick Links', and 'Browse'. Each section has a green header bar. Under 'Go To', there is a link for 'Process Automation'. Under 'Quick Links', there are links for 'Browse Literature', 'Technologies', 'Control System Solutions', 'Download Technical Documents', 'Press Releases', and 'Trainings+Seminars'. A red arrow points to the 'Download Technical Documents' link. Under 'Browse', there are links for 'News', 'Products', 'Markets+Applications', and 'Service'.

3. Activate the options **Industrial Monitors+HMI Solutions** and **Driver**.

The screenshot shows the 'Products' menu on the left with 'Industrial Monitors+HMI Solutions' selected. The 'Downloads/Documents' section on the right shows search results for 'Downloads/Documents: 2'. The results table is as follows:

Product group	Document type
<input type="checkbox"/> AS-Interface	<input type="checkbox"/> Brochure
<input type="checkbox"/> Accessories	<input type="checkbox"/> CAD
<input type="checkbox"/> Corrosion Monitoring	<input type="checkbox"/> Catalogue
<input type="checkbox"/> Custom Cabinets+Junction Boxes	<input type="checkbox"/> Certificate
<input type="checkbox"/> Fieldbus Infrastructure	<input type="checkbox"/> Commissioning example
<input type="checkbox"/> HART Interface Solutions	<input type="checkbox"/> Commissioning file
<input type="checkbox"/> Identification Systems	<input type="checkbox"/> Control drawing
<input type="checkbox"/> Inclination and Acceleration Sensors	<input checked="" type="checkbox"/> Driver
<input checked="" type="checkbox"/> Industrial Monitors+HMI Solutions	<input type="checkbox"/> Instructions
<input type="checkbox"/> Industrial Vision	<input type="checkbox"/> Instructon leaflet
<input type="checkbox"/> Isolated Barriers	<input type="checkbox"/> Layout drawing
<input type="checkbox"/> Level Measurement	<input type="checkbox"/> Manual / Short Instructions / Safety information
<input type="checkbox"/> Logic Control Units	<input type="checkbox"/> Product information
<input type="checkbox"/> Overlapping Documents	<input type="checkbox"/> Prolist
<input type="checkbox"/> Photoelectric Sensors	<input type="checkbox"/> Technical information
<input type="checkbox"/> Positioning Systems	
<input type="checkbox"/> Power Supplies	
<input type="checkbox"/> Proximity Sensors	
<input type="checkbox"/> Purge+Pressurization Systems	
<input type="checkbox"/> Remote I/O Systems	
<input type="checkbox"/> Rotary Encoders	
<input type="checkbox"/> Separator Alarm Systems	
<input type="checkbox"/> Signal Conditioners	
<input type="checkbox"/> Software	
<input type="checkbox"/> Ultrasonic Sensors	
<input type="checkbox"/> Zener Barriers	

4. Click **Downloads/Documents:** for results.

5. Download the required driver.



Installing touchscreen drivers

1. Start the **UniWinDriver620cs.exe** file.

The dialog box **Welcome** will open.



Figure 3.14: Dialog box **Welcome**

2. Click **Next**.

The dialog box **Software License Agreement** will open.



Figure 3.15: Dialog box **Software License Agreement**

3. Read the License Agreement. If you agree with the License Agreement activate the check box **I accept all of the terms of the above License Agreement**.
4. Click **Next**.



The dialog box **Select Controller** will open.

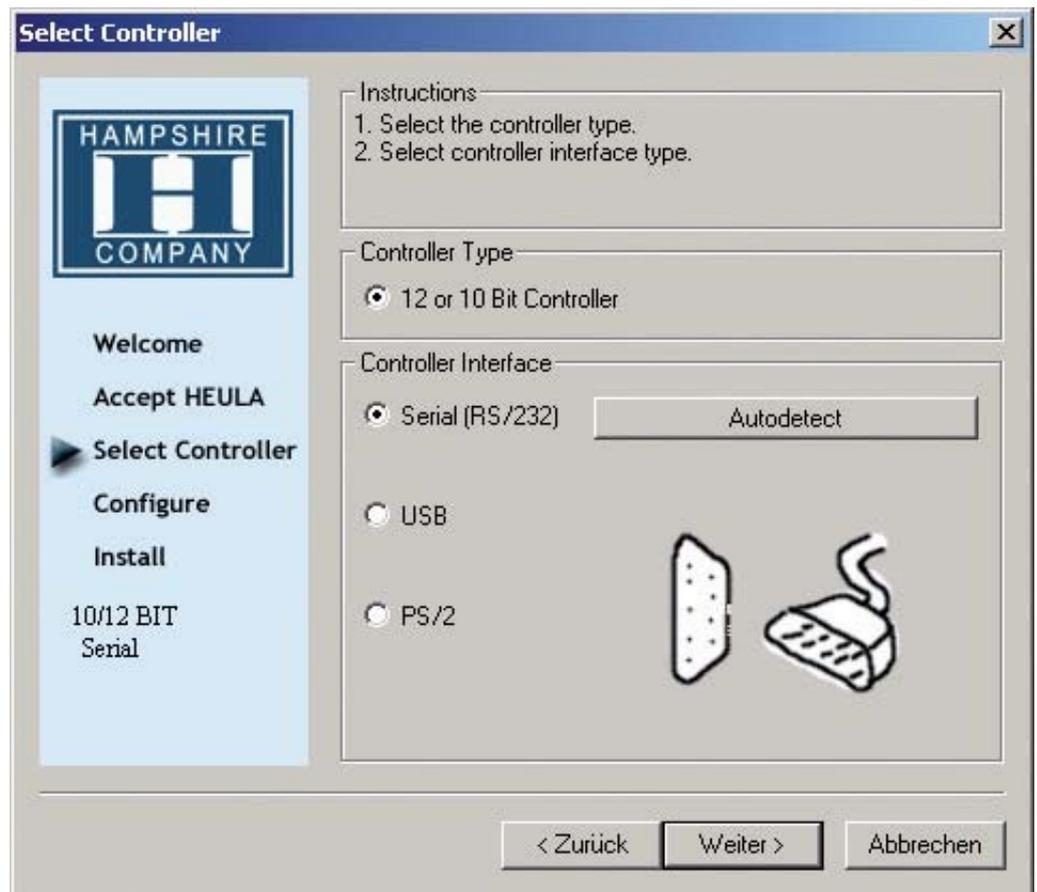


Figure 3.16: Dialog box **Select Controller**

5. In the **Controller Type** area, activate the option **12 or 10 Bit Controller**.
6. In the **Controller Interface** area, activate the option **Serial (RS/232)**.
7. Click **Autodetect**.

The software automatically detects a connected touchscreen.



Figure 3.17: Auto detection

8. Follow the instructions of the setup routine.

After successful installation the host PC will reboot. Afterwards you can operate the VisuNet GMP KM with touchscreen.



3.8 Calibrating the Touchscreen in Windows 95/98/ME/2000/XP



Starting the calibration software

1. Start the program **Hampshire TSHARC Control Panel**.

The program will start on the **Screen Selection** tab.

2. Select the touchscreen you want to calibrate.



Enhancing touchscreen accuracy



Note!

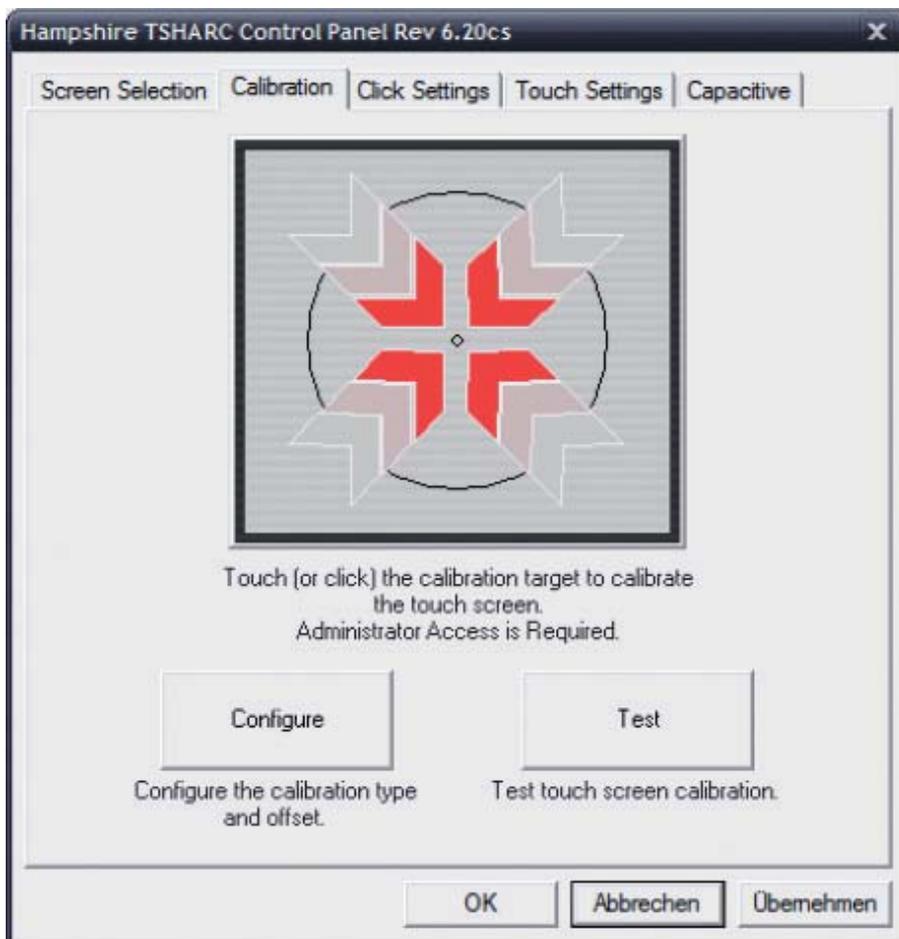
Avoid looking at the monitor from the side during calibration, as this will result in an offset between your finger position and the calibration point (parallax error). This will reduce touchscreen accuracy.

1. In the **Calibration** tab, click the **Configure** button.

The dialog window **Calibration Options** will open.

2. In this window, specify the number of calibration points and their distances to the side of the screen. The more calibration points you define and the smaller their distance to the side of the screen, the more accurate the touchscreen will react after calibration.

3. Start the calibration process by clicking on the large calibration symbol.



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4. One after the other, touch the calibration points on the screen.
5. After successful calibration, check the touchscreen by clicking on **Test**.

Click Settings tab

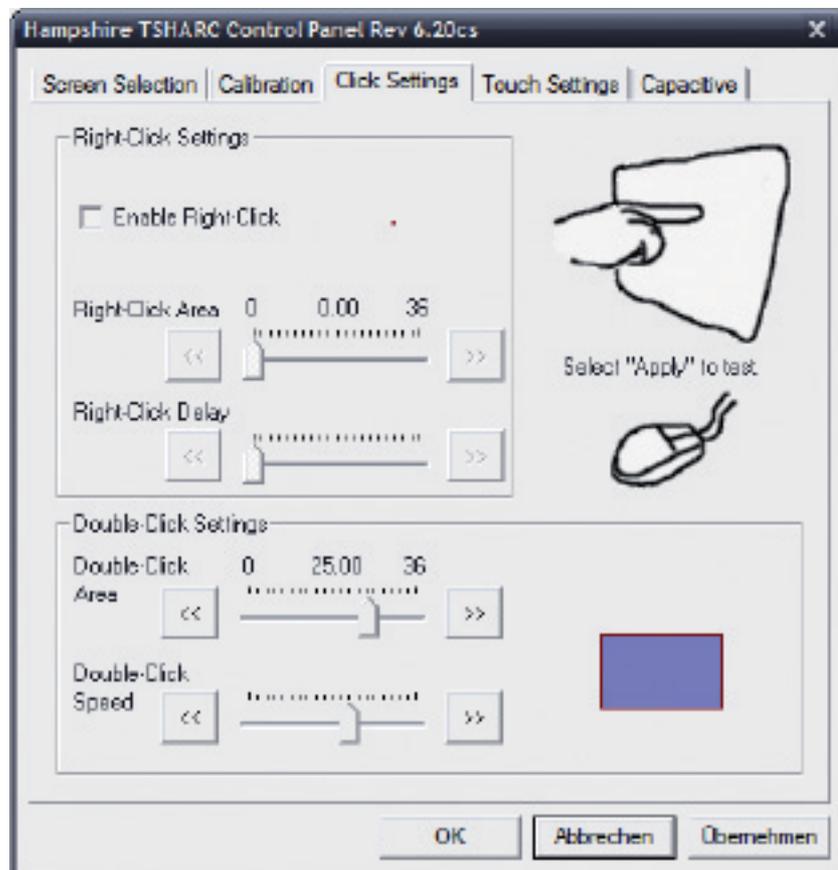
In this tab, you can specify the "doubleclick" properties of the touchscreen.

The area **Event Area/Double Click Time** has 2 slide controls.

The first slide control serves to define the area in which you have to doubleclick. To the right of the slide controls, the size of the area is being shown as a blue rectangle.

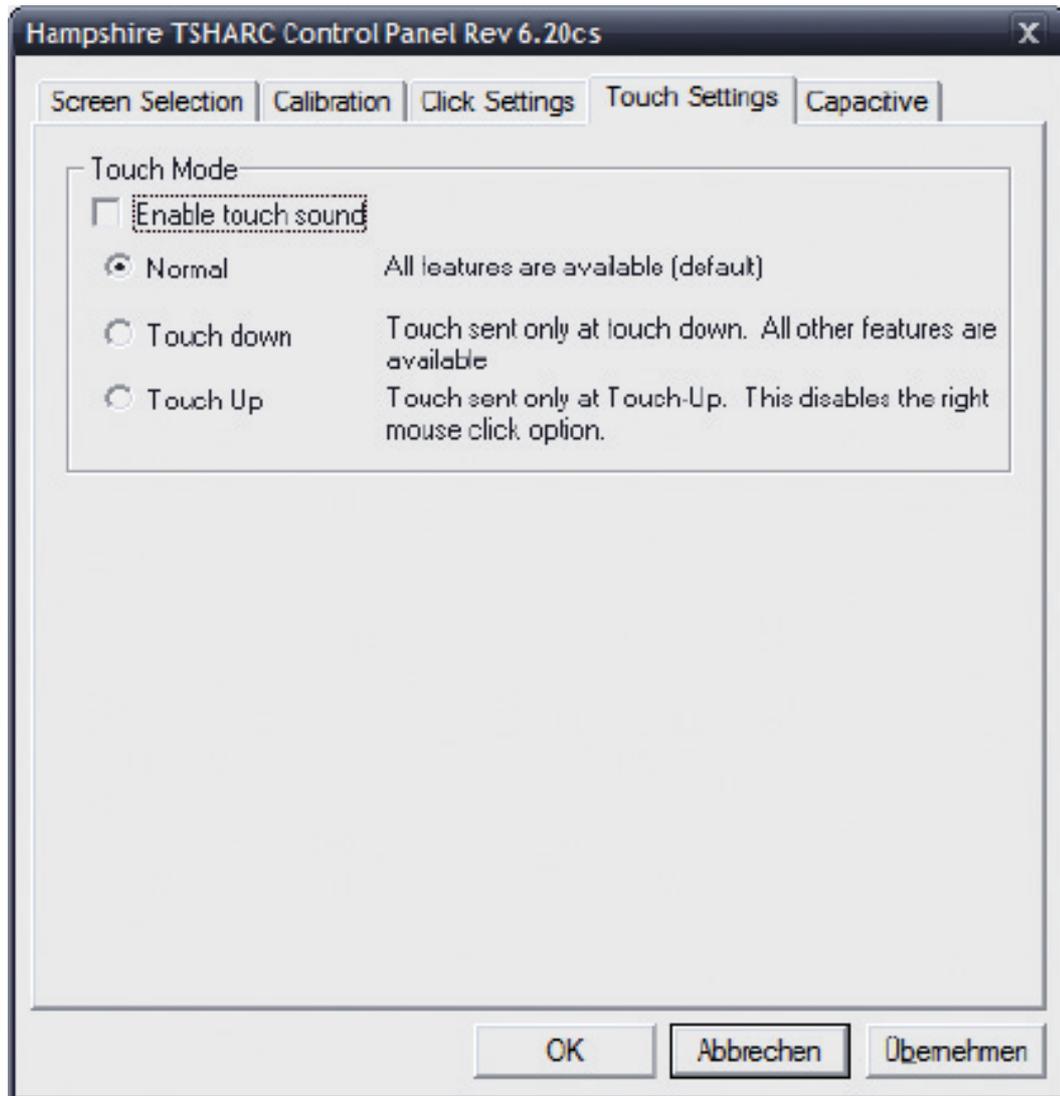
The second slide control serves to define the "doubleclick time", i.e. the time in which you have to perform both clicks.

