

PowerView 8000 Series

Operator Interface Terminals with Extensive PC-like Expansion

The advanced function PowerView 8000 Operator Interface Terminal Series with enhanced software and system integration capabilities brings true system expansion to local operator interface and control applications.



A common fanless hardware platform in four screen sizes allows the user maximum flexibility to match ever demanding application needs with compact space limitations.

Cost effective and easy-to-use, the PV-8000 Series was designed for general industrial applications including food & beverage, material handling, pharmaceutical, assembly, and process control.

The all-new ViewBuilder 8000 Development Environment includes enhanced graphics capabilities and advanced object libraries. The merging of traditional HMI functionality with features such as Alarm management, Historical and Real Time Event, Trend and Recipes means ViewBuilder 8000 delivers on a level typically found only in large scale SCADA systems.

Standard Features

- 2000 Screens
- 65,536 Colors
- Ethernet Supports:
 - Allen Bradley Ethernet/IP (DF1) master/slave HMI connectivity
 - Modbus TCP/IP
- Connects up to 16 different types of controllers simultaneously
- Peer-to-Peer Communication
- Global Data Access
- Large PLC Driver Library
- Data Downloading/Program Transfer
 - Ethernet
 - USB flash or thumb drive
 - CompactFlash™
- Online/Offline Simulator

Hardware Features

- 5.6" color TFT to 12.1" SVGA TFT LCD sizes
- 65K Color Displays
- Resistive Touch Screens
- 200MHz Intel XScale Processor
- 64MB DRAM Memory
- 32MB Flash Memory
- 3 USB 2.0 Ports
- 1 x Ethernet 10/100 BaseT
- 3 x Configurable RS232/485 Serial Ports
- CompactFlash Port
- Real Time Clock
- Audio In/Out

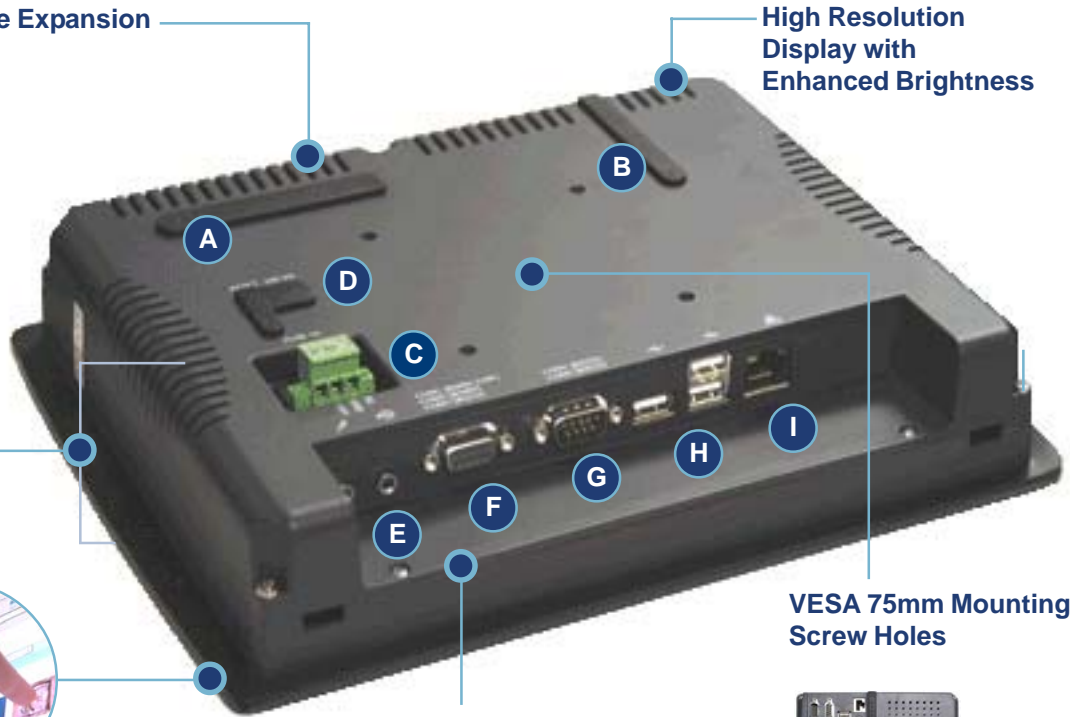
Hardware Features & Benefits

The **Powerview 8000 Series** is an embedded HMI with the **peripheral support of a PC**. Extensive Serial, USB, and Ethernet device support extend the PV-8000 Series application scope by making the integration of devices such as Barcode, Wireless and Audio Devices as natural as PC expansion. PV-8000 offers multiple storage memory media options including Hard Drive Interface and peripheral support for Printer, Keyboard and Mouse.

