# ENDURANCE TO WITHSTAND THE ENVIRONMENT

## VISUNET PANEL MOUNT SOLUTIONS

**PEPPERL+FUCHS**

*PROTECTING YOUR PROCESS*

## OUTPERFORMING THE CONDITIONS

When it comes to industrial HMIs, quality and performance are nonnegotiable! Harsh conditions in process facilities can be extremely problematic for control and monitoring equipment. Visualization systems are subject to moisture and extreme temperature shifts as well as solvents, chemicals, and pressure cleaning. For electrical components, an easy solution is to place only essential components in the field and use data lines to connect with the safe area. This separation minimizes exposure to harsh conditions and decreases susceptibility to faults.

Our industrial products are built to outperform your toughest conditions.

**To learn more go to: www.visunet.com**



*VisuNet panel PCs and remote monitors are ready for 24/7 operation.*



*Every VisuNet monitor is built to outperform the toughest conditions.*

## YOUR BENEFITS

- Industrial-grade design and manufacturing for extreme environments
- Shock-absorbing gasket makes monitors and panel PCs resilient to shock and vibration
- Globally certified for Class I, II/Div.2 and ATEX Zone 2
- Extended temperature range, -20 °C to +50 °C for indoor/outdoor applications

## SELECTABLE CONFIGURATIONS

An HMI workstation is a single interface for managing recipes and monitoring control variables and alarm systems. The ability to easily access this information from the plant floor saves time and can prevent process interruptions. Pepperl+Fuchs' VisuNet industrial monitors are a key component in plant floor visualization and are engineered to endure harsh, unyielding environments. Hot or cold, dirty, dusty, wet, caustic process surroundings are no match to the resilience of the VisuNet industrial design.

- Highest MTBF in the industry ≥ 550,000 hrs

- Sleek, all-in-one solution available, 10" to 22" widescreen

- Manufactured using only industrial-grade components

- Gold-plated connectors – provide corrosion protection

- True industrial LCDs – provide brighter screen, wider viewing cone, and true colors

- Shock-mount gasket – ensures reliable operation

- Fanless design – adds to reliability

- Compression fit touchscreen – provides accurate touch without recalibration maintenance

*PC-based control supports greater processing speeds, flexibility, and simplified integration.*

## VISUNET MONITORS (DM500)

VisuNet DM industrial monitors are specifically designed to deliver reliable operation and long life in harsh application environments. Made with only industrial-grade components – no consumer-grade electronics – they are true industrialized monitors. VisuNet DM industrial monitors are fully configurable to suit specific application requirements, are listed and registered for North American use, and carry the CE mark. They are available for general-purpose or Class I/Div. 2, Zone 2 environments. Touchscreen and transflective options are available.

- Connects directly to the PC
- Use in hazardous and nonhazardous areas
- Antiglare and transflective options
- 12 VDC powered, externally powered for increased reliability
- Fully configurable to suit specific application requirements
- 10" to 22" widescreen format
- 10" to 19" (4:3) and 22" (16:10)

DM

HOST-PC

*Properly engineered for continuous duty in general-purpose and Class I, Div. 2 and Zone 2 hazardous rated areas.*
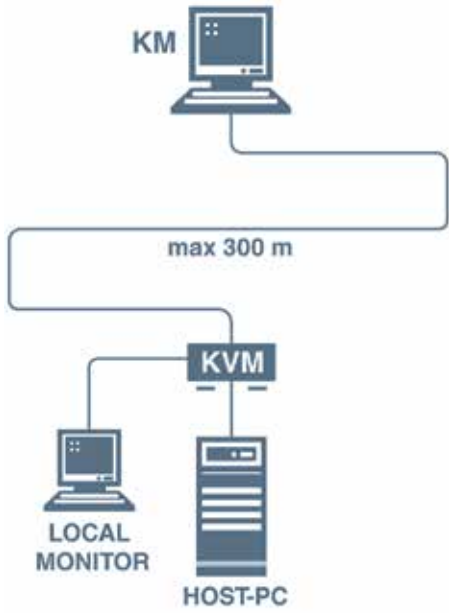
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## VISUNET PANEL MOUNT KVM MONITOR (KM8200)