In the area **Touch to Test** at the top right, you can test the settings you have made.





Touch Settings tab



3.9 Uninstalling the Touchscreen Drivers in Windows 95/98/ME/2000/XP



Uninstalling the Touchscreen Drivers

1. Choose the installation path (e. g. **C:\ Programme\ TSHARC**).
2. Run the file **tsun.exe**.
3. Confirm by clicking on **Yes**.
4. Restart the Host PC.

The touchscreen drivers have been uninstalled.

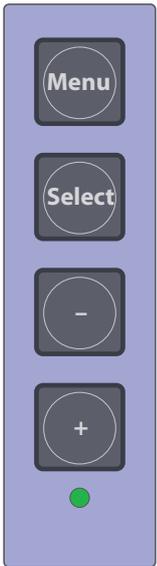


4 Operation

4.1 On Screen Display

VisuNet GMP features a graphical user interface for setting up the display via the **On screen display** (OSD menu). A control panel with four buttons for operating the system is located on the right hand side of the housing.

The following table describes the buttons and their function.

Picture	Button	Function	Description
	Menu	Menu selection	1. First click: activates menu 2. Second click: quits sub menu/menu
	Select	menu access/selection	1. Select menu entries 2. Confirm active menu entries
	-	downwards/left	1. Navigate in menus: downwards/left 2. Decrease a value 3. shortcut for audio volume
	+	upwards/right	1. Navigate in menus: upwards/right 2. Increase a value
	LED	Status	red light: no signal green light: operating status "on"



Selecting the OSD menu

To select the OSD menu, press the  button.

The OSD menu is divided in the following menu items :

- Color
- Image Setting
- Position
- OSD Menu
- Language
- Misc.
- Exit



Navigating in the OSD menu

1. If applicable select the OSD menu.
2. Navigate to the designated tab with the  button (scroll to the right) and  button (scroll to the left) respectively.
The active tab will be marked.
3. To select a tab, press the  button.
The sub menu will be opened.
4. Navigate to the designated sub menu entry with the  button and the  button respectively
5. To select a sub menu, press the  button.
Depending on the menu you will get to another sub menu or to a dialog box.



Adjusting values

1. To adjust values (i.g. brightness or contrast) in a sub menu, press the  button and the  button respectively.
2. After adjusting the value, quit the active dialog box by pressing the  button.
The adjusted value will be adopted and you will return to the designated sub menu.



Quitting OSD menu/sub menus

To quit a sub menu, select the menu item **Back** or press the  button.

The sub menu will be quit.



Note!

Image Sticking

Displaying a fixed pattern may cause burn-in-effects (image sticking due to the LCD characteristics).

To avoid image sticking change pattern frequently or activate screen saver.

Please note that damages at the display caused to burn-in-effects are not included in the warranty.



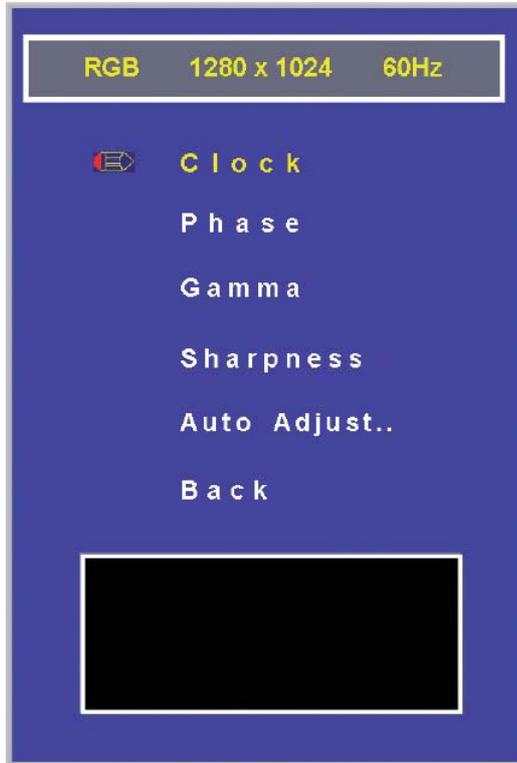
4.1.1 Menu **Color**



Sub menu	Description
Contrast	Adjust the contrast of the image
Brightness	Adjust the brightness of the image
Color Adjust	Adjust the value of red, green and blue
Color Temp	Adjust the color temperature
Auto Color	Run the auto config of the color
Back	Back to main menu



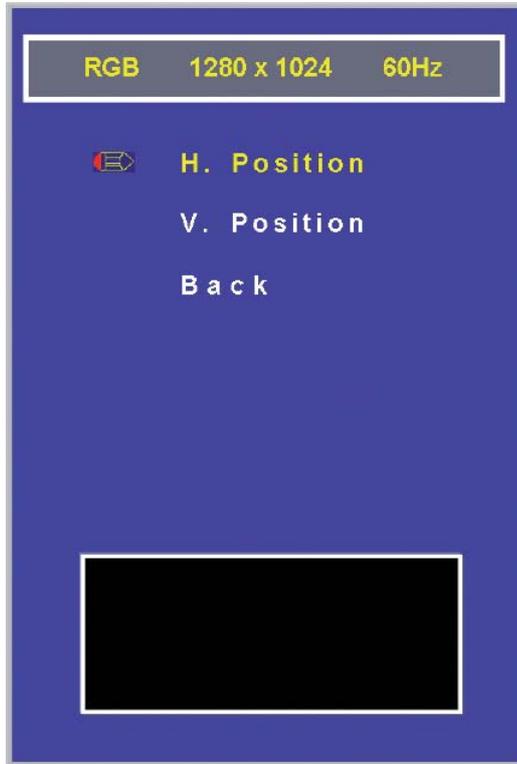
4.1.2 Image menu



Sub menu	Description
Clock	Adjust the clock of the image
Phase	Adjust the phase of the image
Gamma	Adjust the gamma level of the image
Sharpness	Adjust the sharpness of the image
Auto Adjust...	Run the auto config of the image
Back	Back to main menu



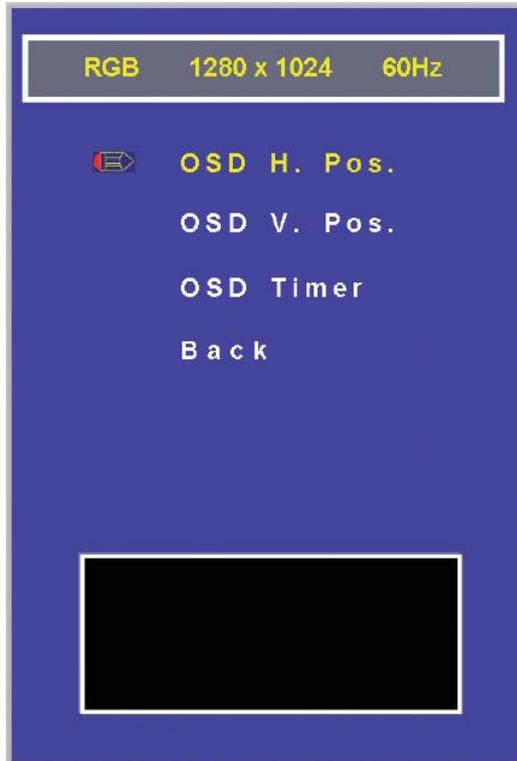
4.1.3 Menu **Position**



Sub menu	Description
H. Position	Adjust the horizontal position of the image
V. Position	Adjust the vertical position of the image
Back	Back to main menu



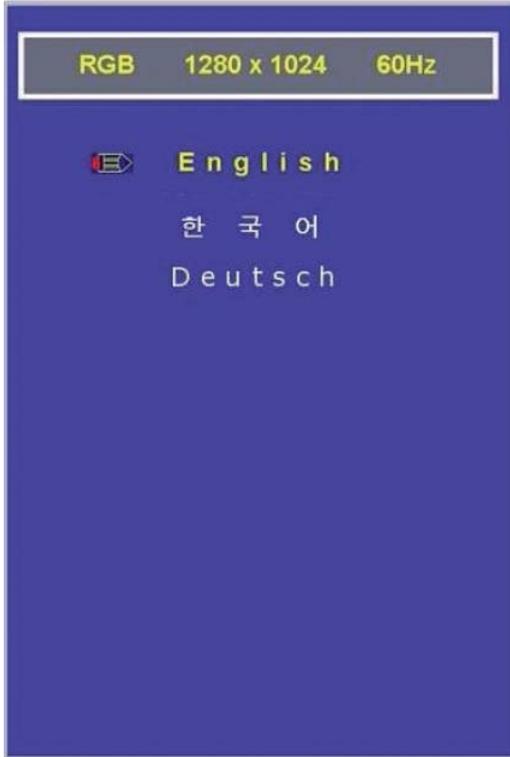
4.1.4 Menu OSD



Sub menu	Description
OSD H. Pos.	Adjust the horizontal position of the OSD
OSD V. Pos.	Adjust the vertical position of the OSD
OSD Timer	Adjust the OSD Off Timer
Back	Back to main menu



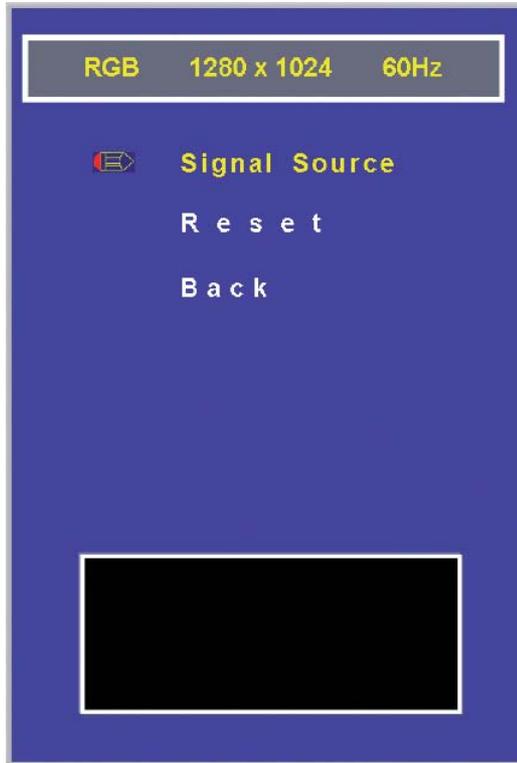
4.1.5 Menu **Language**



Sub menu	Description
English	Select english
Korean	Select Korean
Deutsch	Select German



4.1.6 MenuMisc.



Sub menu	Description
Signal Source	Select the input source
Reset	Factory reset
Back	back to main menu



5 Appendix

5.1 Chemical resistance of keyboard foil

The keyboard foil is manufactured from a biaxially aligned polyester-based material and therefore has a greater resistance to solvents. The foil is stronger and more durable than other standard foils used on keyboards and front panels, such as polycarbonate and PVC.

The keyboard foil is resistant against the following substances: (Test method: DIN42115):

- Alcohols
- Dilute acids
- Dilute alkalis
- Esters
- Hydrocarbons
- Household cleaning

5.2 Anti microbial resistance of keyboard foil

The foil passed the anti microbial effectiveness tested with (Test method: AATCC Test Method 100):

- Staphylococcus aureus (MRSA)
- Escherichia coli 0157
- Listeria monocytogenes
- Pseudomonas aeruginosa
- Salmonella enteritidis
- Bacillus cereus
- Streptococcus faecalis
- Klebsiella pneumoniae
- Aspergillus niger
- Penicillium purpurogenum
- Phoma violacea
- Saccharmyces cerevisiae

5.3 Chemical resistances of the touch screen

The foil is manufactured from a biaxially aligned polyester-based material and therefore has a greater resistance to solvents. It is physically resistant to pencil lead with a maximum hardness of 3HB.

The foil is resistant against the following substances (concentration 100 % - unless otherwise specified):

Aldehydes:	
Acetaldehyde	Formaldehyde 37 - 42 %
Alcohols:	
Ethanol	Hexahydrophenol
Triacetin	Dowandol DRM/PM
Glycol	Glycerin
Isopropanol	Methanol
	Diacetone alcohol
Hydrocarbons:	
Aliphatic hydrocarbons	generally gasoline
Kerosene	Toluol
Xylene	Benzene
Chlorinated hydrocarbons:	
Chlorofluorocarbons	Perchloroethylene
III-Trichloroethylene	Diethyl ether
Methyl ethyl ketone	Trichloroethylene
Acids:	
Formic acid <10 %	acetic acid <10 %
Phosphoric acid <10 %	Hydrochloric acid <10 %
Nitric acid <10 %	Trichloroacetic acid <10 %
	sulfuric acid <10 %
Other organic solvents:	
Ether	Acetone
Dimethylformamide	Dioxane
Ethylidioctyl	Dibutyl phthalate
Phthalate	Butyl cellosolve
Iron chlorid (FeCl ₂)	Iron chlorid (FeCl ₃)
Lyes:	
Ammonia <10 %	Sodium hydroxide <10 %
	Alkali carbonate
Ester:	
Ethylacetate	N-butyl acetate
	Amyl acetate

Technical oils and greases:	
Drilling emulsion	Diesel oil
Varnish	Heating oil
Liquid paraffin	Castor oil
Silicone oil	Turpentine oil substitute
Brake fluid	Decon
Saline solutions:	
Alkali carbonate	Bichromate
Potassium hydroxide <30 %	Acetonitrile
sodium bisulfate	potassium ferrocyanide
	Sodium hypochlorite <20 %
Various other substances:	
Molecular chlorine	Cresol phenol soaps in hydrogen solution
Oxygen	Tricresyl phosphate
Water <100 °C	Hydrogen peroxid <25%
Saline water	Solvent (white spirit)
Grape juice	Milk
	Coffee
Detergent, rising agent, cleaning agent:	
Potash soap	Detergent solutions (surfactants)
Fabric softener	Sodium carbonate
Household chemicals (24 hours of exposure at 50 °C)	
Top Job	Jet Dry
Gumption	Fantastic
Formula 409	Ariel
Persil	Wisk
Lenor	Downey
Ajax	Vim
Domestos	Vortex
	Windex0

Resistance to surface desinfectant can be determined on request.



Slight discoloration

Intense examinations established that the following products caused slight discoloration:

- Mustard
- Tomato juice
- Tomato ketchup
- Lemon juice

No resistance

Not resistant to:

- concentrated mineral acids
- concentrated alkaline solutions
- High-pressure steam over 100 °C



Note!

