



PHYSICAL INFRASTRUCTURE MANAGEMENT SYSTEM

Research shows that half of all network problems arise from issues in the physical infrastructure. Yet the physical infrastructure is largely overlooked. Without real-time monitoring and visibility into dense physical layer connectivity and related data center infrastructure information, enterprises are vulnerable to a number of risks, such as unnecessary downtime and underutilized resources.

Panduit provides complete visibility of the data center and extended enterprise through intelligent devices and software-based automation, change management, and related documentation that integrates with higher-level network management and services desk platforms. This combined approach helps optimize data center operations as enterprises embark on virtualization and cloud computing initiatives.

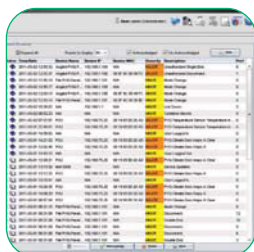
The Physical Infrastructure Manager™ (PIM™) Software Platform is an enterprise class Data Center Infrastructure Management (DCIM) tool that combines connectivity management data with asset tracking, allocation, and utilization information, enabling you to reclaim and repurpose IT assets effectively. PIM™ Software centralizes the collection and representation of a rich set of asset attributes, such as connectivity, space/port availability, and power/environmentals, to ensure that your physical infrastructure supports mission-critical applications, and enables effective optimization of your data center's space, power, and cooling resources.



Front View



Rear View



- Provide real-time information on network status and monitor connectivity
- Facilitate planning, implementation, and documentation of connectivity moves, adds, or changes
- Monitor and alert administrators of any patch field changes or potential connectivity-based security risks
- Simplify user interaction via web-based management system
- Interface with third-party network management system programs, help desk applications, and other enterprise systems

Panduit's modular approach to delivering DCIM functionality enables you to customize the solution to meet the needs of your organization both now and in the future. Process-driven integration with your current network management and service desk platforms delivers a streamlined interface to support management of IT assets with related attributes and physical infrastructure components of your data center and extended enterprise.

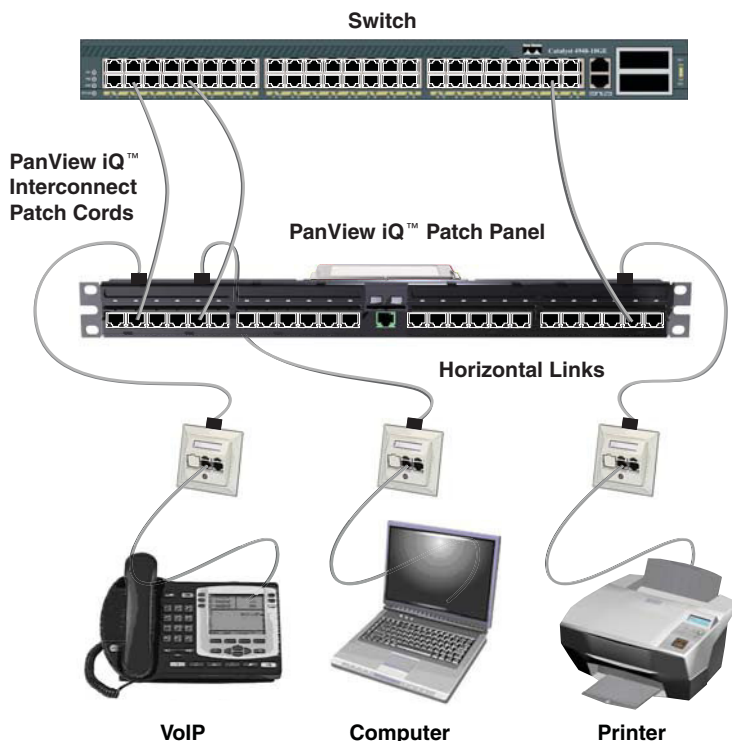
The PanView iQ™ (PViQ™) System supports interconnect configurations that monitor connectivity between a network switch and monitored PanView iQ™ Patch Panels, delivering enhanced port security. This configuration is particularly beneficial in data center applications where rack space optimization is critical. The PanView iQ™ System can also support cross-connect configurations to implement a protected patch field where each switch and server port is represented via a port on a PanView iQ™ Patch Panel.