The KVM extender consists of a receiver, which is embedded in the KVM monitor, and a transmitter that communicates with the host PC. Together they act as an electronic extension cord, sending keyboard, video, and mouse or touchscreen signals. They communicate over long distances while maintaining high-quality VGA or DVI video resolution. It uses a standard CAT5 cable or fiber-optic cable that can range up to 300 meters/1000 feet. This technology facilitates the use of standard control room PCs in a controlled environment and is commonly used to duplicate the HMI graphic in harsher industrial environments or to move a KVM monitor closer to the operating machinery. KVM monitors with KVM extenders are designed for use in areas where the host PC cannot be installed near the industrial monitor, such as in a portable drilling rig or cookers/steamers/processing equipment in the food industry.

- High-quality video and noise immunity over long distances
- Reduced space requirements in the hazardous area...only the monitor is located in the hazardous area
- Extend control room HMI with no additional licensing

*KVM extenders provide hardware safety and protection by allowing you to place computers and servers in a centralized location far away from environmental hazards.*

## PRODUCT SPECIFICATIONS

| Model Variant | VGA | DVI | CAT 5 | FIBER | USB | PS2 | AUDIO | SERIAL |
|---|---|---|---|---|---|---|---|---|
| K3 | ■ | - | ■ | - | - | ■ | ■ | ■ |
| K4 | - | ■ | ■ | - | ■ | - | ■ | ■ |
| K5 | - | ■ | - | ■ | ■ | - | ■ | ■ |

## VISUNET PANEL MOUNT REMOTE MONITOR (RM8200)

VisuNet remote monitors are part of a virtualization strategy designed to communicate with host PCs or servers installed in remote locations using a standard Ethernet network. Using this technology there is virtually no limitation in the distance between the remote monitor and host PC. Multiple RM workstations can connect to a server or servers via independent Windows sessions on the same network. Data is digitally transmitted using Microsoft® RDP, Citrix ICA, or VNC protocol. This networked monitor strategy allows flexible administration of operator workstations, be it server upgrades or software revision management on the host side.

- Standard Ethernet networking connections to the server—no expensive converter

- Access multiple workstations from one server

- Supports Remote Desktop Service applications: Microsoft RDP, Citrix® ICA, and VNC

- Compressed video traffic—only changes in graphics are transmitted

- Dual Ethernet ports

- Patented technology

- Toggle between multiple sessions using a hot key

- Automatically re-establishes connection in the event it is lost
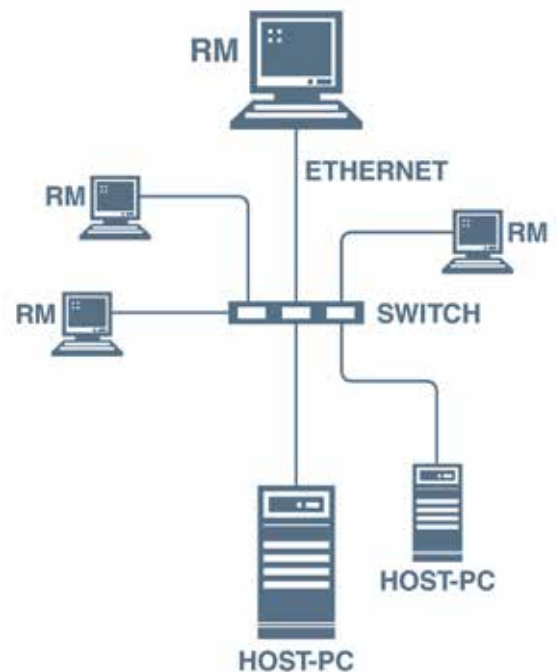


*Our patented RM technology makes installation and managing terminals simple. Each RM automatically connects to its own session on the terminal server.*

## VISUNET PANEL PC (PC8200)

VisuNet panel PCs are industrial monitors with an integrated industrial-grade PC. Panel PCs operate as stand-alone solutions for combined plant control and visualization. Standard interfaces include Ethernet, USB, and serial ports. The Windows® operating system allows the user to install software packages for plant control, visualization, and production. Two processor options ensure compatibility with the majority of off-the-shelf HMI and SCADA software. Panel PCs communicate directly with PLCs within the same cabinet or are networked over Ethernet or serial communications.