Various other substances may cause the surface structure to alter. Testing and subsequent assessment still require clarification.

5.4 Chemical Resistance of the Display Foil Frame

The foil is manufactured from a biaxially aligned polyester-based material and therefore has a greater resistance to solvents.

The foil is resistant against the following substances (concentration 100 % - unless otherwise specified):

Ethanol	Acetaldehyde	1.1.1. Trichloroethane (Genklene)
Cyclohexanol	Aliphatic hydrocarbons	Amylacetate
Dowanol DRM/PM Diacetone	Formaldehyde (37-42%)	Butylcellosolve
Glycerine	Toluene	Diethyl ether
Isopropanol	Xylene	Ether
Methanol	White spirit	Ethylacetate
Triacetin		N-Butyl acetate
Acteone	Acetic acid (<50%)	Dibutyl Phthalate
Isophorone	Formic acid (<50%)	Diocetyl Phthalate
Cyclohexanone	Hydrochloric acid (<36%)	Fabric conditioner
Methylethylketone	Nitric acid (<10%)	Ferric Chloride (saturated)
Methylisobutyleketone	Sulphuric acid (<30%)	Ferrous Chloride (saturated)
Lixtop	Phosphoric acid (<30%)	Hydrogen peroxide (<25%)
	Trichloroacetic acid (<50%)	Potassium carbonate
	Glutaraldehyde in water 50%	Sodium carbonate (saturated)
	Oleic Acid	Sodium hypochlorite (<20%)
		Tego51
		Washing powders
Acetonitrile	Blown castor oil	Saturated Salt Solution
Ammonia (<32%)	Cutting oil (hysol X)	Water
Ammonium chloride (<10%)	Decon	
Sodium hydroxide (50%)	Diesel oil	
Dichromate	Hydraulic oil (Castrol Anvol)	
Potassium hydroxide (<40%)	Linseed oil	
Sodium bisulphate (<50%)	Paraffin oil	
Potassium ferrocyanide/ferricyanide	Universal brake fluid (Castor Girling)	
Silver Nitrate	Silicone oil	
	Teepol	
	Turpentine substitute	



	Petrol	
	Diabasic Ester 5	
	Skydrol 500B4	

Resistance to surface desinfectant can be determined on request.

No resistance

Not resistant to:

- Benzyol alcohol
- Concentrated caustic solution
- Concentrated mineral acids
- Dichloromethane
- Dimethylformamide
- High pressure steam at over 100°C
- Methylene chloride
- Tetrahydrofuran

Slight discoloration

Intense examinations established that the following products caused slight discoloration:

- Mustard
- Tomato juice
- Tomato ketchup
- Lemon juice
- Tea
- Coffee



Note!

Various other substances may cause the surface structure to alter. Testing and subsequent assessment still require clarification.

5.5 Configurator VisuNet GMP KM

Monitor type	Screen type	Protection	KVM specification	Power supply	Housing / frontplate version	Keyboard housing	Keyboard / mouse	Keyboard layout	Accessories	Options
Monitort type, display size										
KM219	48,3 cm (19 inch) direct monitor with KVM extender									
KM222	55,9 cm (22 inch) direct monitor with KVM extender									
Screen type										
E	Etched glass, antireflex									
T	Resistive touchscreen									
Protection										
-GP	Industrial Non-Ex version									
KVM specification										
-K1	Integrated KVM, 2xUSB, 1xRS232. Analogue Cat.x cable transmission									
Power supply										
DC	24 V DC									
Housing / frontplate version										
-SL2N	Slim-Line stainless steel housing									
Keyboard housing										
N	No keyboard & mouse housing									
R	Keyboard & mouse housing, stainless steel									
C	90°-180° tiltable keyboard housing, stainless steel									
Keyboard / mouse										
K0	No keyboard									
K4	Foil keyboard with touchpad									
K6	Foil keyboard with joystick									
K8	Foil keyboard with optical trackball									
Keyboard layout										
L0	No keyboard									
DE	Keyboard layout German									
US	Keyboard layout US/international									
FR	Keyboard layout French									
XX	More Keyboard layouts by request									
Accessories										
-S0	No special accessories									
Options										
-N	No Options									

CATVision



Operating Instructions

copyright G&D 08/08/2007
2.60
Errors and technical changes excepted

INFORMATION

Warning



IN ORDER TO AVOID THE RISK OF AN ELECTRIC SHOCK THE DEVICE IS NOT TO BE OPENED OR THE COVERS NOT TO BE REMOVED.
IN CASE OF AN ERROR PLEASE CONTACT OUR TECHNICIANS.

BEFORE YOU TAKE THIS DEVICE INTO OPERATION PLEASE READ THE OPERATING INSTRUCTIONS CAREFULLY.

FOLLOW ALL THE WARNINGS OR OPERATING HINTS WHICH ARE ON THE DEVICE OR IN THE OPERATING INSTRUCTIONS.

KEEP THE OPERATING INSTRUCTIONS IN A SAFE PLACE FOR LATER USE.

POWER SUPPLY : USE THIS DEVICE ONLY WITH THE DELIVERED OR IN THE OPERATING INSTRUCTIONS DESCRIBED AC-ADAPTOR. CONNECT THIS DEVICE ONLY TO AN EARTHED VOLTAGE SOURCE.

VOLTAGE-FREENESS: MAKE SURE THAT THIS DEVICE IS VOLTAGE-FREE BEFORE INSTALLATION. PULL OFF THE POWER PLUG OR THE POWER SUPPLY.

CABLES: ONLY USE ORIGINAL G&D CABLES. DAMAGES WHICH SOURCE FROM THE USE OF FOREIGN CABLES ARE NOT INCLUDED IN THE WARRANTY REGULATIONS. AVOID TRUMPLE TRAPS WHEN LAYING THE CABLES.

VENTING SLOTS: VENTING SLOTS PREVENT AN OVEHREATING OF THIS DEVICE. DO NOT COVER THEM.

EXCLUSION OF GUARANTEE: G&D DOES NOT TAKE OVER ANY GUARANTEE FOR DEVICES WHICH

- WERE NOT USED ACCORDINGLY.
- WERE REPAIRED OR MODIFIED BY NON AUTHORIZED PERSONS.
- SHOW BIG OUTER DAMAGES NOT VISIBLE WHEN DELIVERED.
- WERE DAMAGED BY FOREIGN ACCESSORIES.
- G&D IS NOT RESPONSIBLE FOR CONSEQUENTIAL DAMAGE OF ANY KIND WHICH POSSIBLY COULD OCCUR WHEN USING THE PRODUCTS.

RANGE: THIS DEVICE IS CONSTRUCTED FOR THE USE IN THE INTERIOR. AVOID EXTREME COLDNESS, HEAT OR MOISTURE.

CONFORMITY: THIS DEVICE FULFILL THE NEEDS OF THE LOW VOLTAGE DIRECTIVE 73/23 EWG RESPECTIVLY 93/68 EWG IN DEPENDENCE ON EN60950 (2000) AND CORRESPONDS TO THE MAIN PROTECTIVE DEMANDS OF THE PROVISION FOR ELECTROMAGNETIC COMPATIBILITY (89/336/EWG) AND THE STANDARDS EN55024 (1998) +A1, A2, EN61000-6-2 (2001), EN61000-3-2 (2000) + A2, EN61000-3-3 (1995) + A1 AND EN55022 CLASS B (1998+ A1, A2).

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1 Description

The **CATVision system** consists of a transmitter and a receiver. It allows operating a console from a distance up to 300 m (max value, dependent on the resolution and the used cable). Also a local console can be connected to the transmitter. You can choose between local and remote operation.

If you use a **CATVision-MC-System**, your PC can be equipped with up to 4 Video-Outlets.

Following products are available (differentiation by existing videochannel/s)

Product	Videochannel/s
CATVision	1 videochannel
CATVision-MC2	2 videochannels
CATVision-MC3	3 videochannels
CATVision-MC4	4 videochannels

In general in this manual is spoken of a **CATVision-System**, since all products differ in the number of transmittable videochannels.

Exceptions in this manual are:

- **Chapter 2** (Scope of delivery),
- **Chapter 3** (Installation) und
- **Chapter 5.4.4.1** (Change of Videochannel).

The transmission of the monitor, keyboard and mouse signals is done via **CAT-x cable** (x = 5, 6, 7). By the possibility of **individual video adjustment** different cable qualities and lengths are balanced so that the user is always getting the optimum picture.

The adjustment of the video signal happens automatically. A manual adjustment is possible from the remote console via IVT (see **chapter 5.4**).

Via CAT-x cable the system can also transmit audio and RS232 signals besides the monitor, keyboard and mouse data. By using an additional CAT-x cable, USB-signals can be transmitted transparent.

2 Scope of Delivery:

- **Transmitting unit** **CATVision-CPU** or **CATVision-MC-CPU**
- **Receiving unit** **CATVision-CON** or **CATVision-MC-CON**
- **Connecting cable** Video/Keyboard/Mouse PS/2 **CPU-2**

- for connecting the CATVision-CPU:
1 x MDR-20 for monitor, keyboard and mouse port
- for connecting the computer:
1 x PS/2 for mouse port (incl. 9pole adaptor for serial mouse)
1 x PS/2 (incl. AT adaptor) for keyboard port
1 x HD-15 connector for VGA port

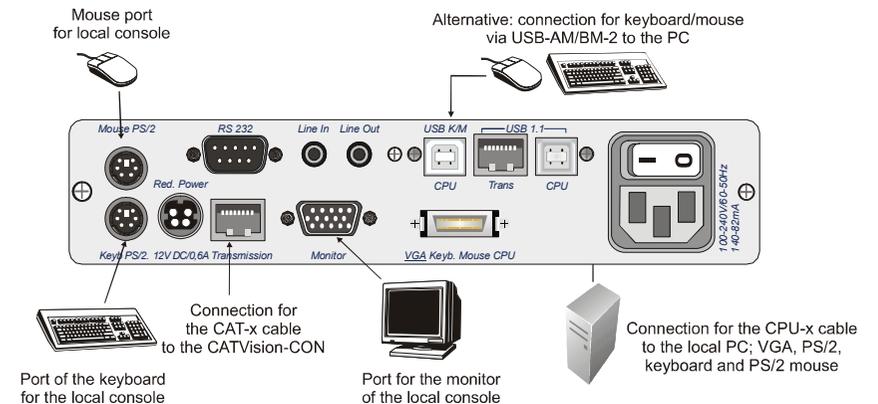
and USB Keyboard/ Mouse **USB-AM/BM-2**

- **Power cable** **PowerCable-2**
- **Transmission cable** (order separately) **K-C7-x**
- **Optional:**
 - **1 x RS232-M/F-2** -> for connecting a serial terminal device
 - **2 x Audio-M/M-2** -> for the audio port
 - **K-C7-x** -> for transparent USB 1.1 transmission
- **Additional Scope of Delivery for CATVision-MC:**
 - **VGA-M/M-2** -> HD15 (jack/jack) Video connection cable;
Number depends on existing videochannels

3 Installation

The installation of **CATVision** and **CATVision-MC** differs in the number of connectable video sources. As an installation example the manual focus is therefore on the **CATVision**. The connection of additional video sources will be explained separately.

3.1 Installing of the transmitting unit



- Disconnect monitor, keyboard and mouse from the computer.
 - **Monitor:**
Connect the 15 pole Sub HD connector of the **CPU-x cable** (x = 2, 4, 6 or 9 m) to the **VGA** interface of the computer.
 - **Keyboard/Mouse (PS/2):**
Establish a connection to the keyboard and mouse interface of the computer by means of the two PS/2 connectors of the **CPU-x cable**. Both connectors have corresponding symbols.
- Alternativ
- **Keyboard/Mouse (USB)**
Establish a connection to the keyboard and mouse interface of the computer by means of the two USB connectors of the **USB-AM/BM-2-cable**
 - Then connect the other end of the **CPU-x cable** (MDR 20 = Mini Delta Ribbon 20pole) with the interface **VGA Keyb. Mouse CPU** of **CATVision**.

Connecting a PC with a serial mouse und AT-(5 pole DIN) keyboard:

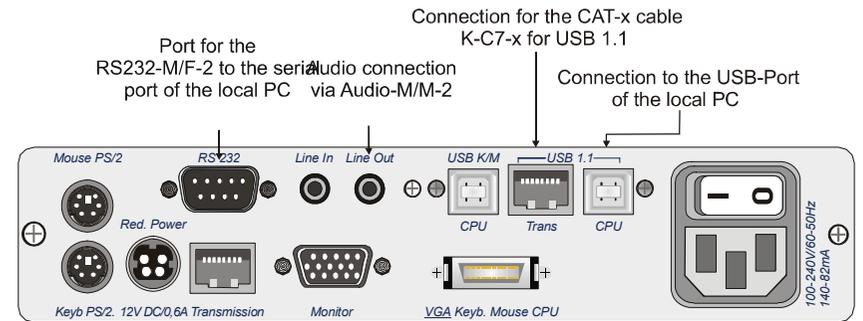
- See [chapter 6.2.2.12](#) for further information
- Connect the **mouse adapter** to the **serial connection set** of the COM interface of the computer assigned to the mouse function.
- Then connect the **keyboard adaptor** (AT connector =>PS/2 jack) to the 5 pole DIN keyboard interface of the computer.
- Connect the CPU-x connecting cable with the adaptors for keyboard and mouse and the VGA interface of the computer.

- **Connection of the transmission cable**
Connect the **K-C7-x** extension cable to the **TRANSMISSION (jack)** interface of the transmitting unit.
- **Connection of the local console**
Connect the connector of the local keyboard and the local mouse to the **keyboard** interface or rather **MOUSE PS/2** at the transmitting unit **CATVision-CPU**.
- Connect the local monitor to the **MONITOR** jack.

3.1.1 Videoconnection at CATVision-MC-CPU

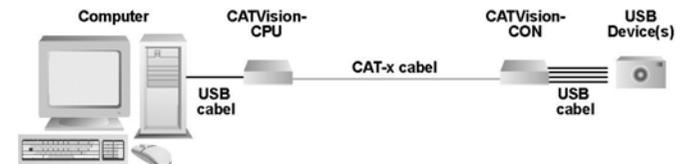
- Connect the 15 pole Sub HD connector of the **VGA-M/M-2-cabel** to the additional **VGA** interface of the computer.
- Then connect the other end of the **VGA-M/M-2-cabel** with the interfaces **VGA CPU 2-4**.

3.1.2 Optional Connections



- **Connection of RS232**
Connect the **RS232-M/F-x** connecting cable (x=2, 4, 6 or 9 m) with a COM interface of the computer and the **RS232** interface (optional) of the **CATVision-CPU** (seizure 1:1).
- **Connection of Audio**
Connect the **Audio-M/M-2** connecting cable with the line-out interface of the computer (or another audio device) and the **Line IN** interface (optional) of the **CATVision-CPU**.
- **Connection of USB1.1**
Connect the jack USB - Typ B of the delivered USB-cabel to the interface **CPU** of the CPU unit. Connect the TYP A jack of the USB-cabel with the appropriate USB-Port of the local PC.