Additional information on the Physical Infrastructure Manager™ (PIM™) Software Platform and PanView iQ™ System can be found in the solutions brochures SA-PVCB24 and SA-PVCB20, and on the Panduit website at <http://www.panduit.com/pim>.



REVOLUTIONARY!

PanView iQ™ Interconnect Solution for the Enterprise

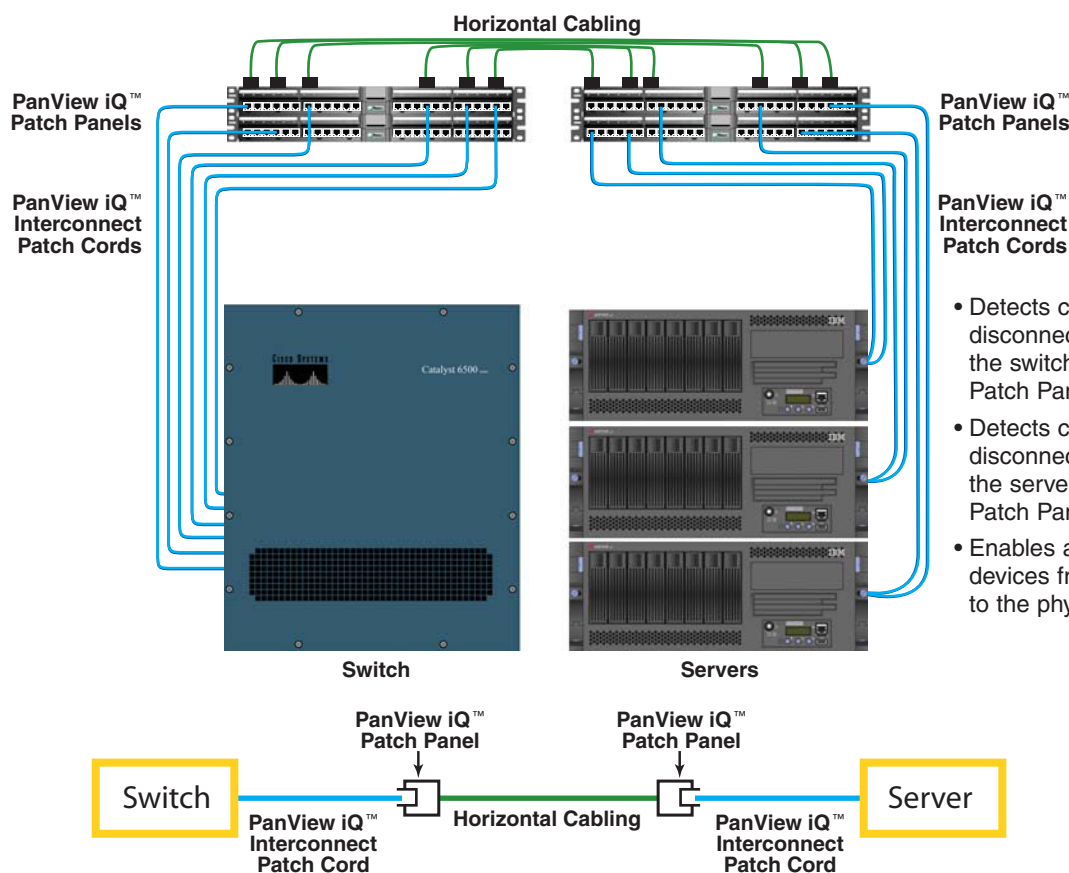


- Eliminates the need for scanner units and the rack spaces that these units occupy
- Eliminates the need for attachment cables and stick-on strips which mount to switches



