

**OPERATING AND MONITORING ACCORDING  
TO GMP REQUIREMENTS**

**VISUALIZATION WITH  
VISUNET GMP**





## PEPPERL+FUCHS

Pepperl+Fuchs provides components, systems and solutions for the most complex problems in process technology. We are able to achieve this through technical expertise, market proximity and development processes in which our customers play an active role.

Pepperl+Fuchs' applications focus primarily on the chemical industry, oil and gas production and processing as well as the pharmaceutical and food industries.

Our products are always designed using state-of-the-art technology. Competent and experienced engineers and consultants across the globe stand ready to lend their assistance. Should you require solutions for process automation in the future, just ask Pepperl+Fuchs.

## SYSTEC & SERVICES

Our partners for conceptual process solutions: Systec & Services has a wealth of know-how and expertise from many years of experience in the process industry.

Systec & Services designs and implements customized, cost-effective GMP IT solutions according to your requirements, offering you innovative technology with a high degree of availability for your production environment.

## RELIABLE PARTNERS

Both partners have many years of experience in joint projects and have adapted their products and services to complement each other.



Pharmaceuticals



Food products



Fragrance and flavors



Cosmetics

## GMP – GOOD MANUFACTURING PRACTICE

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 fragrances or flavors.

The materials selected, design of the surfaces and architecture of the overall system should prevent the accumulation of fluids and dirt.

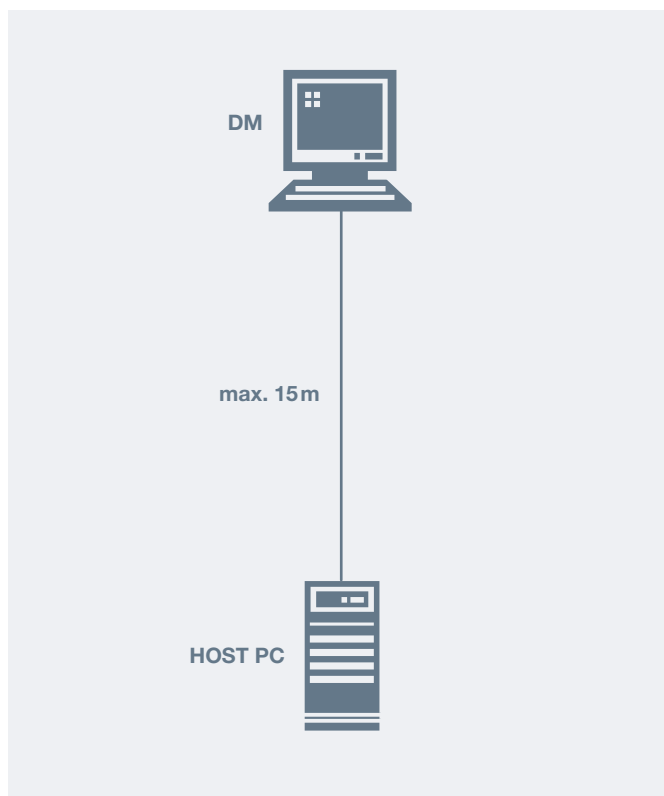
Cleaning, maintenance, inspection and servicing must be as safe and easy as the processes employed for the disinfection, pasteurization and sterilization of mechanical components.

The VisuNet GMP product portfolio extends from simple monitors and remote monitor systems with Ethernet connection to a host PC, to complete PCs available with single or dual monitor systems and various mounting options. All models feature a 19-inch display with an optional touch screen. The stainless steel housings have an IP65 degree of protection. Remote monitors and PCs are equipped with RS232, PS/2, Ethernet and USB interfaces.

## VISUALIZATION PLATFORM FOR ANY SYSTEM INFRASTRUCTURE

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: high-quality industrial monitors,