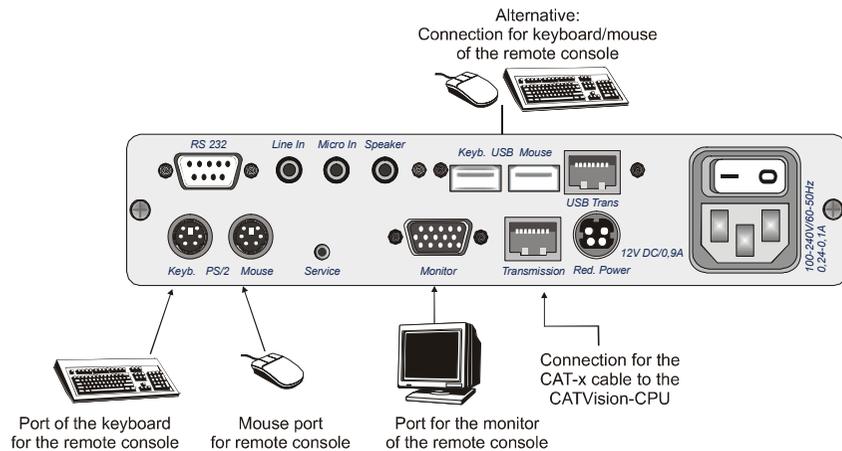
Connection of the transmission cable
Connect the **K-C7-x** extension cable within the USB 1.1 section to the **TRANS (jack)** interface of the transmitting unit.



Special note to the compatibility of the transparent USB 1.1 connection:

The USB-connection complies with the specification of the USB 1.1 standard, which defines the design of USB full-speed devices. However, we do not gurantee, that all USB full-speed devices are compatibel to the **CATVision**.

3.2 Installation of the receiving unit



- Set up the receiving unit.
- Connect the **K-C7-x** extension cable to the TRANSMISSION interface of the receiving unit **CATVision-CON**.
- Connect the monitor to the **MONITOR** jack.
- Connect the keyboard to the **Keyb.** interface at **CATVision-CON**.
- Connect the mouse to the MOUSE PS/2 jack.
- As an option you have the possibility to connect keyboard and mouse (also SUN-USB-keyboards) via USB. For this connect keyboard and/or mouse with the USB-interfaces **Keyb. USB Mouse** at the backside of **CATVision-CON**.

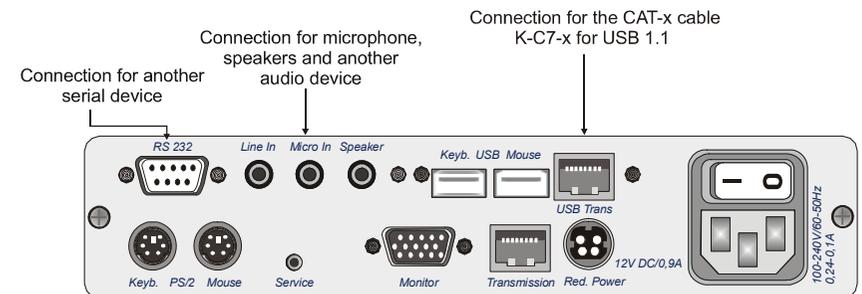
Don't use the USB-interfaces at the frontside of **CATVision-CON** for keyboard- mouse connection. The usage of these USB-interfaces is restricted to a usage as a transparent USB-transmission to the local PC.

Notice: At mixed operation of PS/2 mouse and USB mouse the PS/2 mouse is switched off completely! The same is true for the mixed operation of PS/2 and USB keyboard.

3.2.1 Videconnection at CATVision-MC-CON

- Connect the **K-C7-x** extension cable to the TRANSMISSION interface **TRANSMISSION 1-4** of the receiving unit **CATVision-MC-CON**. Consider the correct assignment of the videochannels!
- Connect the monitors to the monitor jacks **MONITOR 1 - 4**.

3.2.2 Optional Connections



- **Connection of RS232**
Connect the serial device with the **RS232** interface (optional) at **CATVision-CON**.
- **Connection of Audio**
Connect the microphone to **Micro In**, the speakers and another audio device (e.g. CD player) to **Line In**.
- **Connection of USB1.1**
Connect your USB devices with one of the four available USB-A-ports on the frontside of the **CATVision-CON**.

Note: . The usage of these USB-interfaces is restricted to a usage as a transparent USB-transmission to the local PC.

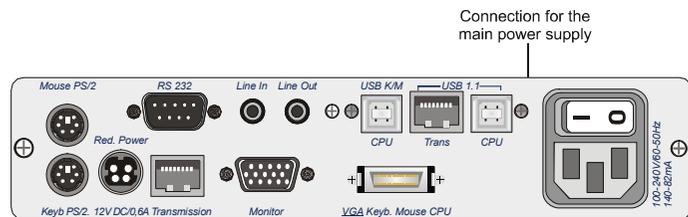
Connection of the transmission cable
Connect the **K-C7-x** extension cable with the the **USB TRANS** (jack) interface of the receiving unit.

4 Power Supply

4.1 In general

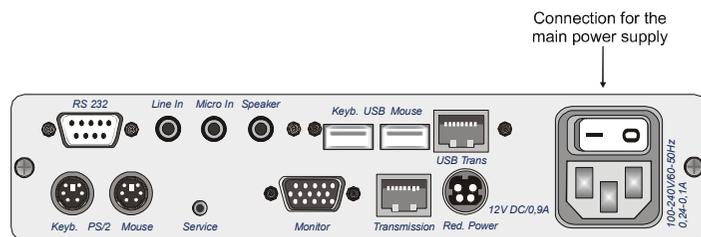
Connect the delivered power cables to the **Main POWER** jack of the devices (**CATVision-CPU** and **CATVision-CON**).

As an option you can connect a redundant power via Optional **Red. Power** jack. For this use the power set **Power-Set 12/Typ 2** (available as option).



↑
Connection for the optional
redundant power supply

Rear view of CATVision-CPU



↑
Connection for the optional
redundant power supply

Rear view of CATVision-CON

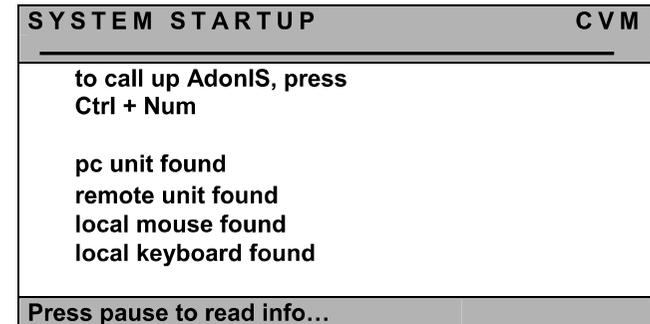
4.2 Note for USB-operation

Only high-Power USB devices (up to 500 mA) are supported by the **CATVision-System**.

5 Operation

5.1 Switching on the CATVision-System

After having switched on the **CATVision system** the following information appears on your monitor (local and remote):



After this window the image of the PC appears on your screen.

IMPORTANT

When starting the **CATVision system**, the system executes automatically an automatic adjustment of the video parameters (e. g. cable length, run time delays to your environment. As a result, the displayed image on your screen should not need any further adjustments. If, however, the displayed image doesn't meet your expectations, a manually adjustment can be executed via IVT (see [chapter 5.4](#)).

5.2 System Informationen Windows

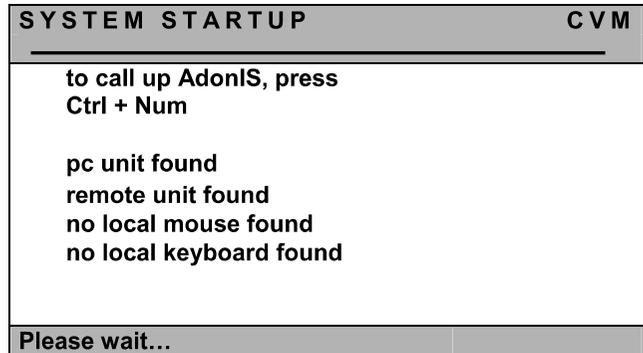
Additional to the described operation in [Chapter 5.1](#) following conditions of the CATVision can exist:

- No local connection of Keyboard/Mouse at the **CATVision-CPU** was found
- No existing connection between **CATVision-CPU** and **CATVision-CON**
- Whether Keyboard/Mouse has been found local nor a communication to the **CATVision-CPU** exist.

These conditions will be described in the following chapters.

5.2.1 Keyboard/Mouse local not attached

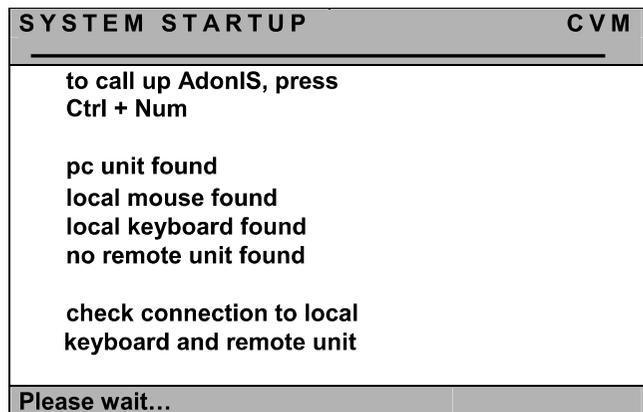
If local Keyboard/Mouse is not attached to the **CATVision-CPU** following information appears on your monitor (local and remote).



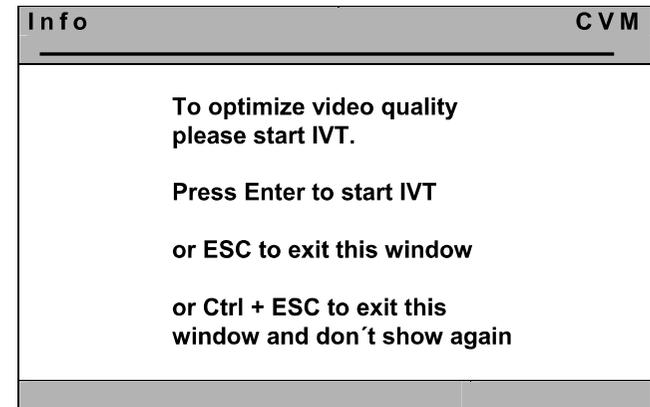
In this case the monitor at the **CATVision-CON** changes automatically to the next Information-Window (**IVT-Information**). To close this window or to start **IVT** you have to connect at least a keyboard to the system.

5.2.2 Remote Unit not attached

When the **CATVision-System** detects no connection to the remote unit **CATVision-Con** (after swichting on the system), following information appears on your local monitor.

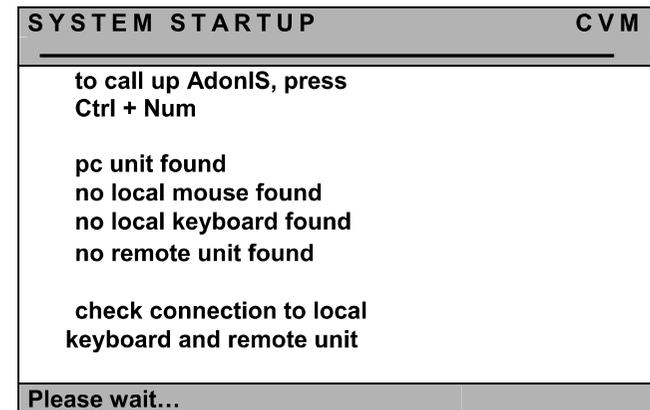


In this case the **CATVision-System** remains in this condition. To proceed with initial operation, establish first the needed CAT-x-connection. When this connection has been established, the **CATVision-System** automatically changes to **IVT-Information** window (local and remote).



5.2.3 Missing of the CAT-x-connection and local Keyboard/Mouse

If whilst the initial operation no connection to the remot unit (**CATVision-Con**) exist and locally no Keyboard/Mouse connection to the **CATVision-CPU** can be detected, following information appears on your local monitor.



Proceed in this case as described in [Chapter 5.2.1 & 5.2.2](#).

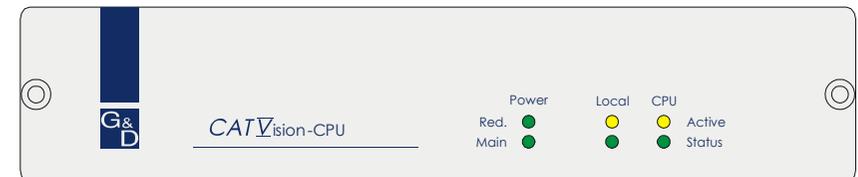
5.3 Getting into Operation / LEDs

After having connected the power set switch on the **CATVisions** via toggle switch on the rear. The LEDs on the front side mean the following:

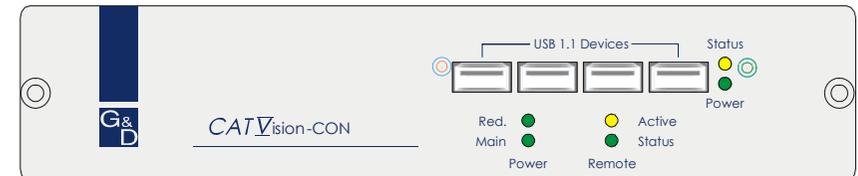
		CATVision CPU	CATVision CON
POWER	Redundant	is lit when an external power set is connected and delivers 12V.	is lit when an external power set is connected and delivers 12V.
	Main	is lit when the main power supply has been established.	is lit when the main power supply has been established.
Remote	Active	---	is lit as long as the remote console is active or can be active ⁽¹⁾ . Off when locally operated
	Status	---	<ul style="list-style-type: none"> ▪ Is off when the remote console is not supplied with voltage. ▪ Flashes when there is voltage but the controller of the remote console is not working. ▪ Is lit steadily when there is voltage and the controller works.
Local	Active	is lit as long as the local console is active or can be active ⁽¹⁾ . Off when operated locally. Disappear whilst remote operation	---
	Status	<ul style="list-style-type: none"> ▪ Off when the local console is not supplied with voltage. ▪ Flashes when there is voltage but the controller of the local console is not working. (Please contact our Service personal) ▪ Is lit steadily when there is voltage and the controller is working. 	---
CPU	Active	is lit when one of both consoles is active. ⁽¹⁾	---
	Status	is lit when the emulation of keyboard and mouse is active	---

USB-section	Status	---	Is lit, when a CAT-x- connection between CV-CPU and CV-CON exist. Is off, when a connection failure exist.
	Power	---	Is lit, when the USB-modul is supplied with voltage by the CATVision-CON

To (1): A console is active when there are mouse or keyboard activities. Either it stays active for the time out after the last entry or as long as the **Permanent Access** or **Protected Mode** is active plus the set time out.



Front view of CATVision-CPU



Front view of CATVision-CON

5.4 IVT – Individual Video Tuning

IMPORTANT

When starting the **CATVision system**, the system executes automatically an automatic adjustment of the video parameters (e. g. cable length, run time delays to your environment and a video profil will be saved. As a result, the displayed image on your screen should not need any further adjustments.

This saved videoprofil can be edited if the displayed image doesn't meet your expectations. Therefore, the **CATVision system** offers the possibility of video adjustment.

By this function the user can balance different cable qualities and lengths. The individual characteristic of this function allows setting the measures to the personal feeling for a "good picture".

The adjustment is done via remote keyboard or as Supervisor from the local console.

The system covers a range of 0 – 190; adjustment can be done in increments of 1.

The **CATVision system** offers the possibility of selecting the kind of cable used. Choose the corresponding mode for the kind of cable used most often.

As an option the run time delays of the CAT-x cables (Skew) can be balanced with the delay electronically.

5.4.1 Authorization

For using the IVT the following persons are authorized:

- **In the activated OpenAccess:** all persons who work with the system. (State of delivery)
- **Exception:** Should the authorization for using the **IVT** be withdrawn by the administrator you have no access in the "OpenAccess" mode to the **IVT**!
- **In the disabled OpenAccess:** only persons who are authorized. For this an account for each user has to be opened (see [User Accounts, chapter 6.2.3](#)) and the user must have the right of IVT access.