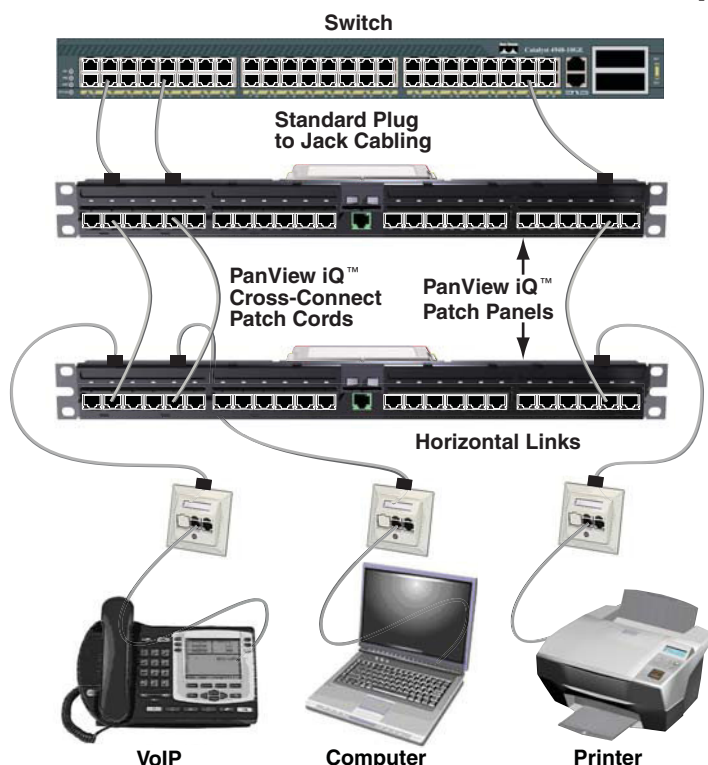
- Provisioning port allows guided patching from PanView iQ™ Patch Panel to designated switch ports
- Detects patch cord connections/disconnections made between the switch and PanView iQ™ Patch Panels

PanView iQ™ Interconnect Solution for the Data Center



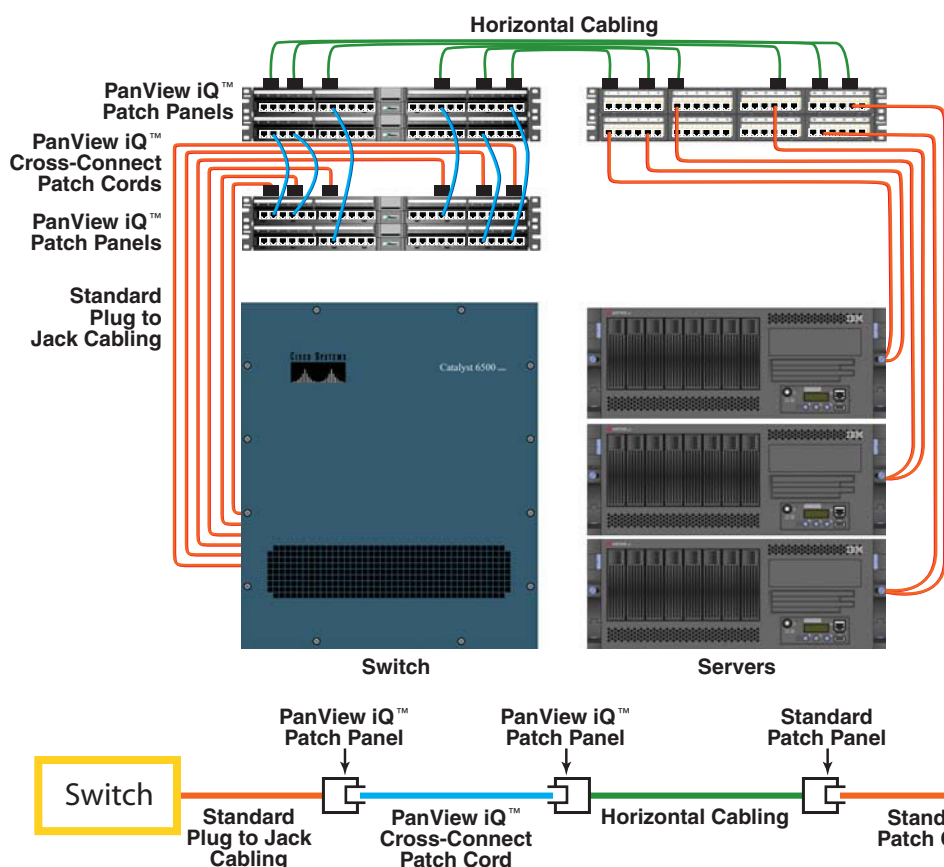
- Detects connections and disconnections made between the switch and PanView iQ™ Patch Panels
- Detects connections and disconnections made between the server and PanView iQ™ Patch Panels
- Enables asset tracking of devices from the logical layer to the physical layer

