



# OPERATING AND MONITORING IN HAZARDOUS AREAS AND INDUSTRIAL ENVIRONMENTS

## PRODUCT OVERVIEW

- VISUNET
- IPC-EX
- TASTEX
- TERMEX
- POWERSCAN
- ACCESSORIES
- VISUNET GMP



# OPERATING AND MONITORING IN HAZARDOUS AREAS AND DEMANDING ENVIRONMENTS










The Human Machine Interface (HMI) center of excellence for Pepperl+Fuchs is located south of Stuttgart in Wernau, Germany. The site is home to the R&D department, production, and a group of specialists who, by working closely with Pepperl+Fuchs customers, continually adapt the product portfolio to reflect market requirements.

The Pepperl+Fuchs HMI team are experts in applications for hazardous areas and extremely demanding industrial environments. HMI components, systems and solutions are found in all process environments from the food and pharmaceutical industries to hazardous areas in the chemical, and oil and gas industries. The product portfolio consists of complete PC systems, remote monitors, monitor systems and operator panels as well as peripherals such as barcode readers or stand-alone keyboards. Since the beginning of 2009, customers have benefitted from the new product line for "Good Manufacturing Practice" (GMP) applications, which meet the strict regulations governing certain industries, e.g., pharmaceuticals, food.

## OVERVIEW

- HMI components, systems and solutions for hazardous areas and environments with GMP requirements
- Complete PC systems, remote monitors, monitor systems, operator terminals and peripherals such as barcode readers or stand-alone keyboards
- Chemical, petrochemical, pharmaceutical, food, mechanical engineering

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	<b>PANEL PCs</b> <b>REMOTE MONITORS</b> <b>MONITOR SYSTEMS</b>	Premium Design visualization systems that meet GMP requirements, specifically for regulated industries.



# VISUNET – A NETWORK-BASED HMI SYSTEM FOR HAZARDOUS AREAS

VisuNet is an HMI system for hazardous areas that transfers data via Ethernet and does not require proprietary structures. Ethernet-based networks in automation technology can, therefore, also be used for PC-based visualization.



## OVERVIEW

- ATEX and IEC-approved for Zones 1 and 21
- Ethernet-based data transfer over distances of up to 90 meters – up to 2 km possible using the option box
- Available as a panel PC or a remote monitor
- System platform with different display sizes, touch option, keyboard layouts, mouse types, etc.
- Floor, wall or ceiling mounting, each option available as a fixed, rotating, tilting or both rotating and tilting solution



Changes to the topology of a plant can be made quickly and easily. No additional data transfer elements, such as a KVM amplifiers, are required. VisuNet is available as both a PC and a remote monitor system. Even though the whole system is in the hazardous area when the VisuNet PC is in use, the PC is in the safe area up to two kilometers away from the keyboard, mouse and screen (fiber optic link).



## IPC-EX – THE PC CONTROL STATION FOR HAZARDOUS AREAS

The iPC-Ex visualization platform is used in conjunction with process control systems and is approved for ATEX Zones 1 and 22. With the iPC-Ex system, the monitor, keyboard and mouse of the operating and monitoring system are in the hazardous area, yet the PC itself may be up to 750 meters away in the safe area. The SK-KVM Line Driver installed in the safe area is an optical interface to facilitate the transfer of keyboard, video and mouse data from the iPC-Ex in the hazardous area to a standard PC in the safe area.

### OVERVIEW

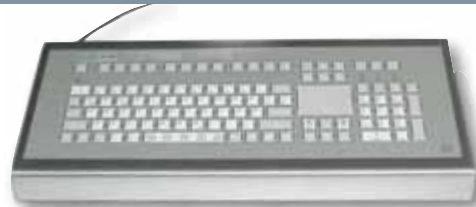
- ATEX and IEC-approved for Zones 1 and 22
- Data transfer via fiber optics over distances of up to 750 meters
- Local monitor also available via the line driver in the safe area
- System platform with different display sizes, touch option, keyboard layouts and numerous housing options
- Floor, wall or ceiling mounting, each option available as a fixed, rotating, tilting or both rotating and tilting solution



## PERIPHERALS – THE HMI ACCESSORIES RANGE

### TASTEX – INTRINSICALLY SAFE STAND-ALONE KEYBOARDS FOR HAZARDOUS AREAS

The intrinsically safe keyboards are PC compatible and comply with ATEX regulations for use in hazardous areas. They are designed for Zone 1 and their housing is IP65 rated.



### OPTION BOX: MEDIA CONVERTER AND POWER SUPPLY FOR HAZARDOUS AREAS

The OB31 option box is IEC and ATEX-compliant for Zones 1 and 21. It is used to bridge large distances that are non-segmentable with the aid of fiber optic cables (up to 2 km) or DSL copper cable (up to 1 km) and also provides a 24 V DC supply.



### RJ switch – for more flexibility in Zone 2

The RJ switch is used for transfer distances between 90 and 150 meters in Zone 2. Equipped with five ports, the switch not only increases the transfer distance, other components can also be connected.



### i.roc – robust industrial PDA for hazardous areas

Depending on the model, the i.roc industrial PDA is ATEX approved for Zones 1 and 21, 2 and 22 and also conforms to FM standards for Class 1, Div. 1 or Div. 2.