5.4.2 Calling up the IVT Mode

The **IVT mode** can be called up in two ways (Default):

- via function menu **CTRL & NUM**
- via hotkey **CTRL & Scroll**.

The following window opens:

IVT			CVM
Active channel: 1			
Boost			4
Noise filter			0
Fine tuning			36
delay R	delay G	delay B	
0 ns	0 ns	0 ns	
ESC: quit IVT menu			
F1: save and quit			
F3: copy to all channels			
1/2/3/4: select channel			
F5: auto adjust active channel			
F6: auto adjust all channels			

The **IVT** menu can be called up from the remote or the local console. Settings within the **IVT** menu, however, are **only** possible via **remote console**. **IVT** settings from the local console can only be proceeded by the administrator.

If a user from the local console wants to change the settings the following window opens:

Info	CVM
<p>IVT is only available on remote console.</p> <p>Press ESC to return.</p>	

By pressing **ESC** you will get back to the last active menu.

5.4.2.1 Call up via Function Menu

For calling up the **IVT** mode open the function menu with **CTRL + NUM** (Default).

Function	C V M
F2: IVT	
F3: Console Setup	
F6: Config	
F8: Logout	
Mouse Utility	
System Info	
Esc	Enter

Move the cursor to the entry **IVT** or confirm with **F2** and press **ENTER**. Then the **IVT** window will open.

5.4.2.2 Call up via Keyboard Combination

For directly calling up **IVT** keep **CTRL** pressed and additionally press **Scroll**. When both keys are released the **IVT** window opens (A PC must be connected to the system).

5.4.3 Advices for Setting the IVT

The previously mentioned steps are to be understood as a default proceeding.

Because the quality of the picture is dependent on the monitor as well as on the graphics card and the transmitting cable it is possible that despite a cable length of e.g. 120 meter the "best picture" is reached with a setting of 140 meter. Meter stands as a synonym for the adjustable video boost.

Try for the best setting.

Because the **cursors** work in 1m steps you may have to press them more often in order to get the best picture within the **fine tuning**.

If your monitor stays dark, check whether the set resolution of the graphics card is supported by the monitor. If so, activate the **IVT** (chapter 5.3.2).

Possibly the supported range is exceeded or undercut. Set the lowest value with the key **Pos1** and move upwards with the HotKey-combination **CTRL+Cursor Right**.

The picture will then appear again and you can change for the best setting.

5.4.4 Video Tuning Settings

After you access **IVT**, the following settings are available to you in the open **IVT** submenu:

- Establishing the video boost.
- Setting the noise filter.
- Fine tuning.
- Delay setting (optional) on the colors R, G, and B of the CAT-x cable.

The **IVT** submenu appears as follows:

IVT	C V M
Active channel: 1	
Boost	4
Noise filter	0
Fine tuning	36
delay R	0 ns
delay G	0 ns
delay B	0 ns
ESC: quit IVT menu	
F1: save and quit	
F3: copy to all channels	
1/2/3/4: select channel	
F5: auto adjust active channel	
F6: auto adjust all channels	

- ESC:** Exits the **IVT** submenu without saving changes
F1: Saves all changes and closes the **IVT** submenu
F3: copies all settings to all channels
1/2/3/4: Selecting the video channel (only with CATVision-MC-Systemen)
F5: Carries out automatic video optimization for the active channel
F6: Carries out automatic video optimization for all channels

You can switch between the individual entries using the **UP ARROW** and/or **DOWN ARROW** keys.

The position of **IVT**-menu can be placed individual on your monitor with the HotKey-combination **SHIFT+Cursor**.

5.4.4.1 Changing video channels

This function is only with CATVision-MC-Systemen available.



The entry “**active channel**” refers to the corresponding used video channel. The channels can be selected via pressing the keys **1** to **4**.

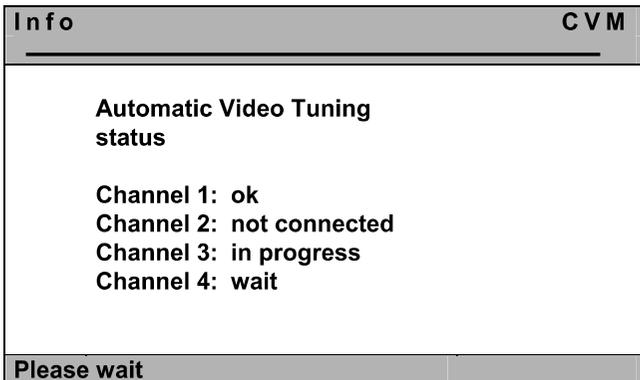
Confirm with **ENTER**.

5.4.4.2 Automatic Settings

You can establish all video settings automatically. To do so, you must be connected to a target.

To activate this function, press the **F5** key. While the settings for the active channel are being established automatically, the monitor turns black for approx. 3 seconds.

With the **F6** key the settings will be established for all channels (only with **CATVision-MC** systems). In this case, following message appears on your monitor:



Whilst the automatic measuring this windows informs you about the process of the respective measurement.

Note: Channel 2 to 4 are only available by the usage of an CATVision-MC-system!

The entries behind the channel have the following meaning:

- ok:** automatic measuring succesfully completed
- not connected:** no video signal available at this channel
- in progress:** the automatic measuring for this channel is in progress
- wait:** no automatic measuring has been carried out yet

After the automatic settings have been established, the display reappears.

The values determind whilst the automatic measuring will be stored. These values can be replaced by manual settings (vgl. **Kap. 5.4.4.3**). By processing the manual settings, only this manual settled values will be used.

Note:

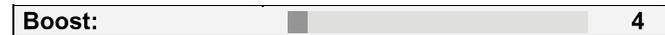
If you change the length of the used cabel after you have processed the manual settings, the system starts an automatic measurement. If hereby a margin of greater than „10“ is asserted between the automatic and manual settings (as reference see the entry „**Boost**“ within the IVT-menu), the system will use the automatic settings and discards the manual settings.

After the automatic video setting process, save the settings by pressing the **F2** key. In this case, the **IVT** submenu is closed and you return to the **CONFIGURATION** menu.

5.4.4.3 Manual Settings

In case, that the automatic setting doesn't meet your expectations, you can adjust the video display manually. This manually adjusting of the video display is described in the following chapters.

5.4.4.3.1 Establishing the Video Boost



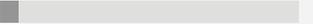
The following keys are available to you to modify the video boost:

Key ←	Subtracts 1 from the video boost value
Key →	Adds 1 to the video boost value
Keys CTRL + ←	Subtracts 5 from the video boost value
Keys CTRL + →	Adds 5 to the video boost value
Home	Maximum video boost (Caution: Overdrive possible → no picture visible on monitor)
End	Minimum video boost

If you want to make other changes within the **IVT** submenu, use the **UP ARROW** and/or **DOWN ARROW** keys to move to another entry.

After establishing the video boost, confirm and save your selection by pressing **F2** or discard your changes by pressing **ESC**. In both cases, the **IVT** submenu is closed and you return to the **FUNCTION** menu.

5.4.4.3.2 Setting Noise Suppression

Noise filter:  0

If the video quality of your monitor is influenced by noise, this effect can be removed using the noise filter setting.

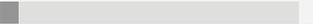
The following keys are available to you to modify the noise filter setting:

Key ←	Subtracts 1 from the noise suppression value
Key →	Adds 1 to the noise suppression value
Keys CTRL + ←	Subtracts 5 from the noise suppression value
Keys CTRL + →	Adds 5 to the noise suppression value
Home	Maximum noise suppression (value: 255)
End	Noise suppression has the value 0

If you want to make other changes within the **IVT** submenu, use the **UP ARROW** and/or **DOWN ARROW** keys to move to another entry.

After establishing the noise filter setting, confirm and save your selection by pressing **F2** or discard your changes by pressing **ESC**. In both cases, the **IVT** submenu is closed and you return to the **FUNCTION** menu.

5.4.4.3.3 Fine Tuning

Fine tuning:  36

The following keys are available to you for fine tuning:

Key ←	Subtracts 1 from the fine tuning value
Key →	Adds 1 to the fine tuning value
Keys CTRL + ←	Subtracts 5 from the fine tuning value
Keys CTRL + →	Adds 5 to the fine tuning value
Home	Maximum fine tuning (value: 575)
End	Minimum fine tuning (value: 0)

If you want to make other changes within the **IVT** submenu, use the **UP ARROW** and/or **DOWN ARROW** keys to move to another entry.

After establishing the fine tuning setting, confirm and save your selection by pressing **F2** or discard your changes by pressing **ESC**. In both cases, the **IVT** submenu is closed and you return to the **FUNCTION** menu.

5.4.4.3.4 Setting the Run Time Delay Compensation

delay R 0 ns delay G 0 ns delay B 0 ns

At the **CATVision** system the run time delay compensation can be set up to 46 ns.

At 0 ns there is no delay compensation.

For compensating the delay the following keys can be used:

←	minimizes the delay compensation for 2 ns.
→	increases the delay compensation for 2 ns.
CTRL + ←	minimizes the delay compensation for 10 ns.
CTRL + →	increases the delay compensation for 10 ns.

Example:

If the colour signal **red** appears too early (red shadow appear left of the letter) move to the entry **delay R** and delay this signal until all colours are on top of

each other and the picture is faultless. If another colour signal appears to early on the monitor repeat this procedure as described before.

After having defined the delay compensation confirm and save your entry with **F1** or reject your choice with **ESC**. In both cases the **IVT** window will be closed.

Note:

It isn't useful to compensate all three colors, since the delay is a result of all three colors. Compensating all three colors would only shift all colors together to a new incorrect value. Therefore adjust only two colours to compensate the run time delay.

If you want to make further changes within the **IVT** window move to the next entry with **cursor up/cursor down**.

5.4.5 Copy the IVT Settings

The settings for a video channel can be copied to other video channels with **F3**.

It may be useful if the conditions for all video channels are the same.

5.4.6 Tested Resolutions

In-house the following resolutions reached good pictures (the values are dependent on the used cable and the **IVT** settings):

Cable length (m)	Resolution	Refresh Rate
200	1920 x 1440	max. 75 Hz
300	1280 x 1024	max. 85 Hz

This overview includes **no maximum values**.

5.4.7 Recommended Cables

G&D recommends for the use of the **CATVision system** the following cables:

Patch cable:

DAETWYLER

UNINET 7702 flex 4P AWG26 S-STP (up to 100 meter)

Installation cable:

Kerpen MegaLine G12-150 S/F AWG22 (up to 300 meter)

6 Configuration

The **CATVision system** can be adapted to your needs. The configuration is done via **AdonIS**.

With **CTRL + NUM** (Default) you open **AdonIS**:

Function	C V M
F2: IVT	
F3: Console Setup	
F6: Config	
F8: Logout	
Mouse Utility	
System Info	
Esc	Enter

In the **Function menu** the following options can be used:

- **F2:** IVT (see [chapter 5.3](#))
- **F3:** settings at the console (see [chapter 6.1](#))
- **F6:** main configuration menu; here additionally **IVT** can be called up, **User Accounts** can be opened and changes in system settings can be made (see [chapter 6.2](#))
- **Mouse Utility:** Reinitialisation of the connected mouse if the initialisation is lost (see [chapter 6.3](#))

6.1 Console Setup

By pressing **F3** in the **Function Menu** you will get to the **Console Setup** for the activating console.

CONSOLE SETUP	CVM
Screen Saver:	OFF
AutoLogout:	OFF
Console Name:	CVM
Display:	NO
Display Position	
Menu Position	
AdonIS by Mouse:	NO
OSD sync:	OFF
Keyboard Layout:	German
Esc	Enter
	F1:Save

6.1.1 ScreenSaver Settings

The ScreenSaver to be set is started by **CATVision** and has nothing to do with the ScreenSaver of the computer.

As in general there is only one indirect connection (via CATVision) between the computer and the monitor you should switch off the ScreenSaver of the computers for making work easier.

The ScreenSaver of **CATVision** takes over this task; it puts the monitor to the Power-Down Mode.

Move the cursor to the line **ScreenSaver**. The current entry can be written over or edited by pressing **ENTER**.

Valid is a time of 1 - 60 minutes. The entry "0" puts the ScreenSaver to "OFF".

ENTER completes the entry.

For saving and closing this menu press **F1**.

6.1.2 AutoLogout Setting

With this setting you can activate the automatic LOGOUT of the system. The automatic LOGOUT, like the manual (**F8**), leads you back to the LOGIN mask.

With this the system is protected against unauthorized access. You can only get access after entering your password in the LOGIN window.

The time until the LOGOUT is carried out is set by moving the cursor to the line AutoLogout. The current entry can be written over or edited by pressing **ENTER**.

Valid is a time of 1 - 60 minutes. The entry "0" sets the Logout to "OFF".

ENTER closes the entry.

For saving and closing this menu press **F1**.

6.1.3 Defining the Console Name

In case of using many switches every G&D device can be given a unique name, the **Console Name**.

Move the cursor to the line **Console Name**. The current entry can be written over or edited by pressing **ENTER**.

Valid is an entry of 10 alphanumerical characters. **ENTER** closes this entry.

For saving and closing this menu press **F1**.

6.1.4 Activating the Channel “Display”

With this you have the possibility to set the display of the selected computer or system informations either to

- **constant** => Yes or
- **temporary** => No (disappears approx 5 seconds after switching).

After having moved the cursor to the array **DISPLAY** you can select your wanted option with **SPACE** (toggle) or **Y + N**.

For saving and closing this menu press **F1**.

If you have selected the temporary setting, the channel display can be called up anytime by pressing **CTRL + CAPSLOCK** (Default).

6.1.5 Setting the Display Position + Size

Here you set the **position and size of the display** on the monitor. Move the cursor to the corresponding entry in the menu **CONSOLE SETUP**.

After having pressed **ENTER** you get to the edit mode and can move the display with the **cursor control keys** or **mouse** to the wanted position.



For making sure that the screen content of **AdonIS** can be ready easily at all resolutions the **size** of the display can be changed with the keys **picture up/picture down** at a resolution higher than 640 x 480.

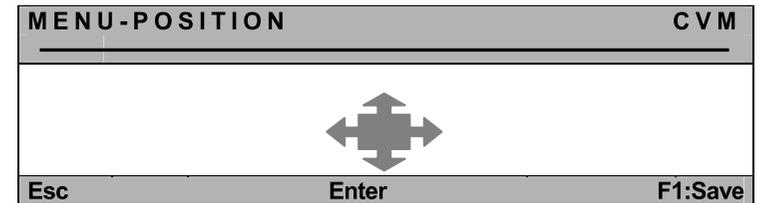
ENTER closes the setting and leads you back to the **CONSOLE SETUP** (temporary saved).

For saving the setting and closing the **CONSOLE SETUP** press **F1** (permanently saved).

6.1.6 Setting the Menu Position & Size

With this you change the position and size of all **AdonIS** windows. Move the cursor to the corresponding entry in the menu **CONSOLE SETUP**.

After having pressed **ENTER** you get to the edit mode and can move the display to the wanted position with the **cursor control keys** or **mouse**.



For making sure that **AdonIS** can be read easily at all resolutions the **size** of the display can be changed with the keys **picture up/picture down** at a resolution higher than 640 x 480.

ENTER closes the entry and leads you back to the **CONSOLE SETUP** (temporary saved).

For saving this setting and leaving the **CONSOLE SETUP** press **F1** (permanently saved).

6.1.7 Settings of the extended Mouse Support

With this the special keys of the Intelli Explorer Mouse for working with **CATVision** are activated. By setting the entry to “**Yes**” **AdonIS** can also be called up by pressing button 4 or 5 of the Explorer Mouse (left side buttons).