PanView iQ™ Cross-Connect Solution for the Enterprise



- Enables asset tracking of devices from the logical layer to the physical layer
- PanView iQ™ Patch Panels will confirm: double-ended connections (both ends connected), and single-ended connections (remote end disconnected)
- The PanView iQ™ System can automatically map the cross-connect patch field and monitor all connections for continuous security. The system also guides moves, adds, and changes

PanView iQ™ Cross-Connect Solution for the Data Center



- Helps prevent damage to switch and server ports by creating protected patch field between PanView iQ™ Patch Panels. Each switch and server port is represented at the patch panel level
- PanView iQ™ Cross-Connect Patch Cords guarantee switch to server traceability to support critical moves, adds, and changes
- PanView iQ™ Patch Panels detect and send notifications of connect and disconnect status for event recording and security purposes

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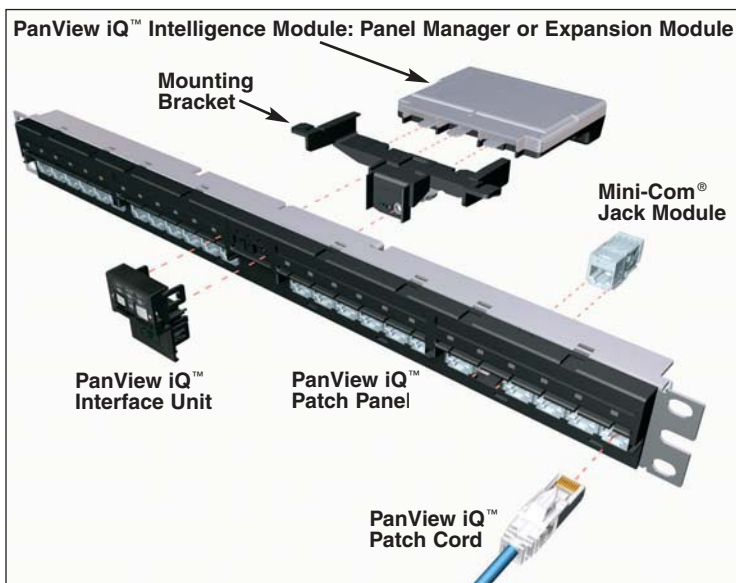
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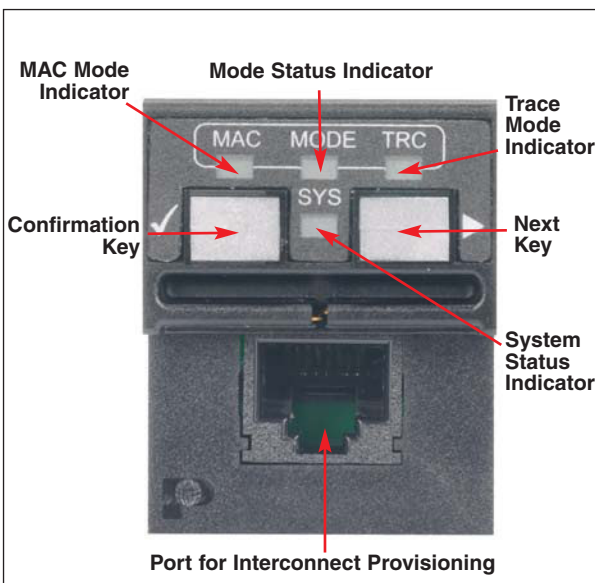
PanView iQ™ Hardware

PanView iQ™ Hardware Exploded View



PanView iQ™ Intelligence Module is supplied with the matching interface unit.