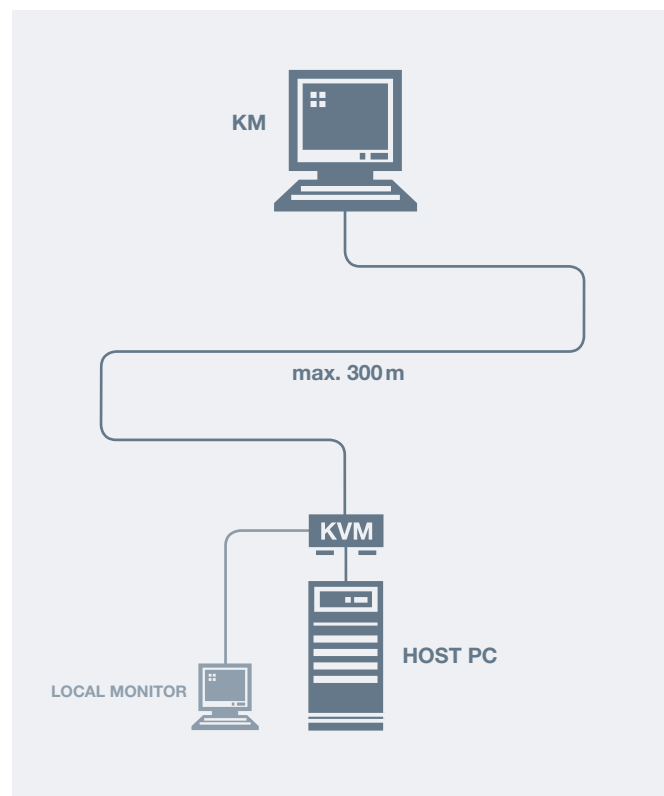
### DIRECT MONITOR (DM)



- PC monitor
- Direct connection to host PC graphics card (VGA and DVI)
- Maximum range 15 m
- No additional hardware required
- Keyboard, mouse and peripherals connected directly to the host PC (PS/2 and USB)

DMs are monitors with VGA and DVI connections that do not incorporate additional elements. Industrial keyboards with integral mouse connected directly to the host PC are available as accessories.

### KVM MONITOR (KM)

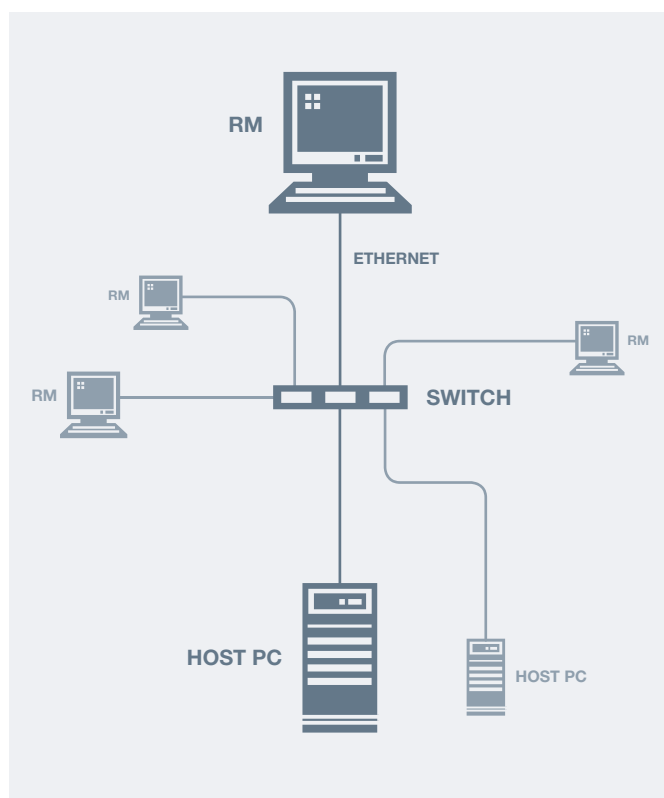


- PC monitor with KVM extender/extension
- Operation of remote host PC (via KVM extender/extension)
- Maximum of 300 meters between KM and host
- Transfer using standard CAT-5e cable
- Suitable for applications where the host PC does not need to be positioned in the direct vicinity of the monitor

The KM monitor consists of a DM monitor and an integral KVM extender, which incorporates a monitor, keyboard and mouse to transfer serial signals over long distances to the host PC.

monitor systems with KVM extension, remote monitors with network connection and panel PCs with integral PC functions.

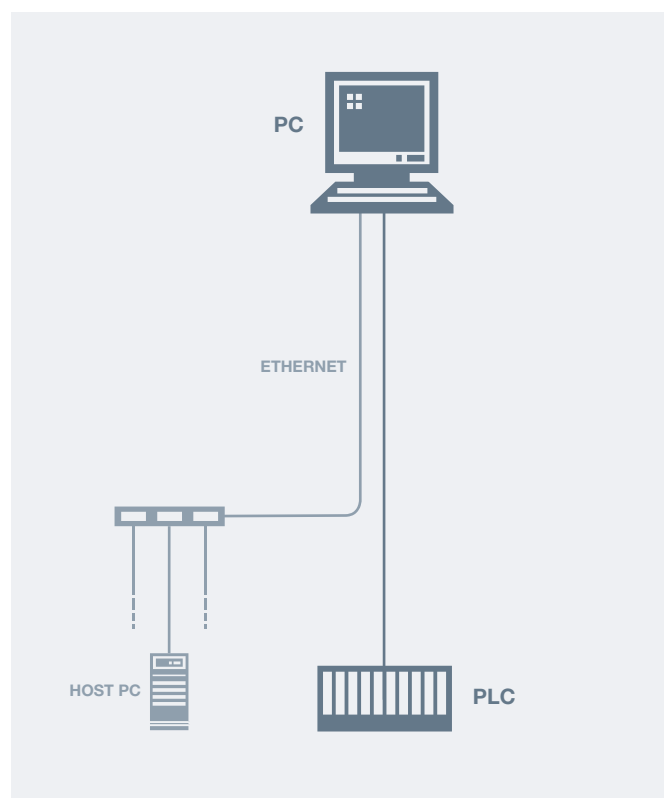
## REMOTE MONITOR (RM)