■ Full PC with excellent performance from the Intel® Atom™ or Core™ 2 Duo processor

■ Low power consumption allows the unit to conserve energy and dissipate very little heat when idling

■ 80 GB SSD

■ Fanless design

■ Rack mount option
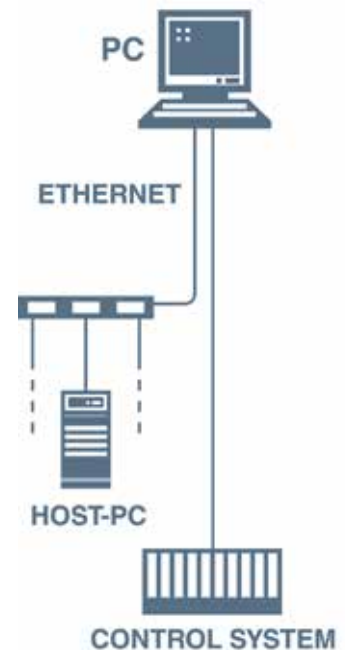


*Vibration and shock resistance are what make VisuNet panel PCs suitable for extreme conditions.*

## SPECIFICATIONS

The VisuNet product family offers a wide range of models that includes various display sizes and communications protocols.

*Vibration and shock resistance are what make VisuNet panel PCs suitable for extreme conditions.*

| | RM | PC | KM |
|---|---|---|---|
| **Display** | | | |
| Screen Size | 15.0" / 19.0" | | |
| Display Resolution | 1024 x 768 (XGA) / 1280 x 1024 (SXGA) | | |
| Brightness | GP, Div 2:  15" 500 nits, transflective 600 nits, 19" 300 nits / ATEX Zone 2:  15"400 nits, 19" 500 nits | | |
| Viewing Angle | 160° | | |
| MTBF | 500,000 hrs backlamp 50,000 hrs (typical) | | |
| **Input Devices** | | | |
| Touchscreen (optional) | 5-wire resistive touch | | |
| **PC System** | | | |
| Processor | 1.6 GHz Atom, N270 | 1.6 GHz Atom / GHz Core 2 Duo | KVM, VGA, DVI Copper or Fiber Optic |
| RAM | 1 GB RAM DDR2 | 2 GB RAM DDR2 | none |
| Mass Storage | 512 MB (CompactFlash) | 80 GB solid state | none |
| Interfaces | 2 x GB Ethernet, 1 x USB, 1 x RS232 | 1 x GB Ethernet, 2 x USB, 1 x RS232 2 x GB Ethernet, 2 x USB, audio, 1 x RS232 (Core 2 Duo) | 2 x USB, or 2 x PS/2, 1 x RS232, audio |
| **Environmental/Electrical** | | | |
| Ambient / Storage Temperature | -20 °C to 50 °C / -20 °C to 60 °C | | |
| Humidity | 0% to 90% non-condensing | | |
| Vibration | 5 Hz to 100 Hz, 1 g 12 m/s$^2$ all axes | | |
| Shock | 30 g, 6 ms, all axes | | |
| Supply Voltage | 20 VDC to 30 VDC, 100 VAC to 240 VAC, 50 Hz to 60 Hz | | |
| Power Consumption | 60 W (Core™ 2 Duo), 48 W (ATOM) | | |
| **Weights and Dimensions** | | | |
| Dimensions | 15" = 16.9" (429) x 13.6" (345) x 4.4" (112)   19" = 19.0" (483) x 16.2" (411) x 4.4" (112) | | |
| Weight | 15" = 19 lbs (8.6 kg)   19" = 25 lbs (11.3 kg) | | |
| Degree of Protection | Type 4 or 4X (front panel) | | |
| **Certifications** | | | |
| North America | cUL$_{US}$, Class I / Div 2, Groups A-D, T4 / cⓊⓁus, Class II / Div 2, F and G, T4 | | |
| ATEX | CE EX II3 G Ex nA IIc T4 (pending) | | |

**PC8215 - A - GP - P7 AC CL5 - N K0 L0 - S0 - N**

**Options**
**N** — Option

**Special Accessories**
**S0** — No special accessories

**Keyboard Layout**
**L0** — No keyboard, no layout

**Keyboard / Mouse Version**
**K0** — No keyboard, no mouse

**Keyboard housing**
**N** — No keyboard, no mouse

**Housing / Frontplate Version**
**CL5** — Panel mount, stainless steel (1.4404/316L)
**CP5** — Panel mount, black painted steel
**CP6** — 19" rack mount, black painted steel - 19" display only (CP only)