After having moved the cursor to the array „AdonIS by Mouse“ you can select the wanted option with **SPACE** (toggle) or the keys **Y + N**.

For saving the settings and closing the menu press **F1**.

6.1.8 OSD SyncMod

Graphics cards are able to generate different sync signals (sync on Green, RGBHV etc.). Depending on the sync signal it has effect on the picture of **Adonis**.

Adonis is designed for a **RGB/HV-Sync signal**. If the graphics card of the connected computer sends a different sync signal than **RGB/HV** the consequence would be a colour corruption of **Adonis**. As a result of this, **Adonis** could appear to dark on your monitor.

In order to balance this colour corruption the colour levels can be changed in the menu **OSD-Sync**.

The following entries can be found (be pressing the **Space-Bar**):

- **OFF:** no colour adjustment
- **Green:** the level for the green signal is changed
- **Red and Blue:** the level for the red and blue signal is changed
- **All:** all colours are changed.

For saving the settings and closing this menu press **F1**.

6.1.9 Keyboard Layout

With this you select the layout of the connected keyboard. If you realize a change of Y and Z (American/German layout) you should change the setting.

The following layouts can be selected:

- **German**
- **English US**
- **English UK**
- **French**
- **Spanish**
- **Lat America**
- **Portugiese**

After having moved the cursor to the array **KEYBOARD LAYOUT** you can select the wanted option with **SPACE** (toggle).

6.2 Config

In the menu **Config** you can open user accounts and make system comprehensive settings. By pressing **F6** in the **function menu** you will get to the **Config Menu**.

The access to this menu is only for certain persons. Besides the supervisor also user can have access to their **User Account** menu having the corresponding authorization by the supervisor.

Anyway, the SUPERVISOR has always access authority on that Config Menu!

Because the **CATVision system** is used either in the **Open Access Mode** (access to the system without Login-Name and Password) or by opened **User Accounts** different constellations occur when calling up the **Config Menu**:

Open Access:

Access is possible without password entry, when the **OpenAccess** has configuration rights! The entries for the **OpenAccess** are presented in white. Entries with no access are presented in light blue.

If the **OpenAccess** has no configuration rights a Login-Window opens for further authorization. You can now logon as an administrator or user with configuration rights by entering Login-Name and Password.

ACCESS CONFIG		CVM
Please enter your login:		
Name:	<input type="text"/>	max 14 characters
Password:	<input type="password"/>	max 12 characters
Esc	Enter	

After having pressed the button **Enter** the **Config Menu** opens.

Opened User Accounts & Supervisor (OpenAccess is disabled):

Access without password query is possible because the users are already logged in (the password query via Access Config window doesn't apply).

Every user, however, can have different configuration rights (e.g. only **IVT** and **System Config**). The configuration entries available for the single user are marked in white. Light blue markings indicate that an access is not possible.

When a user has no configuration rights and tries to access the config menu, a menu appears on his window containing information about the missing configuration rights.

Anyway, the supervisor has always unlimited access to the **Config-Menu!**

After having called up the **Config-Menu** successfully the following window appears on the monitor:

Config	CVM
IVT	
System Config	
User Account	
Esc	Enter

Select the wanted entry with **cursor up/cursor down** and then confirm with **Enter**.

6.2.1 **IVT**

[See chapter 5.4](#)

6.2.2 **System Config**

Move in the menu **Config Menü** to the entry **System Config** and press **Enter**. The following window will open:

SYSTEM CONFIG	CVM
HotKey	CTRL
Double HotKey	OFF
Set System Defaults	
Remote Video	ON
Local Video	ON
Permanent Access	BOTH
Time-Out	1s
Protected Mode	OFF
Keyb. LED flash	ON
Scancode Set local	2
Scancode Set remote	2
V24 Mouse enable	No
USB Multimedia Keyboard	No
USB SUN-Keyboard mode	No
USB SUN-Keyboard layout	US
PixelPower local	No
PixelPower remote	
Signal type input:	Standard
Remote Sync:	as input
Esc	Enter
	F1: Save

If there is a conflict between the hotkeys used in **AdonIS** and your software you can change it here.

Another reason for changing the hotkeys may lay in the combination of several G&D switch types. In the delivery status of all G&D products, the default HotKey-Combination is set to **CTRL + NUM** (as an example for calling up the **AdonIS**).

6.2.2.1 Defining the first HotKey

Move with the cursor to the entry **HotKey**.

By pressing **SPACE** you can select between the following alternatives:

Ctrl, Alt, AltGr, Win, Shift



Please remember that the **defined HotKey** also is used as first key for calling up **AdonIS** (e.g. **WIN + NUM**).

For saving the settings and closing the menu press **F1**.

6.2.2.2 Defining the Double-HotKey

Here you define whether to use a **double-hotkey** for calling up **AdonIS** or the **IVT**

Move with the **cursor control keys** or the mouse to the entry double-hotkey. With **Space** you can select between

- **Yes**
- **No** (Default).

After having changed the entry to **Yes** the entry in the line **HotKey** changes automatically (see [chapter 6.2.2.1](#)). Now you can select the wanted double-hotkey. The following positions are available:

Ctrl (Strg) + Shift
Alt + Shift
Alt Gr + Ctrl (Strg)
Windows + Ctrl (Strg)
Shift + Windows



Please remember that the selected **HotKey** is also used as first key for calling up **AdonIS** (e.g. **WIN (+CTRL) + NUM**).

For saving the settings and closing the menu press **F1**. After this setting you need to press three keys to call up **AdonIS** or **IVT**.

6.2.2.3 Set System Defaults (Supervisor Function)

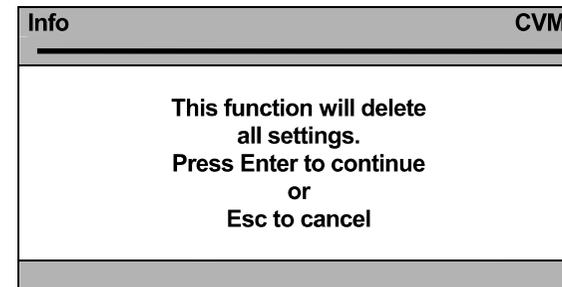
This function sets back this device to the default condition.

Also the passwords and IVT settings are set back.

The corresponding **default settings** can be found in the descriptions of the different menu windows in this documentation.

Move with the cursor control keys to the corresponding menu.

By pressing **ENTER** the function will be executed and the following window will open.



Confirm again with **ENTER**. The window will change to the menu **FUNCTION**.

6.2.2.4 Remote Video (Dark-Switching)

With this setting you define whether the monitor of the remote console at keyboard or mouse action of the local console either

- stays permanently visible or
- is switched dark.

The following selections are possible:

- **ON:** Monitor stays permanently visible
- **Switch off:** Monitor is switched dark at keyboard or mouse action of the local console.

For saving the settings and closing the menu press **F1**.

You can always close this menu by pressing **ESC**.

6.2.2.5 Local Video (Dark-Switching)

Function according to [chapter 6.2.2.4](#) but related to the picture at the local console (monitor at **CATVision-CPU**).

6.2.2.6 Permanent Access

Whilst your e. g. configuration you don't want to be interrupted. Therefore the remote console (**CATVision-CON**) as well as for the local console (**CATVision-CPU**) has the possibility of activating a **permanent access** (hold function, [see chapter 7.3](#)).

If the permanent access is activated at one console by **CTRL + Print** the computer access for this console is exclusive. If in the entries "**Local Video**" and "**Remote Video**" ([see chapters 6.2.2.4 – 6.2.2.5](#)) the setting is **Switch Off** the monitors of the blocked console are additionally switched dark.

The blocked station has access until the function is disabled by the same key combination.

The function **Permanent Access** allows the following settings:

BOTH	Both consoles can activate the permanent access
NONE	No console can activate the permanent access
LOCAL	Only the local console (CATVision-CPU) can activate the permanent access
REMOTE	Only the remote console (CATVision-CON) can activate the permanent access

The change in setting is done by moving the cursor with the mouse or keyboard to the entry **Permanent Access**.

With **SPACE** the selection is activated (toggle function)

For saving the settings and closing the menu press **F1**.

6.2.2.7 Defining the Time Out

With this setting you define the delay time you define how long the blocked console stays inactive unless at the active console no Keyboard/Mouse action can be mentioned. The other console can have access to the system again, after the in this chapter defined time-out after the last keyboard/mouse action has exceeded.

Move the cursor to the entry **Timeout**.

By entering a value in the range of 1 to 90 seconds you can define the delay time.

For saving the settings and closing the menu press **F1**.

6.2.2.8 Enabling the Protected Mode

In default condition of the **Protected Mode** all connected console are locked for keyboard and mouse action and all monitors are switched dark ([see chapter 7.4](#)). Only by pressing the hotkeys (**CTRL + Print**), a console can exclusively reserve the right for operation. Whilst this exclusive operation of the active console, the monitor of the inactive console remains dark and no keyboard and mouse operation are possible.

With this setting you define whether the **Protected Mode** ([see chapter 7.4](#)) is enabled or not.

Move the cursor to the entry **Protected Mode**.

By pressing **SPACE** you can choose between **Yes** or **NO**.

For saving the settings and closing the menu press **F1**. After you have finished all settings the **Protected Mode** is active.

After enabling the Protected Mode the following window appears on the monitor.

CVM
PROTECTED MODE ENABLED

6.2.2.9 Keyb. LED flash

With this setting you define whether the keyboard LEDs will flash after activated hold function (see [chapter 7.3](#)) or Protected Mode (see [chapter 7.4](#)) or not.

Move the cursor to the entry **Keyb. LED flash**.

By pressing **SPACE** you can chose between **Yes** or **NO**.

For saving the settings and closing the menu press **F1**.

6.2.2.10 Defining the local Scan Code

The scan code is the language with which keyboard and computer communicate. **CATVision** works with Scancode 2 (Default).

Only change this setting in accordance with our service department.

Move the cursor to the corresponding entry.

By pressing **SPACE** you can select between **3** or **2**.

For saving the settings and closing the menu press **F1**.

6.2.2.11 Defining the remote Scan Code

Function according to [chapter 6.2.2.10](#) but related to the keyboard at the remote console.

6.2.2.12 V24 Mouse enable

To the delivery status of the **CPU-x**-cabel belongs an adapter, which enables you to connect the **CATVision-System** to the serial mouse interface of your computer.

Therefore stick the adapter on the mouse PS/2-jack of the **CPU-x**-cabel (compare [Chapter 3.1.1](#)). With this adapter you can establish the connection to the serial interface of your computer.

In order that the **CATVision** can build up the serial connection to the computer, move the cursor to the entry **V24 Mouse enable** and set the entry by pressing **SPACE** to **Yes**.

For saving the settings and closing the menu press **F1**.

6.2.2.13 USB Multimedia Keyboard

By selection of the entry **USB Multimedia Keyboard** the USB multimedia support for keyboards will be activated. In Default this setting is not activated (NO).

For saving the settings and closing the menu press **F1**.

6.2.2.14 USB SUN Keyboard mode

If you connect a SUN computer with USB keyboard (and mouse) at CATVision-CPU, adjust this setting to **yes**.

At default the support for USB SUN Keyboards is deactivated.

6.2.2.15 USB SUN Keyboard layout

After activation of the **USB SUN Keyboard mode** (see above) you can use this menu item to select the keyboard layout of the SUN keyboard.

If you experience that german umlauts and other language-specific characters are without correct output at screen, check this adjustment and modify if necessary.

The following options are available:

- **DE**: German keyboard layout
- **US**: American keyboard layout

If the adjustment of the keyboard layout is modified during the operation of the SUN computer, a restart of the SUN computer is necessary, in order to apply the modified adjustment.

At default modifying of this adjustment is not possible, because the support for USB SUN keyboards is deactivated.

6.2.2.16 PixelPower local

By selection of the entry **PixelPower local** the support for Pixelpower keyboards „PixelPower Clarity (blue)“ will be activated for the local console. In Default this setting is not activated (NO).

For saving the settings and closing the menu press **F1**.

6.2.2.17 PixelPower remote

By selection of the entry **PixelPower local** the support for Pixelpower keyboards „PixelPower Clarity (blue)“ will be activated for the remote console. In Default this setting is not activated (NO).

For saving the settings and closing the menu press **F1**.

6.2.2.18 Signal type input

To ensure the correct display of the transmitted video signal you find selection in this menu, which type synchronisation signal is available as input video signal.

The options are:

- Standard: comprises RGB HV, RGsB, RsGsBs
- RGsB/HV: Sync on green and additionally seperated HV

6.2.2.19 Remote sync

Basically, two options are available at the entry „Remote sync“. These are:

- Separated H/V
- as input

When CATVision detects seperated HV signals, the value behind the entry „Remote sync“ changes to „Separated H/V“. This entry is not editable.

When no seperated HV signals can be detected, you still have the possibility to deliver seperated HV signals by choosing the value „Separated H/V“.

With the value „as input“ the signal will be transmitted without any changes from the PC to the CATVision system.

6.2.3 User Account

Move in the **Config Menu** to the entry **User Account** and press **Enter**. The following window will open:

SELECT ACCOUNT		CVM
1	USER 01	
2	USER 02	
3	USER 03	
4	USER 04	
...	bis User 08	
	OpenAccess	
	SUPERVISOR	
Esc		Enter

Here you select the **USER ACCOUNT** which you want to change.

Move the cursor with the keyboard or mouse to the corresponding account.

Confirm your selection with **ENTER** (or left mouse button) or close the menu without selection with **ESC** (or right mouse button).

If you have selected an account (e.g. user 1) you get to a submenu with the window **USER ACCOUNT**.

Here you can change the settings for the user selected in **SELECT ACCOUNT**.

Due to the special condition of the Supervisor and the **OpenAccess**, these two accounts appear separately in the menu **Select Account**.

- Supervisor:** No rights can be detracted
- User:** User, who optionally can be provided with configuration rights
- Open Access:** by enabling this account, you can access the **CATVision-**System without Login-Name and Passwort.

Up to **8 users**, **SUPERVISOR + OpenAccess** can be managed.

USER ACCOUNT		CVM
Account No. 1		
Account enabled:	Yes	
User Name:	USER 01	
Set Account Defaults		
IVT access	Yes	
System Config access	No	
User Account access	No	
Change Password...		
Esc	Enter	F1:Save

Notice:

If you want to change more than one array save with **F1** only after all changes are made in the **USER-ACCOUNT**.

6.2.3.1 Account Enable / Disable

Account enabled: Yes / No

In the first line of the **USER-ACCOUNT** you have the possibility to lock or release the whole account. The Administrator-Account cannot be disabled. A lock can be useful e.g. at longer absence of the account owner.

After having moved the cursor to the corresponding array like described before you can change the setting with **Y** or **N**.

For alternative switching you also can use **SPACE**.

F1 saves the new settings and leads you back to **SELECT ACCOUNT**.

Default: Account enabled = Yes

6.2.3.2 Defining the User Name

User name USER 01

Enter maximum 14 characters for the name of the user of this account. Current entries can be written over.

Move the cursor to this array. Press **ENTER** for getting into the edit mode for his array.

Close the entry with **ENTER**.

If the **User Name** is changed a window opens automatically which indicates the change. After having pressed any key the input menu for the user password appears:

CHANGE PASSWORD		CVM
Please enter your new password twice:		
<input type="text"/>		
[max. 12 characters]		
<input type="text"/>		
Esc	Enter	

The entry has max 12 alphanumeric characters. **ENTER** closes the first entry and automatically jumps to the second array where the password has to be entered again. With **ENTER** you confirm the new password and this will lead you back to the **User Account**.

With **F1** you save the new settings and go back to **SELECT ACCOUNT**.