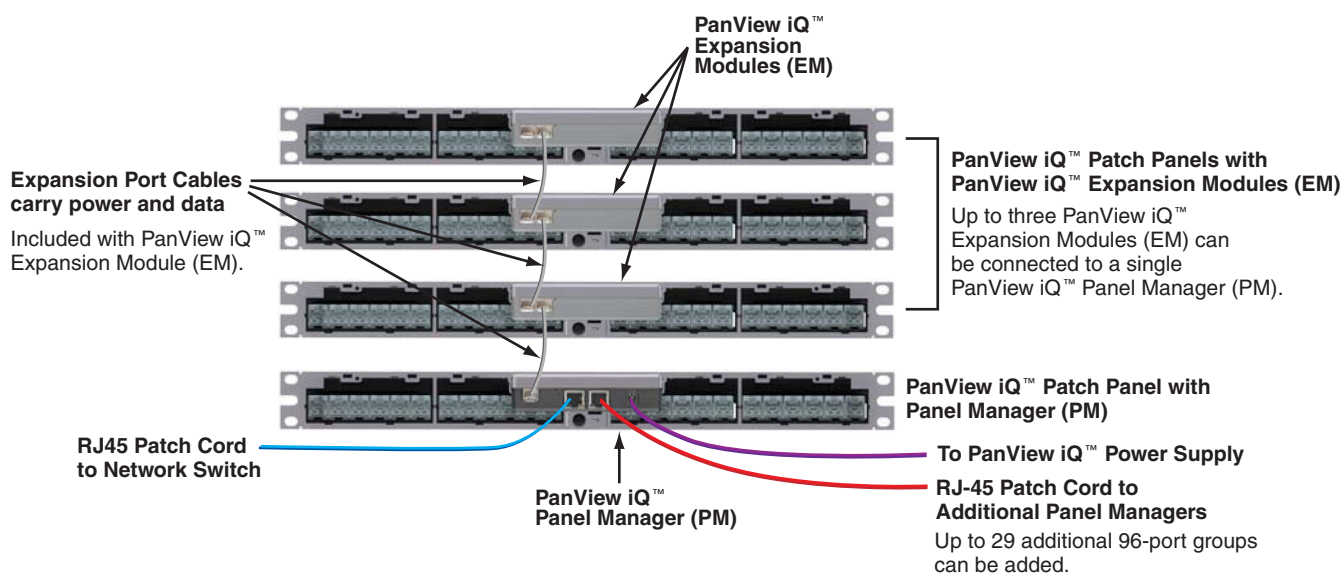
PanView iQ™ Interface Unit



Interface unit shown for PanView iQ™ Panel Manager (PM). Interface unit for PanView iQ™ Expansion Manager (EM) does not contain provisioning port.

Recommended PanView iQ™ 96-Port Configuration (Rear View)

This recommended 96-port configuration delivers optimum efficiency and scalability for large installations.



Physical Infrastructure Management System Roadmap



- 1** PanView iQ™ Intelligence Modules (page I.9)



- 2** PanView iQ™ Patch Panels (page I.7)



- 3** PanView iQ™ Power Supply (page I.9)



- 4** Power Outlet Units (page L.35 – L.55)



- 5** Physical Infrastructure Manager™ Software Platform (page I.6)



- 6** PanView iQ™ Copper and Fiber Patch Cords (pages I.10 and I.11)



- 7** Horizontal Cable Managers (page L.76)



- 8** Ultimate ID® Labels (pages O.11 and O.21)