Enhanced PC-like Hardware Expansion

- A. IDE Interface (DOM slot)
- B. CompactFlash slot
- C. Power connector
- D. DIP SW and Reset Button
- E. Mic In/LineOut
- F. Com1 RS-485
Com3 RS-485
Com3 RS-232
- G. Com1 RS-232
Com2 RS-232
- H. USB Host x 3
- I. Ethernet Port 10/100 BaseT

High Resolution Display with Enhanced Brightness



Nominal 2" Mounting Depth

4-wire Analog Resistive Touchscreen



VESA 75mm Mounting Screw Holes

The 8", 10", and 12" models have wired ports on the bottom to minimize space requirements



PV-8056V1 (5.6" back)

| Model | Display | Resolution | Cutout W x H | Depth |
|------------------|-----------------|---------------|--------------------------------|--------------|
| PV-8056V1 | 5.6" color TFT | LCD 320 x 234 | 7.56" x 5.43" (192mm x 138mm) | 1.88" (48mm) |
| PV-8080V1 | 8.0" color TFT | LCD 640 x 480 | 8.74" x 6.57" (223mm x 168mm) | 1.97" (50mm) |
| PV-8104V1 | 10.4" color TFT | LCD 640 x 480 | 10.10" x 7.80" (259mm x 201mm) | 1.97" (50mm) |
| PV-8121V1 | 12.1" SVGA TFT | LCD 800 x 600 | 12.00" x 9.05" (303mm x 230mm) | 2.00" (51mm) |

Enhanced PLC Connectivity

The PV-8000 Series supports the popular industrial Ethernet drivers - Allen-Bradley Ethernet/IP and Modbus TCP/IP. Connect via the Ethernet port to a single or multiple PLCs and using a router or switch.

Three serial ports provides unique PLC communication using assigned drivers.

Exchanging data between PLCs has never been easier. Data can be collected and stored in internal memory then downloaded to PLCs at a later time.

Wide Range of PLCs Supported

The PV-8000 Series supports over 30 communications drivers compatible with most major brand PLCs on the market today.

Remote Monitoring Made Easy

ViewBuilder 8000 running on a PC allows the user quicker and easier project setup. Connect one or more PV-8000 units via the Ethernet port to your PC then use the Online Simulator to display a facsimile of the PowerView unit on your PC screen to monitor data or control PLC operation.

ViewBuilder 8000 Development Environment



For performance and functionality typically found in larger scale SCADA Systems, look no further than the PowerView 8000 Operator Interface Terminal Series. ViewBuilder 8000 Development Environment takes full advantage of the PV-8000's high resolution display with a wealth of application development tools.

The advanced object libraries containing bar graphs, trend displays, list & dropdown menus, user configurable shapes and engineering icons facilitate fast mimic and screen development reducing project implementation time. Alarm management, historical and real time event & trend functions are functions not typically seen on graphical OIT platforms.

A suite of efficient application test tools allows the developer to simulate off-line and online for both single and multiple device applications from the PC. Additionally, a full control function allows the developer to run multiple simulation screens on a single PC to monitor data from many PV-8000s simultaneously.

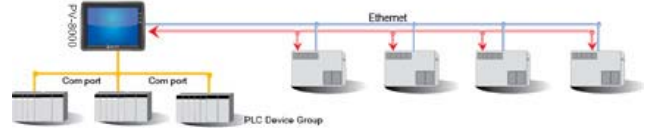
Enhanced Application Development Suite

ViewBuilder 8000 comes with a set of enhanced tools for reducing the time to develop projects.