Interrupting the password change

ESC in the window **CHANGE PASSWORD** will interrupt the action and lead you back to **User Account**.

Note:

When you have defined a **User Name** earlier and abort this procedure without entering a new password, this user is still existing. This user won't have any chance to login, since no password is existing!

If you abort the reentering of an existing password, the old password remains activ.

By creating a User Account, the **OpenAccess** will be disabled.

6.2.3.3 Set Account Defaults

Set Account Defaults

This function sets back all changes of the **USER ACCOUNT** to the default values which can be found at the end of a chapter at “**default**”.

Exception: User Name + User Password

Move the cursor to the entry and confirm with **ENTER**. The function will then be active in the background.

With **F1** you save the new settings and go back to **SELECT ACCOUNT**.

6.2.3.4 IVT Access

IVT Access: Yes/No

Here you can give the owner of this account access to **IVT** or not.

Move to the array and give access to **IVT** by entering **Y** or deny access by entering **N**.

SPACE can additionally be used for alternative switching.

With **F1** you save the new settings and go back to **SELECT ACCOUNT**.

Default: IVT-Access = Yes

6.2.3.5 System Config Access

System Config Access... No/Yes

Here you can give the owner of this account access to the menu **System Config** or not.

Move to the array and give access to **System Config** by entering **Y** or deny access by entering **N**.

SPACE can additionally be used for alternative switching.

With **F1** you save the new settings and go back to **SELECT ACCOUNT**.

Default: System Config Access = No

6.2.3.6 User Account Access

User Account Access ... No/Yes

Here you can give the owner of this account access to the menu **User Account** or not.

Move to the array and give access to the **User Account** by entering **Y** or deny access by entering **N**.

SPACE can additionally be used for alternative switching.

With **F1** you save the new settings and go back to **SELECT ACCOUNT**.

Default: User Account Access = No

6.2.3.7 Change Password

Change password...

Here you can define the **User Password**. Take care that the user password and the user name exist only once. The entry is possible for alphanumerical characters.

Move the cursor to the corresponding entry in the menu **USER ACCOUNT**.

After having pressed **ENTER** you get into the submenu where you are asked to enter the password.

CHANGE PASSWORD		C V M
Please enter your new password twice:		
<input type="text"/>		
<input type="text"/>		
[Min. 4, max. 12 characters]		
Esc	Enter	

The input can be done with min 4 and max 12 alphanumerical characters.

ENTER will close the first entry and automatically will lead you to the second array where you have to enter the password once again. With **ENTER** you confirm the new password and go back to the **USER ACCOUNT**.

With **F1** you save the new settings and go back to **SELECT ACCOUNT**.

Default: no password.

Interrupting the password change

ESC in the window **CHANGE PASSWORD** will interrupt the action and lead you back to **USER ACCOUNT**.

Note:

If you abort the reentering of an existing password, the old password remains activ.

Please keep the password in a safe place as at a loss a system access is not possible anymore.

6.3 Mouse Utility

If the mouse **of the computer** does not work anymore during operation (mouse cursor does not move) you have the possibility of re-initialization.

First check whether the connecting cables are fitted correctly.

First call up the **FUNCTION** menu (**CTRL + NUM**). Move by means of the cursor control keys to the menu **Mouse Utility**.

By pressing **ENTER** a submenu will open which offers the following possibilities:

MOUSE UTILITY	C V M
Enable Mouse ▶ for Unix ◀	
Reset Mouse	
Enable Intelli	
Enable Int Explorer	
Esc	Enter

Warning! Only do the **Enable/Reset suitable** for the single computer!

Enable Mouse (Standard Mouse)

Select this function for non-Windows systems (e.g Linux) if the computer works with a standard mouse driver.

Reset Mouse

Select this function for Windows OS; **independent from the set mouse driver.**

This is for:

WIN 98, WIN NT, WIN ME, WIN 2000, WIN XP.

Move the cursor via cursor control keys to the corresponding entry.

Press **ENTER**.

The initialisation of the mouse is done and the menu is closed. The mouse works with all its functions.

Enable Intelli (MS-IntelliMouse)

Select this function for non-Windows systems (e.g. Linux) if the connected computer uses the MS IntelliMouse driver.

Enable Int Explorer (MS IntelliMouse)

Select this function for non-Windows systems (e.g. Linux) if the connected computer uses the MS IntelliMouse Explorer driver.

7 System Operation

7.1 Possibilities of Access

The following possibilities of access on this system exist:

- Open Access: free access to the system
- User defined: Log-in with password and name
- as supervisor

In the following chapters these possibilities of access are described in detail.

7.1.1 OpenAccess

At OpenAccess everybody has access to the **CATVision system** and the connected CPU.

OpenAccess in default condition is defined as follows:

- Access to the connected CPU without necessary log-in with name and password
- Access to the **IVT** for individual adjustment of the picture
- Access to the menu **Console Setup**
- Manual log-out via **F8**
- Reinitialisation of the mouse

In default the OpenAccess to the menu **Config** is denied (except **IVT**, the OpenAccess can access **IVT** just by pressing **Enter** at the password query).

The authorization can be assigned by the supervisor. For this the supervisor has to assign the corresponding configuration rights in the menu **User Account** to the OpenAccess (see chapters 6.2.3.4 – 6.2.3.6).

As long as the OpenAccess is active there is always the possibility of access without log-in even if the user already exists.

In order to protect the system against unauthorized access OpenAccess has to be disabled by the supervisor or by a user. OpenAccess is managed in the **UserAccount**. For disabling OpenAccess open the menu **UserAccount**, a submenu of the **Config Menu** (see chapter 6.2.3).

At the bottom of the window the entry OpenAccess can be found.

SELECT ACCOUNT		CVM
1	USER 01	
2	USER 02	
3	USER 03	
4	USER 04	
...	bis User 08	
	OpenAccess	
	SUPERVISOR	
Esc		Enter

Move to the entry and press **Enter**. The following window opens:

USER ACCOUNT	CVM
OpenAccess	
Account enabled:	NO
User Name:	OpenAccess
Set Account Defaults	
IVT Access	Yes
System Config Access	No
User Account Access	No
Change Password...	
Esc	Enter F1:Save

Move to the entry Account enabled and change it with **Space** to **NO**. Save your settings with **F1**.

With this OpenAccess is disabled and access to the **CATVision system** is only possible with the log-in.

For activating OpenAccess again repeat the last procedure and change the entry from **NO** to **YES!**

7.1.2 Access via Defined User

If you wish to protect the **CATVision**-system against undesired access, it is useful to define Users in the menu **UserAccount** and assign this users with certain rights.

As soon as the supervisor has defined users, the access to the system is possible by entering a Login-Name and Password. To this user certain rights can be assigned. The procedure of defining a user is described in chapter 6.2.3.

7.1.3 Access as Supervisor

If you want to change the presets enter your **SUPERVISOR identification** in the arrays "name" and "password". Both can be found in the **appendix 1** of the operating instructions.

Via **SUPERVISOR-Login** you have unrestricted access to all configuration levels independent from the current settings.

For the settings in **Menu Config** a log-in as **SUPERVISOR** is necessary:

Of course can a configuration right be linked to the **User Login** (see [chapters 6.2.3.4 – 6.2.3.6](#))

Please remove the SUPERVISOR password from the operating instructions for your own safety.

7.2 Automatic Switching

The **CATVision system** allows the selectable operation of the computers from both consoles (local and remote).

In default operation at both consoles is possible.

As soon as at one of the consoles there is **keyboard or mouse action** keyboard and mouse of the other station are disabled.

After a time out of approx 1 second where there is no action the system is enabled again.

The time out between the switching can be adjusted to your needs (see [chapter 6.2.2.7](#)).

Both connected **monitors** show simultaneously the picture of the computer.

If the dark switching is enabled (see [chapter 7.5](#)) only the monitor of the active console is switched on.

7.3 Manual Hold Function (Permanent Access)

The **CATVision** system makes it possible that either the local or the remote console has access to the computer. This prevents that the system enables the other console after a preset time out of approx 1 second.

By pressing **CTRL** and **PRINT** the hold function is enabled.

The enabled **permantent access** is indicated

- by the slowly flashing keyboard LED "**Scroll Lock**" at the console where the hold function was enabled.
- by the fast flashing keyboard LED "**Scroll Lock**", the disabled **ACTIVE LED LOCAL** (e.g. at **CATVision-CPU**) and the enabled **ACTIVE LED CPU** at the console which was locked by the hold function.

The display looks like the following:

CVM
PERMANENT ACCESS

The **permantent access** will be enabled by pressing **CTRL** and **PRINT** again and the LED **SCROLL-LOCK** of the keyboard will be switched off. After this the automatic switch (as described in [chapter 7.2](#)) will be enabled again.

Notice: If you have activated the double-hotkey (see [chapter 6.2.2.2](#)) you have to press the defined double-hotkey for activating the **permantent access**.

In default the permantent access for both consoles is released. If you intend to lock the permantent access or only release it for one console proceed as described in [chapter 6.2.2.6](#).

This function can be combined with the dark-switching-function (see [chapter 7.5](#)). In this case the monitor of the inactive console will be dark-switched.

7.4 Protected Mode

In default condition of the **Protected Mode** all connected console are locked for keyboard and mouse action and all monitors are switched dark (see [chapter 7.4](#)). Only by pressing the hotkeys (**CTRL + Print**), a console can exclusively reserve the right for operation. Whilst this exclusive operation of the active console, the monitor of the inactive console remains dark and no keyboard and mouse operation are possible.

Whilst **permanent access**, operation is possible for the local and remote console. Just by activating the hold function one console obtain the exclusive right to work with the system.

By pressing **CTRL** and **PRINT** the releasing console will have full keyboard and mouse access. The disabled keyboard, however, still has no keyboard and mouse access.

The **Protected Mode** is indicated

- at the console which has the exclusive right of control by the slowly flashing keyboard LED “**Scroll Lock**”.
- at the console which still is locked by the fast keyboard LED “**Scroll Lock**”, the **ACTIVE LED LOCAL** (e.g. at **CATVision-CPU**) is switched off and the **ACTIVE LED CPU** is lit.

The display looks like the following:

CVM
PROTECTION ACTIVATED

The **Protected Mode** will be activated by pressing **CTRL** and **PRINT** again and the LED **SCROLL-LOCK** of the keyboard will be switched off and all monitors will be switched dark. After this the automatic switching (as described in [chapter 7.2](#)) will be active again.

In default the Protected Mode is not enabled. If you intend to activate the Protected Mode proceed as described in [chapter 6.2.2.8](#).

7.5 Dark Switching of the Monitor

The **CATVision-system** offers the possibility that the monitor of the local or remote console can be switched of when a keyboard/mouse action is done at one of the attached consoles.

The dark-switching can be carried out:

- whilst **automatic switching**
- whilst **permanent access**

All of this issues will be explained in the following chapters.

7.5.1 Dark switching whilst automatic switching

In default (automatic switching), the hold function will be released by a keyboard/mouse operation. After the set time-out of approx. 1 second, the monitor of the of the disabled console will be released after the set time out (see [chapter 6.2.2.7](#)).

In default the “dark switching” is disabled. If you intend to activate the “dark switching” proceed as described in the [chapters 6.2.2.4 and 6.2.2.5](#).

7.5.2 Dark switching whilst permanent access

The dark switching of the disabled monitor is possible at keyboard and mouse action and in the mode “**Hold Function**” if the dark switching was enabled (see [chapters 6.2.2.4 and 6.2.2.5](#)).

The dark switching is activated by keyboard or mouse action or by activating the hold function (**CTRL + PRINT**).

The manual hold function will be disabled again by pressing **CTRL** and **PRINT** and the monitor of the disabled console will be released after the set time out (see [chapter 6.2.2.7](#)).

In default the “dark switching” is disabled. If you intend to activate the “dark switching” proceed as described in the [chapters 6.2.2.4 and 6.2.2.5](#).

7.6 Manual Logout

By pressing **F8** in the **Function Menu** you log-out.

This function deletes log-in to the **CATVision**.

After execution **CATVision** opens the LOGIN window:

- If you are still in the mode OPEN ACCESS you can directly log-in again with **Enter**.
- If you have opened User Accounts and OPEN ACCESS was disabled you can only have access to the system after entering your user password or the **supervisor** password.

Notice: You should use this function always then when you want to protect your computer against unauthorized access, e.g. when you leave your working place.

8 Optional Equipment

All components mentioned in this chapter are available as options. If you need one of these components please contact our sales department (phone: +49 2739 89010 or mail: sales@gdsys.de).

8.1 Delay

Delay balances the run time delays in CAT-x cables. These run time delays are caused by the twisting of the core pairs.

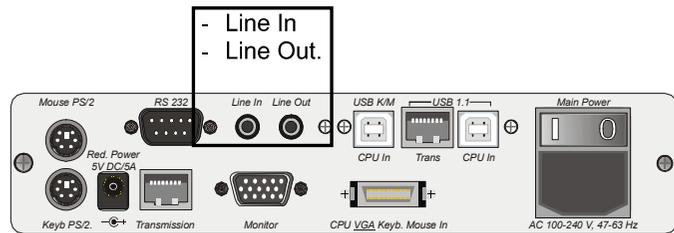
Because of these different lengths the colour signals **R**, **G** and **B** reach the monitor in different times. The effect of these run time delays is that you see no harmonic picture but colour shifts which can be compared with convergence errors at the monitor.

For balancing the run time delays **Delay** is used and described in [chapter 5.4.4.4](#).

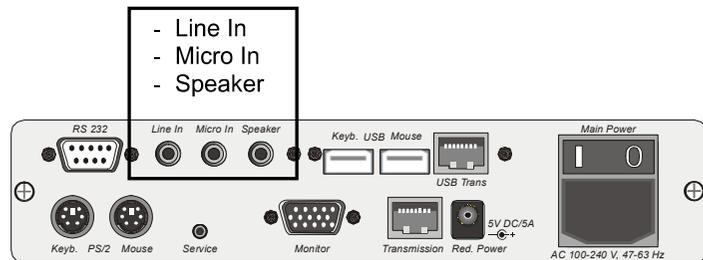
8.2 Audio

CATVision offers a bidirectional **Stereo-Audio transmission** nearly in CD quality.

For this **CATVision-CPU** has



CATVision-CON has the following connections:



The output is for sending the corresponding audio signals which come in at the other end of the transmitting distance.

The transmission of the audio signals is **digital** via CAT-x cable and so independent from the length of the cable.

Digitalisation is done with a resolution of 18 Bit and a scan rate of 48 kHz.

The connecting is designed as **3.5 mm jack**.

The inputs **Micro In** and **Line In** of the corresponding devices can not be used at the same time.

The input **Micro In** has a preamplification of 20 dB.

Here the connections used most often:

PC	CAT Vision-CPU	CAT Vision-CON	Periphery
1. Line-Out =>	Line-In	Line-Out	<= active speaker
2. Line-In =>	Line-Out	Micro-In	<= microphone

8.3 RS232

With the port RS232 external devices can be connected to **CATVision**. These devices must have the following characteristics:

- Transmission rate: up to 200 meter: max 38400 bits/sec
up to 100 meter: max 57600 bits/sec
- Transmittable signals: TxD, RxD, RTS, CTS, DTR, DSR

8.4 USB 1.1 transmission

Due to the used technologie you overcome the transmitting limitation of the USB standard between the PC and the USB – device.(normally up to 5 meter).

With the **CATVision-System** USB-devices can be connected up to 100 meter to the local PC.

Special note to the compatibility of the transparent USB 1.1 connection:

The USB-connection complies with the specification of the USB 1.1 standard, which defines the design of USB full-speed devices. However, the manufacturer does not guarantee, that all USB full-speed devices are compatible to the **CATVision**.