**Power Supply**
**DC** — 24 VDC

**Board Specification (pick one from a color code that matches the monitor type, above)**
**P8** — Intel Core 2 Duo, 1.5 GHz, 2 GB RAM, 80 GB SSD, 2 x USB, 1 x network,
Microsoft Windows XP Professional with Service Pack 3 (SP3) with Multilingual User Interface
**P9** — Atom 1.6 GHz, 2 GB RAM, 80 GB SSD, 2 x USB, 2 x network,
Microsoft Windows XP Professional with Service Pack 3 (SP3) with Multilingual User Interface
**T2** — Remote Monitor, ATOM 1.6 GHz, 1 GB RAM, 512 MB Flash, Windows XP embedded
**K3** — KVM for VGA video included, 2 x PS/2, 1 x RS232, analog CATx cable transmission
**K4** — KVM for DVI-D video included, 2 x USB interface, 1 x RS232, CATx cable transmission
**K5** — KVM for DVI-D video included, 2 x USB interface, 1 x RS232, fiber-optic transmission (multimode), 2 x LC connectors

**Protection**
**GP** — General purpose, industrial, not for hazardous locations
**D2** — Class I, Div. 2, Groups A, B, C, D/Class II, Div. 2 Group F and G
**V3** — Class I, Div. 2/Class II, Div. 2/ATEX Zone 2 (12", 15", and 19" only) [pending]

**Screen/Touchscreen Type**
**A** — Antiglare glass front, no touchscreen
**R** — Touchscreen, resistive, 5-wire, hardened glass
**T** — Touchscreen, resistive, 5-wire
**L** — Transflective display, with antiglare front, non touch (15" only)
**H** — Transflective display with touchscreen, resistive, 5-wire, hardened glass (15" only)
**M** — Transfective display with touchscreen, resistive, 5-wire (15" only)

**Monitor Type & Display Size**
**PC8215** — PC, 15.0", XGA (1024 x 768 pixel)
**PC8219** — PC, 19.0", SXGA (1280 x 1024 pixel)
**RM8215** — Remote monitor, 15.0", XGA (1024 x 768 pixel), Ethernet network connection, RDP
**RM8219** — Remote monitor, 19.0", SXGA (1280 x 1024 pixel), Ethernet network connection, RDP
**KM8215** — KVM monitor, 15.0", XGA (1024 x 768 pixel), KVM attached
**KM8219** — KVM monitor, 19.0", SXGA (1280 x 1024 pixel), KVM attached

*Looking for a complete operator workstation? Our panel mount solution is ready to drop into an enclosure.*

*Need an enclosure? Our Systems and Solutions design team can help.*

*Panel mount solutions can be easily made into a sleek Div. 1 solution with our integrated purge component kit.*

## SPECIFICATIONS

We offer a variety of configurable options and features to create the exact panel mount solution for your application. Don't see the exact options that you need? In addition to our standard products, we also offer custom engineered solutions designed by our in-house engineers. Pepperl+Fuchs is a UL 508 and Industrial controls for hazardous location ( NNNY & 698A ) certified panel shop. Talk to us about your requirements, and we can provide CAD drawings and a quote in two to three business days.