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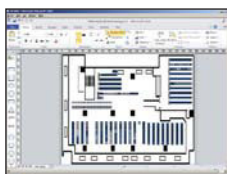
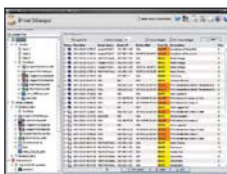
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Physical Infrastructure Manager™ (PIM™) Software Platform



- Supports the PanView iQ™ System
- Provides automated documentation of network patch field connectivity
- Provides real-time notification of all changes in physical layer patch field
- Documents and assigns moves, adds, and changes for planned configuration changes
- Utilizes a web-based graphical user interface that is globally accessible



Part Number	Part Description	Std. Pkg. Qty.
PIM-MEDIA	Physical Infrastructure Manager™ Software, support tools, and documentation.	1
PIM-BASE	Base module of the PIM™ Software Solution.	1
PIM-CAMA	Comprehensive annual maintenance agreement covering both PIM™ Software Platform and PViQ™ System Hardware.	1
PIM-ASSET*	Asset tracking and utilization module of the PIM™ Software Solution.	1
PIM-POWER*	Power outlet unit monitoring module of the PIM™ Software Solution.	1
PIM-ENT	Enterprise connectivity management module of the PIM™ Software Solution.	1
PIM-CONNECT*	Connectivity module of the PIM™ Software Solution.	1
PIM-DASHBOARD*	Dashboards and reports module of the PIM™ Software Solution.‡	1
PIM-IBMINT*	IBM^ Tivoli connector module of the PIM™ Software Solution.	1
PIM-MSFTINT*	Microsoft^^ System Center Operations Manager 2007 Management Pack for the PIM™ Software Solution.	1
PIM-AYAIN	AyaNova** work order integration module of the PIM™ Software Solution.	1
PIM-BMCINT*	BMC Remedy*** work order integration module of the PIM™ Software Solution.	1

Always check with a sales representative for latest software updates.

*To order this module, add the appropriate letter to the end of the part number, based on the size of the installation: -S (<50 racks); -M (50-199 racks); -L (200-399 racks); -X (400+ racks). For example, the part number for the Connectivity Management Module for 250 racks is PIM-CONNECT-L.

^IBM and Tivoli are registered trademarks of IBM Corporation.

^^Microsoft is a registered trademark of Microsoft Corporation.

**AyaNova is a registered trademark of Ground Zero Tech-Works.

***BMC is a registered trademark of BMC Software, Inc.

‡Advanced Dashboard and Reports Module is powered by Pentaho.

PanView iQ™ Patch Panels

PanView iQ™ Patch Panels revolutionize intelligent physical infrastructure management by providing a modular and scalable approach to meet the demands of enterprise and data center installations. Standard copper and fiber cabling is used for all terminations onto the back of these panels while unique PanView iQ™ Patch Cords are used for cross-connect or interconnect installations.

- Mount to standard EIA 19" rack or 23" racks with optional extender bracket
- Accommodates intelligent modules that mount in the rear and utilize no additional rack space (zero RU)
- Accepts all Mini-Com® UTP and STP Modules
- Accepts a PanView iQ™ Interface Unit to provide patch cord tracing and provisioning of switch ports with PanView iQ™ Interconnect Patch Cords or patch field mapping with PanView iQ™ Cross-Connect Patch Cords



PVQ-MIQAPU24



PVQ-MIQAPS24



PVQ-MIQPU24



PVQ-MIQPS96F



PVQ-MIQPS96A



PVQ-MIQAPCVR

Part Number	Part Description	No. of Rack Spaces^	Std. Pkg. Qty.	Std. Ctn. Qty.
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Angled PanView iQ™ Patch Panels

PVQ-MIQAPU24	24-port unpopulated angled UTP modular intelligent module-ready patch panel. Accepts all Mini-Com® UTP and LC Fiber Optic Modules.	1	1	10
PVQ-MIQAPS24	24-port unpopulated angled STP modular intelligent module-ready patch panel. Accepts all Mini-Com® STP Modules. Accepts all Mini-Com® STP Modules.	1	1	10