- Pop-up Windows
- Alarm & Event Management
- Recipe Management
- Data Logging/Data Sampling
- Object Libraries
 - Bar Graphs
 - Numerical Input
- Text Display
 - Multi-language
 - Windows® True Font
- Object Protection
- Support for BMP, JPG and GIF
- Multi-level Password Security
- Online & Offline Simulator
- Macro Language Programming

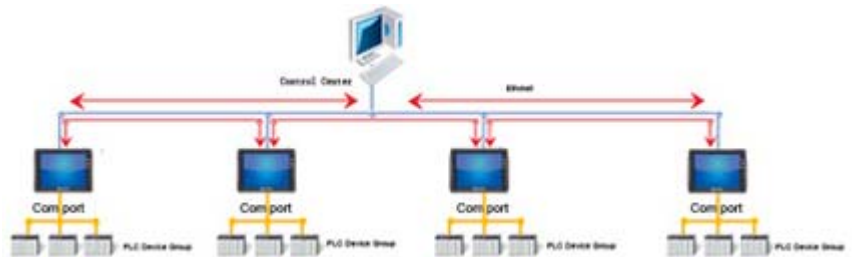
Serial and Ethernet Communication

Ethernet and Serial are included in the extensive Communication options. The PV-8000 also has its own Peer-to-Peer capability to share data across Ethernet.



Global Data Access and Exchange

Through Ethernet, each PV-8000 can communicate with one another and exchange data with other PV-8000s. In addition, each PV-8000 can operate the devices connected to other PV-8000s. Global Data Access also facilitates remote monitoring and fault diagnosis.

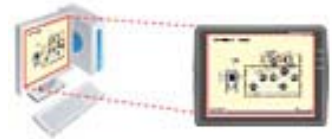


Importing/Converting Projects from PV-500 Series

ViewBuilder 8000 provides the ability to import and/or convert projects created for the older PowerView 500 Series models into fully-functional projects that can be edited in ViewBuilder 8000 and utilized on the PV-8000 Series.

Offline Simulation

Simulate the operation of PV-8000 directly on the PC without PV-8000 and PLC.



COMMUNICATION DRIVER SUPPORT

PowerView 8000 comes with driver support for the following protocols. For a complete list of drivers, contact us.

- AB Micrologix (DF1 Protocol)
- AB SLC500 (DF1, DH485)
- AB PLC5 (DF1 Protocol)
- AB CompactLogix, FlexLogix (AB Logix DF1)
- GE Fanuc Micro, 90-30 Series (GE SNP-X Protocol)
- Mitsubishi FX Series, Q00/Q01 CPU
- QJ71, Communication Module (QJ71), 232/485 BD
- Modicon PLC (Modbus RTU), TSX Micro, Nano, Naza Series (UnitelWay)
- Omron CPM, CQM Series (Host Link)
- Omron C200H/HS/ALPHA
- OMRON CP1H, CJ1, CS1 Series
- OMRON E5CN Series
- Siemens S7/200, S7/300
- Telemecanique Twido (Modbus RTU)
- Yokogawa FA-M3 Series

Technical Specifications

| MODEL | PV-8056V1 | PV-8080V1 | PV-8104V1 | PV-8121V1 |
|--------------------|--|---|--|---|
| Display Type | 5.6" TFT | 8.0" TFT | 10.4" TFT | 12.1" SVGA TFT |
| Display Colors | 65,536 colors | 65,536 colors | 65,536 colors | 65,536 colors |
| Display Size (WxH) | 4.5" x 3.5" | 6.3" x 4.8" | 8.4" x 6.3" | 9.75" x 7.25" |
| Viewing Area | 114mm x 89mm | 161mm x 122mm | 213mm x 160mm | 284mm x 184mm |
| Display Brightness | 500 cd/m ² | 400 cd/m ² | 400 cd/m ² | 300 cd/m ² |
| Display Contrast | 250:1 | 250:1 | 300:1 | 200:1 |
| Display Resolution | 320 x 234 | 640 x 480 | 640 x 480 | 800 x 600 |
| Viewing Angle | 55/65/65/65 (T,B,R,L) | 55/65/65/65 (T,B,R,L) | 55/65/65/65 (T,B,R,L) | 95/95/120/120 (T,B,R,L) |
| Touchscreen Type | 4-wire analog resistive | | | |
| CPU Type | 200MHz 32-bit RISC fanless | | | |
| Memory | 32MB Flash, 64MB DRAM | | | |
| Ethernet Port | 10/100 BaseT (RJ45) | | | |
| Serial Ports | Com1: RS-232/RS-485, Com2: RS-232, Com3: RS-232/RS-485 | | | |
| CompactFlash Slot | CompactFlash™, Type II | | | |
| USB Interface | 2 USB 2.0, Type A | 3 USB 2.0, Type A | 3 USB 2.0, Type A | 3 USB 2.0, Type A |
| Sound Output | 20-bit Stereo Audio | | | |
| RTC | Built-in | | | |
| Dimensions (WxHxD) | 8.0" x 5.9" x 1.88" 204mm x 150mm x 48mm | 9.5" x 7.0" x 1.97" 240mm x 179mm x 50mm | 11.3" x 8.4" x 1.97" 287mm x 213mm x 50mm | 12.7" x 9.6" x 2.0" 322mm x 243mm x 51mm |
| Cutout (WxH) | 7.56" x 5.43" 192mm x 138mm | 8.74" x 6.57" 223mm x 168mm | 10.10" x 7.80" 259mm x 201mm | 12.00" x 9.05" 303mm x 230mm |