9 Keyboard/Mouse-Support

The following table explains, what kind of keyboard and mouse signals are supported by the **CATVision-System**, either direct or indirect (additionally with converter).

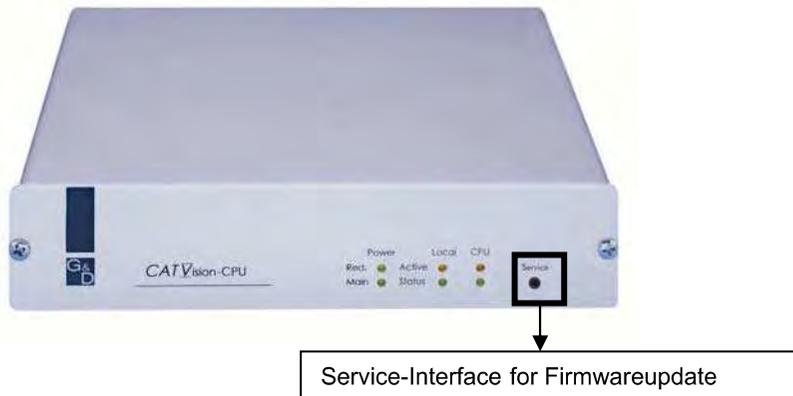
The explanation will be splitted in **CATVision-CPU** and **CATVision-CON**.

CATVision-CPU			
Format	Direct Support	Indirect Support (Conversion)	Comment
PS/2	X		
serielle Mouse	X		
USB	X		
RS/6000	X		
HP	X		
SUN		X	Connection via SUN-SET-CPU
SUN-USB		X	Connection via SUN-USB-CPU
SGI	X		
DEC Alpha Station		X	If a PS/2 keyboard is used, special keys of the DEC Keyboard are not usable
MAC		X	MAC without USB-Interfaces
Reuters DK 3000		X	No Support of acoustic signals and keyboard surveillance
Open Bloomberg	X		

CATVision-CON			
Format	Direct Support	Indirect Support (Conversion)	Comment
PS/2	X		
serielle Mouse			
USB	X		
RS/6000	X		
HP	X		
SUN		X	Connection via USB-CON
SUN-USB	X		
SGI	X		
DEC Alpha Station		X	If a PS/2 keyboard is used, special keys of the DEC Keyboard are not usable
MAC		X	MAC without USB-Interfaces
Reuters DK 3000		X	No Support of acoustic signals and keyboard surveillance
Open Bloomberg	X		

10 System-Update

Over a **Service-Interface** you can update **CATVision** with an actual firmware. This interface is located at the front-side of the **CATVision-CPU**.



The Service-interface at **CATVision-CON** is located at the rear-side.

For the daily use the Service-interface is for you without broader meaning.

Since the system can be updated with special hardware or new firmware releases, a permanent use of the CATVision-System will be ensured by the Service-interface. In one of these issues, please contact our service-department by dialing +49-2739-8901-100.

11 System Info

In the window **System Info** which only can be called up via **FUNCTION** menu no settings can be made.

Here you will find information about **CATVision** which is important for the service department.

With **ESC** you close the window.

12 CV-Power-Expansion

By the **CV-Power functionality** (GPIO=General Purpose Input Output) the **CATVision system** offers the possibility of transmitting electronic signals over long distances.

A correct application for this is the remote control of

- RESET and
- switching of the ATX power supply

in a PC. With a simple slot-aperture insertion card the current key switches are combined with the control signals of **CATVision**.

12.1 Scope of Delivery

For the connection at the CATVision-CPU

- | | |
|----------------------------------|---|
| ▪ 1 x CV power | Slot card (ATX module) for the installation in a PC |
| ▪ 2 x 2pole connection cable-0,4 | for the connection between motherboard and CV power (2-core jack/jack) |
| ▪ 2 x 2pole connection cable-0,4 | for the extension of the jack-jack cable (2-core connector/jack) |
| ▪ 1 x Power Cord-2 | Connection cable for connecting the CV power card with the CATVision CPU (3pole connector on RJ9 plug) |

For the connection at the CATVision-CON

- | | |
|--------------------------------|---|
| ▪ 1 x 3-pole cable jack | for the connection at the key switch connection cable |
|--------------------------------|---|

12.2 Installation

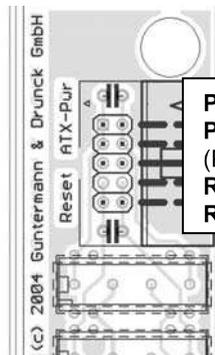
12.2.1 Installation in the PC

The connection of the **CV-Power (ATX module)** with the motherboard of the computer allows

- RESET and
- switching of the ATX power supply.

For switching the ATX power supply please proceed as follows:

- Open the side covers of the PC case
- Insert the ATX module **CV-Power** in a free extension slot. This does not require a PCI, ISA or AGP slot but just the installation position at the back of the computer.
- Pull off the 2-core cable at the motherboard coming from the ATX switch at the PC front side (Motherboard) and connect it to the connector **Pwr-Sw** ATX-Modul **CV-Power**.



The 2-pole connector position seen from bottom to top:

Pwr-Sw – Power connection to the ATX switch
Pwr-MB – Power connection to the motherboard (Place holder)
Res-MB – Reset connection to the motherboard
Res-Sw – Reset connection to the Reset switch

- Now connect the 2-pole connection cable with **Pwr-MB**. Connect the other end with the connecting position with the motherboard where the cable of the ATX switch was connected before. If the length of the 2-pole connection cable is not sufficient use the delivered extension cable.

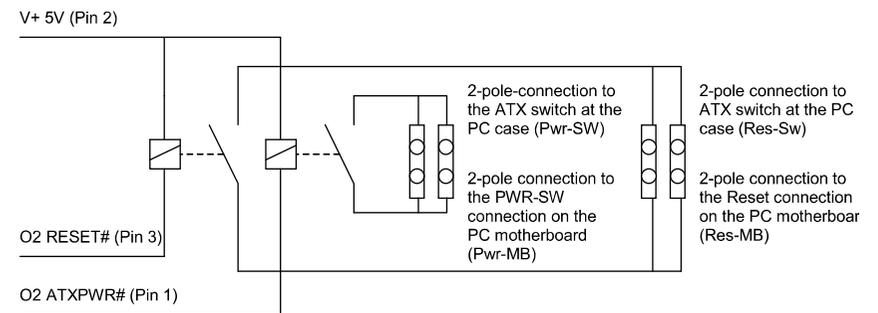
For establishing a Reset connection, proceed in the same way as described above. Here you connect the connector **Res-Sw** with the Reset switch and then the connector **Res-MB** of the module with the motherboard.

Even if there is no Reset button at the PC case a Reset is still possible. In this case **Res-MB** is connected with a 2-core cable with suitable connections for the Reset key switch on the motherboard.

Information:

For finding the correct contacts on the motherboard please see the manual of the motherboard.

Typical application: principle circuit for controlling ATX power and Reset:



The remote activation of Reset or On/Off of the computer only works at switched on and (over CAT-x cable) connected **CATVision-CPU** and **CATVision-CON**. At a correct wiring the key switches at the PC still work as usual.

12.2.2 Connction with CATVision-CPU

For establishing a connection between ATX module **CV-Power** and **CATVision-CPU** please use the delivered cable **PowerCord-2**.

- Plug the 3-pole jack of the cable in the 3-pole flange connector of **CATVision-CPU** on the back of the device.



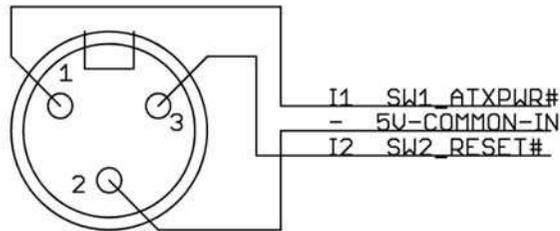
(3-pole flange connector)

- Then plug the RJ9 connector in the RJ-9 jack of the ATX module **CV-Power**.

12.2.3 Connection of the key switch with CATVision-CON

Before connecting the key switch with **CATVision-CON** the key switch has to be connected with the delivered 3-pole cable jack.

From the following illustration you can see which wire has to be connected with which PIN.



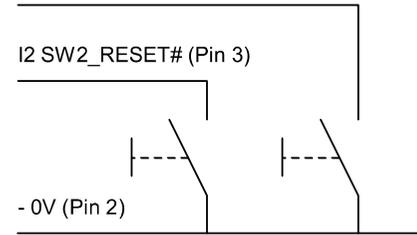
Male, exterior view

Principle circuit with key switches for Reset and ATX Power On/Off:

I1 SW1_ATXPWR# (Pin 1)

I2 SW2_RESET# (Pin 3)

- 0V (Pin 2)



After having connected the key switches with the 3-pole cable jack, plug these in the 3-pole flange connector of **CATVision-CON** on the back of the device.



(3-pole flange connector)

13 Specifications

13.1 CATVision

Video

- Resolution: max 1920 x 1440 pixels (depending on cable and video signal)
- Transmitting distance: 10 to 300 m (max value, depending on resolution, cable and video signal)
- Transmittable signals: RGBHV, RGSB or RsGsBs

Keyboard / Mouse

(ON COMPUTER + USER SIDE)

- Port/Transmission: USB, PS/2 / serial Mouse / Intelli-Mouse
RS 6000, HP 9000, SGI, DEC Alpha Station,
SUN-USB (at CATVision-MC-CON)
via adaptor: Sun, MAC

Mixed operation possible

RS232 (optional)

- Transmission rate: up to 100 meter: max 57600 bits/sec
up to 200 meter: max 38400 bits/sec
- Transmittable signals: TxD, RxD, RTS, CTS, DTR, DSR

Audio (optional)

- Resolution: 18 Bit digital
- Scan rate: 48 kHz
- Band width: 22 kHz
- Microphone preamplification: 20dB

USB 1.1 (optional)

- Transmitting distance: 100 meter
- Support: High power devices (up to 500 mA)
- Transmission rate: up to 12 Mbits/s

Transmitting cable: CAT-x cable or higher (x = 5, 6, 7)

Size: CATVision-CPU
(W x H x D in mm) 210 x 44 x 210 (19" / 1 unit)

CATVision-CON
210 x 44 x 210 (19" / 1 unit)

Weight:

CATVision-CPU		CATVision-CON	
without USB	1,20 kg	without USB	1,10 kg
with USB	1,28 kg	with USB	1,18 kg

Power supply:

- Main: 100 – 240 V primary
50 – 60 Hz
- Redundant: DC 12V
5 A

Current consumption (max. values):

	at 100 V (Main)	at 240 V (Main)	at 12 V (red.)
CATVision-CPU	140 mA	82 mA	600 mA
CATVision-CON	240 mA	100 mA	900 mA

Power consumption (max. values):

	at 100 V (Main)	at 240 V (Main)	at 12 V (red.)
CATVision-CPU	9,08 W	9,78 W	7,2 W
CATVision-CON	11,38 W	11,46 W	9,96 W

Heat dissipation (max. values):

	at 100 V (Main)	at 240 V (Main)	at 12 V (red.)
CATVision-CPU	9,08 W	9,78 W	7,2 W
CATVision-CON	11,38 W	11,46 W	9,96 W

Temperature range:

Operation: 5 to 40° C
rel. air moisture < 80%, non precipitate

Storage: - 10 to 55°C, < 85 % Air moisture

13.2 CATVision-MC

Video

- Resolution: max 1920 x 1440 pixels (depending on cable and video signal)
- Transmitting distance: 10 to 300 m (max value, depending on resolution, cable and video signal)
- Transmittable signals: RGBHV, RGsB or RsGsBs

Keyboard / Mouse

(ON COMPUTER + USER SIDE)

- Port/Transmission: USB, PS/2 / serial Mouse / Intelli-Mouse
RS 6000, HP 9000, SGI, DEC Alpha Station,
SUN-USB (at CATVision-MC-CON)
via adaptor: Sun, MAC

Mixed operation possible

RS232 (optional)

- Transmission rate: up to 100 meter: max 57600 bits/sec
up to 200 meter: max 38400 bits/sec
- Transmittable signals: TxD, RxD, RTS, CTS, DTR, DSR

Audio (optional)

- Resolution: 18 Bit digital
- Scan rate: 48 kHz
- Band width: 22 kHz
- Microphone preamplification: 20dB

USB 1.1 (optional)

- Transmitting distance: 100 meter
- Support: High power devices (up to 500 mA)
- Transmission rate: up to 12 Mbits/s

Transmitting cable: CAT-x cable or higher (x = 5, 6, 7)

Size: CATVision-MC 2 (3,4)-CPU; CATVision-MC 3 (4)-CON
Twin CATVision-MC 2-CPU
(W x H x D in mm) 435 x 44 x 210 (19" / 1 unit)

CATVision-MC2-CON
210 x 44 x 210 (19" / 1 unit)

Weight:

CATVision-MC2-CPU		CATVision-MC2-CON	
without USB	1,90 kg	without USB	1,35 kg
with USB	1,98 kg	with USB	1,43 kg
CATVision-MC3-CPU		CATVision-MC3-CON	
without USB	2,10 kg	without USB	2,00 kg
with USB	2,18 kg	with USB	2,08 kg
CATVision-MC4-CPU		CATVision-MC4-CON	
without USB	2,15 kg	without USB	2,00 kg
with USB	2,23 kg	with USB	2,08 kg

Power supply:

- Main: 100 – 240 V primary
50 – 60 Hz
- Redundant: DC 12V
5 A

Current consumption (max. values):

	at 100 V (Main)	at 240 V (Main)	at 12 V (red.)
CATVision-MC-CPU	410 mA	200 mA	2 A
CATVision-MC-CON	310 mA	160 mA	1,5 A

Power consumption (max. values):

	at 100 V (Main)	at 240 V (Main)	at 12 V (red.)
CATVision-MC-CPU	26,0 W	26,51 W	21,24 W
CATVision-MC-CON	19,51 W	21,96 W	16,56 W

Heat dissipation (max. values):

	at 100 V (Main)	at 240 V (Main)	at 12 V (red.)
CATVision-MC-CPU	26,0 W	26,51 W	21,24 W
CATVision-MC-CON	19,51 W	21,96 W	16,56 W

Temperature range:

Operation: 5 to 45° C
rel. air moisture < 80%, non precipitate

Storage: - 10 to 55°C, < 85 % Air moisture

14 Appendix

14.1 HotKey Seizure

Function	Default HotKey	Personal HotKey	Chapter
Calling up Function-Menu	CTRL+ NUM		6
Manual Hold function	CTRL + PRINT		7.3
Activating keyboard-mouse operation in protected mode	CTRL + PRINT		74
Calling up the IVT Mode	CTRL+ SCROLL		5.4
Shifting the IVT-Menu	SHIFT+ Cursor-Keys		5.4.4

14.2 IVT Settings

Parameter	Konfiguration Key	Chapter
CALLING UP THE IVT MODE	CTRL + SCROLL	5.3
Min Amplification	END	5.4.4.3.1
Max Amplification	POS 1	5.4.4.3.1
+ 5 Amplification	CTRL + →	5.4.4.3.1
- 5 Amplification	CTRL + ←	5.4.4.3.1
+ 1 Amplification	→	5.4.4.3.1
- 1 Amplification	←	5.4.4.3.1
Reject new settings	ESC	5.4.4.3.1

14.3 Password

For OpenAccess name and password are not necessary.

If you want to configure the system you have to log-in as SUPERVISOR!

Please watch the spelling.

Remove the password from this manual!

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