PowerView 6000 & 8000 Series

4.3" to 15.0" Industrial Operator Interface Terminals with Extensive PC-like Expansion

| PV-8150XV1 | PV-8121XV1 | PV-8104XHV1 | PV-6100WHV1/ PV8100WHV1 | PV-6070WHV1/ PV8070WHV1 | PV-8056V1 | PV-6050WV1 |

The PowerView 6000 & 8000 series provide a new level of performance and hardware expansion to operator Interface applications. The extensive communication support for a wide range of popular PLCs and Servo Controllers will allow simultaneous connection of up to 16 different controllers, along with Peer-to-Peer and Global variables functions. A comprehensive range of hardware interfaces are offered as standard and extend application support for USB, CompactFlash, Hard Disk, Bar Code Scanner, Wireless and many other devices. Free downloadable EasyBuilder 8000 configuration software supports all standard HMI functions, and includes macro, math and logic capability for advanced operations. Included with EasyBuilder is a subset of the popular Symbol Factory 2.0 graphics library, containing over 2,000 graphical objects.

Hardware Features & Benefits

The Powerview 6000 & 8000 Series are embedded HMIs with the peripheral support of a PC. Extensive Serial, USB, and Ethernet device support extend the PV-6000/8000 Series application scope by making the integration of devices such as Barcode, Wireless and Audio Devices as natural as PC expansion. PV-6000 & 8000 offers multiple storage memory media options including Hard Drive Interface and peripheral support for Printer, Keyboard and Mouse (see Feature Matrix for full list of features).

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
- **J.** SD Card
- **K.** PS/2

High Resolution Display with Enhanced Brightness

VESA 75mm Mounting Screw Holes

(PV-8121XV1 back shown)

4-wire Analog Resistive Touchscreen

Nominal 2" Mounting Depth

Note: Typical view - Models vary. See PowerView Features Matrix for details.

EasyBuilder 8000 Development Software

For performance and functionality typically found in larger scale SCADA Systems, look no further than the PowerView 8000 Operator Interface Terminal Series. EasyBuilder 8000 Development Environment takes full advantage of the PV-8000's high resolution display with a wealth of application development tools. The complete EasyBuilder 8000 Development Software ships with every unit and is also available for free download at www.nematron.com.

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

EasyBuilder 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.

EasyBuilder 8000 Development Software ships free with every unit, also available for download at www.nematron.com.
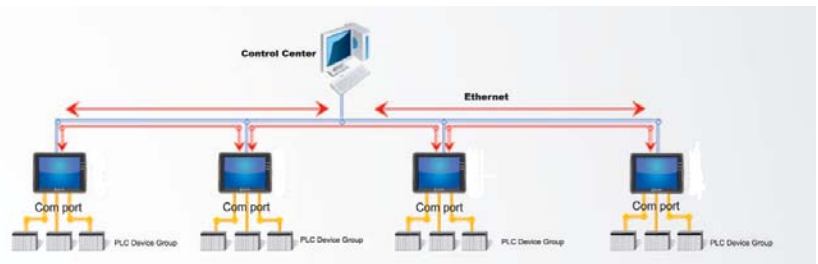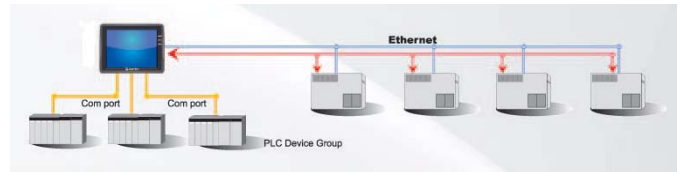
Global Data Access and Exchange

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

EasyBuilder 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 EasyBuilder 8000 and utilized on the PV-8000 Series.

Offline Simulation

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

COMMUNICATION DRIVER SUPPORT

EasyBuilder 8000 comes equipped with support for many protocols. Highlights of more popular drivers are shown here. For a more complete list, consult the PLC Connect Guide included in software.

- 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
- Telemechanique Twido (Modbus RTU)
- Yokogawa FA-M3 Series

* AB DH485 only available with use of Extreme Performance Units.