Accessories - HMI Cables (Cables are 6-foot length unless otherwise noted.)

| | |
|--------------------|--|
| CBL-PV8COM1 | Adapter cable to break out ports for COM1-232 and COM2-232. Allows Nematron HMI cables to be connected to PV8000 units. |
| CBL-PV8COM3 | Adapter cable to break out COM1-485, COM3-485, and COM3-232. Allows Nematron HMI cables to be connected to PV8000 units. |

Nematron HMI Cable Cross-Reference by Controller

| Mfg | Model | Type/Controller Connector | PowerView/8000 (See note) |
|--------------|--|---------------------------|---------------------------|
| A-B/Rockwell | MicroLogix 1000/1200/1500 | RS-232 (DIN 8-pin) | CBL-PV3-8 |
| A-B/Rockwell | MicroLogix 1500 | RS-232 (DE9S) | CBL-PV4-8 |
| A-B/Rockwell | SLC 5/01, 5/02, 5/03, 5/04, 5/05, A-B Communications Interface Module (DF1) | RS-232 (DB9) | CBL-PV4-8 |
| A-B/Rockwell | SLC500 (DH485) | RJ45 | CBL-PV12 |
| A-B/Rockwell | A-B PLC5 (DF1) | RS-232 (DB25) | CBL-PV13-8 |
| GE | Series 90 | RS-485 (DA15P) | CBL-PV5 |
| GE | VersaMax | RS-485 (DA15P) | CBL-PV5 |
| Koyo | DL05/DL105/DL205/DL305/DL350/DL405 Port 2 | RS-232 (RJ12) | CBL-PV10-8 |
| Koyo | DL205/DL250 CPU Port 2 (cannot be used with PV-570L) | RS-232 (15P SVGA) | CBL-PV6-8 |
| Koyo | DL305/ DL340 (cannot be used with PV-570L) | RS-232 (DB25P) | CBL-PV7-8 |
| Koyo | DL405 port 0 | RS-232 (DA15P) | CBL-PV8-8 |
| Koyo | DL405 port 1 | RS-232 (DB25P) | CBL-PV9-8 |
| Koyo | DL405 Port 2 | RS-232 (RJ12) | CBL-PV10-8 |
| Mitsubishi | A Series | RS-232 (DE9P) | CBL-PV2-8 |
| Modicon | Micro, Momentum | RS-232 (RJ-45) | CBL-PV11-8 |
| Nematron | Pointe Controller (Modbus) | RS-232 (RJ12) | CBL-PV10-8 |
| Siemens | Simatic TI505 | RS-232 (DE9S) | CBL-PV14-8 |
| Siemens S7 | Siemens S7-200 | RS-485 (DB9) | CBL-PV15 |

Note: The use of either CBL-PV8COM1 or CBL-PV8COM3 adapter cable is required to connect to the PV8000 Series units.

Ordering Information

Nematron products are available worldwide through our network of factory-authorized distributors. For distributor contact information in your area, please visit our website at www.nematron.com and submit a Request for Quote or call Nematron's Customer Care Center at your nearest regional sales office. ViewBuilder software can be downloaded free of charge from the Nematron website (registration required).

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