Flat PanView iQ™ Patch Panels

PVQ-MIQPU24	24-port unpopulated UTP modular intelligent module-ready patch panel.	1	1	10
PVQ-MIQPS24	24-port unpopulated STP modular intelligent module-ready patch panel.	1	1	10

PanView iQ™ Hardware Kits

PVQ-MIQPS96F	For standard configurations, this 96-port modular intelligent panel kit includes four flat PanView iQ™ Patch Panels (PVQ-MIQPU24), one PanView iQ™ Panel Manager with interface unit, and three PanView iQ™ Expansion Modules with expansion port cables and interface units. Also includes one 1.5' (0.5m) RJ45 patch cord for connection to network switch or additional daisy-chained PanView iQ™ Panel Managers. (Power supply, PanView iQ™ Patch Cords and Mini-Com® Jack Modules are not included and must be purchased separately.)	4	1	—
PVQ-MIQPS96A	For standard configurations, this 96-port modular intelligent panel kit includes four angled PanView iQ™ Patch Panels (PVQ-MIQAPU24), one PanView iQ™ Panel Manager with interface unit, and three PanView iQ™ Expansion Modules with expansion port cables and interface units. Also includes one 1.5' (0.5m) RJ45 patch cord for connection to network switch or additional daisy-chained PanView iQ™ Panel Managers. (Power supply, PanView iQ™ Patch Cords and Mini-Com® Jack Modules are not included and must be purchased separately.)	4	1	—

PanView iQ Patch Panel Accessories

PVQ-MIQAPCVR	Transitional cover for angled PVQ patch panels that occupies zero rack space.	0	1	—
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^One rack space = 1.75" (44.45mm).

PanView iQ™ Panel Manager requires proper country-specific power supply (PVQ-PS12VDC-S for North America, PVQ-PS12VDC-E for Europe, PVQ-PS12VDC-J for Japan, PVQ-PS12VDC-C for China, or PVQ-PS12VDC-U for United Kingdom) which must be ordered separately, found on page I.9.

Component Labels for PanView iQ™ Patch Panels



Suggested Label Solutions for TIA/EIA-606-A Compliance			
Patch Panel Part Number	Laser/Ink Jet Desktop Printer Label	PanTher™ LS8E Hand-Held Printer Label	Cougar™ LS9 Hand-Held Printer Label
All Patch Panels on Page I.7	UILJ6	UILS8BW	UILS8BW

For complete Ultimate ID® Labeling Solutions and product information, reference charts on pages O.11 and O.21.

PanView iQ™ Fiber Trays

- Provides real-time physical layer management to the fiber channels in the network
- Enhances usability and maintainability through an enclosure and drawer design that allows for easy access to the fiber connectivity
- An easily-accessible integrated mechanism for mounting a PM or EM module simplifies installation and maintenance
- Provides the capability to map and monitor the fiber channels to efficiently manage resources and substantially reduce network operations cost
- Provides the capability to automate network documentation and maintenance procedures for the physical layer, which in turn supports improved reliability, security, and increased overall network management efficiency
- Installable in a 19" standard TIA/EIA rack or cabinet utilizing 1RU of space



PVQ-FMT

Part Number	Part Description	No. of Rack Spaces^	Std. Pkg. Qty.	Std. Ctn. Qty.
PVQ-FMT	24-port PanView iQ™ Fiber Tray with no fiber adapters.	1	1	1
PVQ-FMTMTP-ZX	PViQ™ 24-Port OM3 MTP Fiber Tray including 24 (CMDSAQLCZBL) LC SR./SR. 10Gig™ SFF Duplex Multimode Aqua Adapters with Zirconia Ceramic Split Sleeves.	1	1	1
PVQ-FMTMTP-ZZ	PViQ™ 24-Port OM4 MTP Fiber Tray including 24 (CMDSAQLCZBL) LC SR./SR. 10Gig™ SFF Duplex Multimode Aqua Adapters with Zirconia Ceramic Split Sleeves.	1	1	1
PVQ-FMTMTP-9	PViQ™ 24-Port, Single-Mode Fiber Tray including 24 (CMDSLCZBU) LC SR./SR. SFF Duplex Singlemode Blue Adapters with Zirconia Ceramic Split Sleeves.	1	1	1

^One rack space = 1.75" (44.45mm).