# TERMEX AND POWERSCAN – CAPTURE AND PROCESS OPERATING DATA IN THE HAZARDOUS AREA

## TERMEX – INTRINSICALLY SAFE OPERATOR PANELS FOR HAZARDOUS AREAS

Approved for ATEX Zones 1 and 22, Intrinsically safe operator panels are ideal for the flexible and cost-effective operating and monitoring of machines and processes.

TERMEX terminals are typically connected to a PLC. A range of interfaces is available for the transfer of data. These include interfaces such as RS232, RS485 or TTY as well as fieldbus protocols such as Modbus or PROFIBUS DP. Today's standard programmable logic controllers from all major manufacturers can also communicate with TERMEX terminals.

The TERMEX terminals are also available with FM certification. Together with the "ENT-DC" intrinsically safe power supply unit, the compact display and operating units are ready for use in North America. Approvals are granted according to IS Cl. I, Div. 1, GP A, B, C, D.

TERMEXpro 4.0 provides TERMEX users with a Windows-based tool for graphical project designs that allows even complex projects to be realized.

### OVERVIEW

- Intrinsically safe operator panels approved for ATEX Zones 1 and 22 and FM Cl. I, Div. 1
- Interfaces: RS232, RS485 or TTY plus fieldbus protocols such as Modbus or PROFIBUS DP
- Compact dimensions and 5.7" display
- TERMEXpro for graphics-based project designs



## POWERSCAN CAPTURES COMPUTER-COMPATIBLE OPERATING DATA IN HAZARDOUS AREAS

PowerScan is suitable for use in ATEX Zones 1 and 21 hazardous areas for data acquisition or logistics applications, etc.

The PowerScan can be connected to a host PC up to 150 meters away or operated in combination with TERMEX operator panels or control stations from the VisuNet or iPC-Ex range from Pepperl+Fuchs.

### OVERVIEW

- Intrinsically safe barcode reader that meets all requirements for ATEX Zones 1 and 21
- Can read all standard barcode formats
- Reading distance from 60 mm to 1100 mm
- Maximum distance from host: 150 m
- Functional reliability guaranteed up to a drop height of 2 m





# VISUNET GMP – OPERATING AND MONITORING UNDER GMP CONDITIONS

VisuNet GMP is a product range from Pepperl+Fuchs which is tailored to the specific requirements of Life Science industries, such as pharmaceuticals or food & beverages. The product portfolio includes monitors, remote monitors and PCs.

## GMP – THE HIGHEST DEMANDS ON THE DESIGN

The design of the premium product range VisuNet GMP was tailored especially for the use in life science industries. GMP (Good Manufacturing Practice) describes requirements for the quality control of production processes, which are issued from institutions, such as the European Commission and the US American FDA. Selected materials, surfaces, as well as the overall architecture of these systems are designed to prevent the accumulation of dirt and fluids. In addition, the support safe and easy cleaning, maintenance, inspection and repairs of all mechanical components. The same is true of disinfection, pasteurization and sterilization.

## 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. All models feature stainless steel cabinets according to protection rating IP65. Remote monitors and PCs offer RS232, PS/2, Ethernet, as well as USB interfaces.

### Monitor

The VisuNet GMP product family has a 19-inch display size. A TFT display with a resolution of 1280 x 1024 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

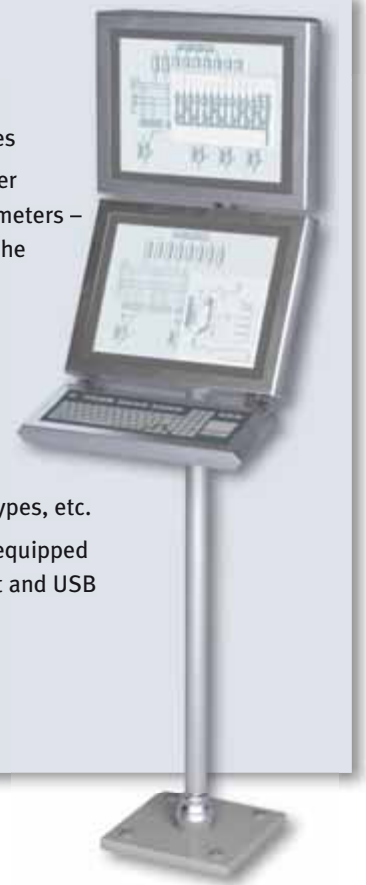
Different mouse versions can be selected irrespective of the keyboard layout: The range includes mechanical and visual track ball mice, touchpads and joysticks.

### Mounting Options

The VisuNet GMP can be mounted on the floor or the wall, depending on requirements. 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.

## OVERVIEW

- Completely redesigned visualization platform according to GMP guidelines
- Ethernet-based data transfer over distances of up to 90 meters – up to 2 km possible using the option box
- Available as a PC, remote monitor or remote monitor system
- System platform with 19" displays, touch option, keyboard layouts, mouse types, etc.
- Remote monitors and PCs equipped with RS232, PS/2, Ethernet and USB interfaces.



# 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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