PowerView Features Matrix

HARDWARE SPECS	PV-6050WV1	PV-8056V1	PV-6070WHV1 & PV-8070WHV1	PV-6100WHV1 & PV-8100WHV1
Display Size	4.3" TFT LCD	5.6" TFT LCD	7.0" TFT LCD Widescreen	10.0" TFT LCD Widescreen
Resolution	480 x 272	320 x 234	800 x 480	800 x 480
Touchscreen	Yes	Yes	Yes	Yes
COM1 (See Note 1)	RS-232/RS-485 (2W/4W)	RS-232/RS-485 (2W/4W)	RS-232/RS-485 (2W/4W)	RS-232/RS-485 (2W/4W)
COM2	N/A	RS232	RS232	RS232
COM3 (See Note 1)	N/A	RS-232/RS-485 (2W)	RS-232/RS-485 (2W)	RS-232/RS-485 (2W)
Ethernet port	N/A	One (10/100)	One (10/100) *PV-8070WH1 only*	One (10/100) *PV-8100WHV1 only*
USB	1 USB Client port	2 USB Client ports	1 USB Host port & 1 Client port	1 USB Host port & 1 Client port
Audio	N/A	N/A	N/A	N/A
Processor	32bit RISC CPU 400 MHz	32bit RISC CPU 200 MHz	32bit RISC CPU 400 MHz	32bit RISC CPU 400 MHz
Program Storage	128MB	32MB	128MB	128MB
DRAM	128MB	64MB	64MB	64MB
SD Card Slot	N/A	N/A	PV-8070WHV1 only	PV-8100WHV1 only
CompactFlash Slot	N/A	Yes	N/A	N/A
Real Time Clock	N/A	Built-in	Built-in	Built-in

GENERAL SPECS				
Input Power/Fuse Rating	24±20% VDC / 1.25 A	12~24 VDC / 1 A	24±20% VDC / 1.25 A	24±20% VDC / 1.25 A
Agency Approvals & Compliance	CE	UL/cUL/CE	CE	CE
Operating Temperature	0~45°C	-10~45°C	0~45°C	0~45°C
Operating Humidity	10-90% RH (non–condensing)	10-90% RH (non–condensing)	10-90% RH (non–condensing)	10-90% RH (non–condensing)
Dimensions WxHxD	5.03" x 4.02" x 1.5" (128 x 102 x 38mm)	8.03" x 5.9" x 1.89" (204 x 150 x 48mm)	7.87" x 5.74" x 1.67" (200 x 146 x 42.5mm)	10.67" x 8.35" x 1.97" (271 x 212 x 50mm)
Panel Cutout	4.685" x 3.661" (119 x 93mm)	7.5" x 5.4" (192 x 138mm)	7.5" x 5.4" (192 x 138mm)	10.2" x 7.91" (259 x 201mm)
Depth	1.42" (36mm)	1.88" (48mm)	1.67" (42.5mm)	1.97" (50mm)
Weight	0.7 lbs (0.3 kg)	1.87 lbs (0.85 kg)	1.87 lbs (0.85 kg)	3.1 lbs (1.4 kg)

HARDWARE SPECS	PV-8104XHV1	PV-8121XV1	PV-8150XV1
Display Size	10.4" TFT	12.1" TFT LCD	15.0" TFT LCD
Resolution	800 x 600	800 x 600	1024 x 768
Touchscreen	Yes	Yes	Yes
COM1 (See Note 1)	RS-232/RS-485 (2W/4W)	RS-232/RS-485 (2W/4W)	RS-232/RS-485 (2W/4W)
COM2	RS232	RS232	RS232
COM3 (See Note 1)	RS-232/RS-485 (2W)	RS-232/RS-485 (2W)	RS-232/RS-485 (2W)
Ethernet port	One (10/100)	One (10/100)	One (10/100)
USB	2 USB Host Ports	2 USB Host Ports	2 USB Host Ports
Audio	One Audio (Out, Mic)	One Audio (Out, Mic)	One Audio (Out, Mic)
Processor	32bit RISC CPU 500 MHz	32bit RISC CPU 500 MHz	32bit RISC CPU 500 MHz
Program Storage	256MB	256MB	256MB
DRAM	256MB	256MB	256MB
SD Card Slot	Yes	Yes	Yes
CompactFlash Slot	N/A	N/A	N/A
Real Time Clock	Built-in	Built-in	Built-in
GENERAL SPECS			
Input Power/Fuse Rating	24±10% VDC / 1.25 A	24±10% VDC / 1.25 A	24±10% VDC / 1.6 A
Agency Approvals & Compliance	CE	UL/cUL/CE	UL/cUL/CE
Operating Temperature	0~45°C	0~45°C	0~45°C
Operating Humidity	10-90% RH (non–condensing)	10-90% RH (non–condensing)	10-90% RH (non–condensing)
Dimensions WxHxD	11.26" x 8.35" x 1.97" (286 x 212 x 50mm)	12.68" x 9.57" x 2.00" (322 x 243 x 51mm)	14.41" x 11.54" x 2.17" (366 x 293 x 55mm)
Panel Cutout	10.2" x 7.91" (259 x 201 mm)	12.0" x 9.09" (305 x 231 mm)	13.86" x 10.98" (352 x 279 mm)
Depth	1.97" (50mm)	2.00" (51mm)	2.17" (55mm)
Weight	3.5 lbs (1.6 kg)	1.6 lbs (2.1 kg)	1.6 lbs (2.9 kg)