### PRODUCT SPECIFICATIONS

| Model Number | | DM510 | DM512 | DM515 | DM519 | DM522 |
|---|---|---|---|---|---|---|
| Diagonal Viewing Area | (in) | 10 | 12.1 | 15 | 19 | 22 |
| Equivalent CRT Size | (in) | 12 | 14 | 17 | 21 | — |
| Native Resolution | | 800 x 600 | 800 x 600 | 1024 x 768 | 1280 x 1024 | 1680 x 1050 |
| Maximum Resolution | | 800 x 600 | 1024 x 768 | 1280 x 1024 | 1600 x 1200 | 1680 x 1050 |
| Brightness | (nit) | 400 | 400 | 500 | 300 | 300 |
| Overall: Width x Height x Depth | (in) | 12.1 x 9.9 x 3 | 13.9 x 11.5 x 3 | 16.9 x 13.6 x 2.9 | 19 x 16.2 x 3.7 | 22.5 x 15.5 x 3.0 |
| | (mm) | 307 x 252 x 76 | 353 x 292 x 76 | 429 x 345 x 74 | 483 x 412 x 94 | 572 x 394 x 76 |
| Cutout: Width x Height | (in) | 11.1 x 8.9 | 12.6 x 10.2 | 15.9 x 12.6 | 17.9 x 15.2 | 21.2 x 14.2 |
| | (mm) | 282 x 226 | 320 x 259 | 404 x 320 | 455 x 386 | 536 x 358 |
| Panel Mount | | ■ | ■ | ■ | ■ | ■ |
| Enclosed Mount | | | ■ | ■ | ■ | |
| Chassis Mount | | | ■ | ■ | | |
| Stainless Steel Bezel | | ■ | ■ | ■ | ■ | ■ |
| Current Consumption: @ 12 VDC | | 1.2 A | 1.2 A | 2.5 A | 3.2 A | 4.5 A |
| $_cUL_{US}$ Class I/Div. 2 | | ■ | ■ | ■ | ■ | ■ |
| $_cUR_{US}$ Class II/Div. 2 | | ■ | ■ | ■ | ■ | ■ |
| Atex Zone 2 | | | ■ | ■ | ■ | |



*Displays can be integrated with purge systems for Class I/Div.1 hazardous environments.*



*Designed for continuous duty: Heavy gauge metal and wiring, corrosion protection, internal bulkhead wiring, and gold-plated latching tie downs.*

# DM510 - A0 - GP - N0 - N

**Options**
**N0** — No option
**NT** — NTSC input

**Mounting/ Frontplate Version**
**CM** — Chasis mount
**EN** — Enclosed
**N0** — Panel mount, painted steel
**RM** — Rack mount
**SS** — Panel mount, stainless steel

**Protection**
**D1** — Class I, Div. 2/Class II, Div. 2/Div. 1 touchscreen (type TI and MI, 15" and 19" only)
**D2** — Class I, Div. 2/Class II, Div. 2
**GP** — General purpose

**Screen/Touchscreen Type**
**A0** — Antiglare
**HM** — Transflective, hardened resistive touch, antiglare (15" only)
**LA** — Transflective, antiglare, nontouch (15" only)
**L0** — Transflective, nontouch (15" only)
**MI** — Transflective, intrinsically safe, resistive touch, antiglare (protection D1, 15" only)
**MT** — Transflective, resistive touch, antiglare (15" only)
**N0** — Nontouch screen with clear glass
**TA** — Resistive touch, antiglare
**TH** — Hardened resistive touch, antiglare
**TI** — Intrinsically safe, resistive touch, antiglare (protection D1 only)

**Monitor Size**
**10** — 10.0" monitor
**12** — 12.0" monitor
**15** — 15.0" monitor
**19** — 19.0" monitor
**22** — 22.0" monitor



*PowerScan is an industrial handheld barcode scanner designed for use in Class I, II, III, Div. 2 and Zone 1/21 hazardous areas. It connects to a host computer up to 150 meters away or operates in combination with VisuNet operator.*



*Zone 1 and Class I, Div. 2 keyboard options are available with touchpad mouse, optical trackball mouse, or joystick mouse. All keyboards are chemically resistant and have antimicrobial properties.*



*The DM519-XX-XX-XX-PT is a direct drop-in replacement for existing and legacy competitor monitor cutouts including, Allen-Bradley, Nematron, Xycom, and Protech.*

# YOUR DEMAND. OUR CHALLENGE.

## PROCESS INTERFACES

- Intrinsic Safety Barriers
- Signal Conditioners
- FieldConnex Fieldbus Infrastructure
- Remote I/O Systems
- HART Interface Solutions
- Level Measurement
- Purge+Pressurization Systems
- Industrial Monitors+HMI Solutions
- Explosion Protection Equipment
- Process Interface Solutions
- Wireless Solutions

## INDUSTRIAL SENSORS

- Proximity Sensors
- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- AS-Interface
- Identification Systems
- Logic Control Units

www.pepperl-fuchs.com

**PEPPERL+FUCHS**