- Network monitor
- Access to remote host PCs via Ethernet and TCP/IP
- Fully digital image transfer for perfect image display
- Option of connecting to several host PCs
- No range restrictions (due to network technology)
- Transfer using standard CAT-7 cable

The remote monitor automatically connects to the host PC using RDP, ICA or VNC, enabling via the network.

## PANEL PC (PC)



- Panel PC
- Monitor with integral industrial PC
- Suitable for combined system control and visualization
- Network-compatible
- Can be used as a stand-alone solution
- PLC protocols can be used via serial interfaces (RS232/RS422/RS485)

The complete industrial PC system has many standard interfaces (network, USB, serial). The operating system used is Windows XP® Professional. Customers can, therefore, install software packages for control, visualization and production. The system operates independently of any external computing power.

## MODULAR CONCEPT FOR CUSTOMIZED SOLUTIONS

The VisuNet GMP product family offers a wide range of models. Different display types, keyboard layouts for international use and different mouse versions are available as well as a large number of mounting options, alternative data transfer methods and additional functions.



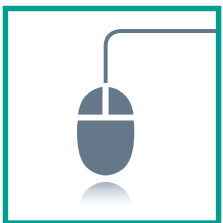
### MONITOR

The VisuNet GMP product family has a 19-inch display size. A TFT display with a resolution of 1280x1024 pixels is included in the standard version. Dual monitor systems are also available. These monitors are suitable for applications where the process control system must be displayed on one monitor and the recipe information on the other monitor. The monitor is available with a touch screen display.



### KEYBOARDS

Membrane keyboards in stainless steel housings for the VisuNet GMP are available with customized layouts for use in different countries. The existing selection includes German, English, French, Danish and Spanish keyboard layouts, others are available on request.



### MOUSE VERSIONS

Different mouse versions can be selected irrespective of the keyboard layout: The range includes mechanical and visual track ball mice, touchpads and joysticks.



### MOUNTING OPTIONS

The VisuNet GMP can both be mounted on the floor or at the wall, either with a wall bracket or a support arm. Rotating versions of the pedestal and support arm are available. A selection of different pedestals for floor installations is also available. Monitors are mounted on the wall via a support arm or mounting plate.



### DATA CONNECTION

In addition to input via interfaces, future versions of the VisuNet GMP will include options for barcode and RFID input.





## VISUNET GMP – SERVICE INCLUDED

A portfolio of engineering services adapted specially for this product line complements the VisuNet GMP product range. Systec & Services GmbH based in Karlsruhe is a partner of Pepperl+Fuchs and designs and implements customized, cost-effective GMP IT solutions according to customer requirements. The company has a wealth of know-how and expertise from many years of experience in the process industry.

Systec & Services and Pepperl+Fuchs have successfully completed numerous projects for Life Science customers and are constantly adapting their services and product portfolio to align with market requirements.

Systec & Services designs, configures, installs and certifies complete solutions according to official regulations:

- Definition of functional specifications
- Hardware design specification
- Engineering
- Hardware installation + integration
- Installation qualification (IQ)
- Integration test
- Validation report



# PROCESS AUTOMATION – PROTECTING YOUR PROCESS



For over a half century, Pepperl+Fuchs has been continually providing new concepts for the world of process automation. Our company sets standards in quality and innovative technology. We develop, produce and distribute electronic interface modules, Human-Machine Interfaces and hazardous location protection equipment on a global scale, meeting the most demanding needs of industry. Resulting from our world-wide presence and our high flexibility in production and customer service, we are able to individually offer complete solutions – wherever and whenever you need us. We are the recognized experts in our technologies – Pepperl+Fuchs has earned a strong reputation by supplying the world's largest process industry companies with the broadest line of proven components for a diverse range of applications.

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