Note 1: The use of either CBL-PV8COM1 or CBL-PV8COM3 adapter cable is required to connect to both ports simultaneously or to use the pre-built Nematron HMI Interconnect Cables. Direct connection to a single port using customer created cables is possible (consult the PLC connect guide in the documentation included with the software).

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).

Part #	Description
PV-6050WV1	4.3" Widescreen TFT color display, Touch, **NO Ethernet (See Note 1 & 2)**
PV-8056V1	5.6" TFT color display, 64K colors, Touch
PV-6070WHV1	7.0" Widescreen TFT color display, 64K colors, Touch, High Resolution, **NO Ethernet (See Note 1)**
PV-8070WHV1	7.0" Widescreen TFT color display, 64K colors, Touch, High Resolution
PV-6100WV1	10.0" Widescreen TFT color display, 64K colors, Touch, **NO Ethernet (See Note 1)**
PV-8100WV1	10.0" Widescreen TFT color display, 64K colors, Touch
PV-8104XHV1	10.4" TFT color display, 64K colors, Touch, High Resolution and Extreme Performance
PV-8121XV1	12.1" TFT color display, 64K colors, Touch, Extreme Performance
PV-8150XV1	15.0" TFT color display, 64K colors, Touch, Extreme Performance
NS-VIEWBLDR8K	ViewBuilder Screen Editor Software on CD (Note: Software only - Free download at www.nematron.com)
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-PV8COM1-8	Adapter cable to break out ports for COM1-232 and COM2-232. Allows Nematron HMI cables to be connected to PV8000 units. NOTE: Only for use when replacing a PV-500 series unit with a PV6000/8000 series unit and a previously installed Nematron HMI Interconnect Cable is present
CBL-PV8COM3	Adapter cable to breakout COM1-485, COM3-485, and COM3-232. Allows Nematron HMI cables to be connected to PV8000 units
CBL-PV8COM3-8	Adapter cable to break out COM1-485, COM3-485, and COM3-232. Allows Nematron HMI cables to be connected to PV8000 units. NOTE: Only for use when replacing a PV-500 series unit with a PV8000 series unit and a previously installed Nematron HMI Interconnect Cable is present
COS-8056PS	Screen Protectors for 5.6" units - 5 pack
COS-8080PS	Screen Protectors for 8.0" units - 5 pack
COS-8104PS	Screen Protectors for 10.4" units - 3 pack
COS-8121PS	Screen Protectors for 12.1" units - 3 pack

Note 1: Non-Ethernet models (PV-6____) are not stocked items and may incur longer lead times than Ethernet models (PV-8____).
Note 2: This model can only connect to One RS-232 device or One Rs-485 device.

HMI Interconnect Cables

Nematron HMI Cable Cross-Reference by Controller. Cables are 6-foot length unless otherwise noted. The use of either CBL-PV8COM1 or CBL-PV8COM3 adapter cable is required to connect to the PV-6000/8000 Series units (except PV-6050WV1 unit) with the cables below. Use of CBL-PV505-PLC232 to connect to the PV-6050WV1 unit is required. Direct connection with customer created cables is possible, reference the PLC connect guide in documentation included with software.

Mfg	Model	Type/Controller Connector	PV-6000/8000 Series (See Note 3 & 4)
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 3: When installing a PV-6000 or 8000 series unit in place of a PV-500 series with a previous version of a Nematron RS-232 HMI Interconnect Cable (not -8 suffix) the use of CBL-PV8COM1-8 or CBL-PV8COM3-8 is required.
Note 4: The use of either CBL-PV8COM1 or CBL-PV8COM3 adapter cable is required to connect these cables to the PV8000 Series units, except for the PV-6050WV1. For the PV-6050WV1 use CBL-PV505-PLC232 and do not include the "-8" suffix at the end of the controller specific cable, I.e. CBL-PV4 instead of CBL-PV4-8. Same price applies whether using "-8" in the part number or not.

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