PanView iQ™ Intelligence Modules

PanView iQ™ Intelligence Modules enable the PanView iQ™ Patch Panels to sense connections and disconnections from each port and relay status information to the Physical Infrastructure Manager™ (PIM) database. The intelligence modules also accept trace mode and MAC commands to provide guidance via the PanView iQ™ Interface Unit and Patch Panel LEDs.

- Provides manageability for a PanView iQ™ Patch Panel
- Eliminates the need for additional rack space by attaching directly to the back of a PanView iQ™ Patch Panel
- Enables quick addition, removal, or replacement of intelligence modules to add management capabilities
- Supports both cross-connect or interconnect installations
- The panel manager (PM) module provides networking interface, power connection and expansion port connections
- The expansion module (EM) receives all power and data signals from the PM through the expansion port; three EMs can be connected to one PM
- Support PanView iQ™ Hardware
- Optional Expansion Port Cables allow connection through various mounting options; for example, PVQ-EPC28 is designed to be utilized when installing PViQ patch panels in a zero RU (vertical mounting) configuration



Part Number	Part Description	Std. Pkg. Qty.
PVQ-PM	Panel manager (includes mounting bracket, 1.5' (0.5m) RJ45 patch cord, and interface unit).	1
PVQ-EM	Expansion module (includes mounting bracket, 7" expansion port cable, and interface unit).	1
PVQ-EPC14*	PanView iQ™ Expansion Port Cable, 14", (0.36m).	1

*For lengths of 20, 28, 35 or 43 inches, change the 14 in the part number to the desired length.

PanView iQ™ Panel Manager requires proper country-specific power supply (PVQ-PS12VDC-S for North America, PVQ-PS12VDC-E for Europe, PVQ-PS12VDC-J for Japan, PVQ-PS12VDC-C for China, or PVQ-PS12VDC-U for United Kingdom) which must be ordered separately.

PanView iQ™ Power Supply

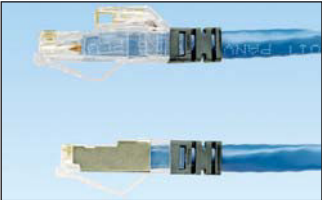
- Provides 12 volts of regulated power
- One power supply required per panel manager module
- Offers flexible placement inside of rack
- 5 feet (1.5m) cord length



Part Number	Part Description	Std. Pkg. Qty.
PVQ-PS12VDC-S	30W power supply for North America.	1
PVQ-PS12VDC-E	30W power supply for Europe.	1
PVQ-PS12VDC-U	30W power supply for UK.	1
PVQ-PS12VDC-J	30W power supply for Japan.	1
PVQ-PS12VDC-C	30W power supply for China.	1

PanView iQ™ Patch Cords

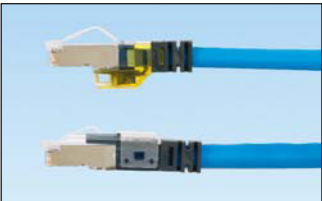
- PanView iQ™ Interconnect Patch Cords support connectivity between shielded non-PanView iQ™ enabled ports (e.g., switches with shielded jacks, servers with shielded jacks, etc.) and PanView iQ™ Panel Ports
- PanView iQ™ Cross-Connect Patch Cords manage and map the patch field between two PanView iQ™ Patch Panels
- All PanView iQ™ Patch Cords permit PanView iQ™ Panels to detect single-ended connections



PVQ-BIU6C3BU

Part Number	Part Description	Length		Cable Color	Std. Pkg. Qty.	Std. Ctn. Qty.
		Ft.	m			
PVQ-BIU6C3BU*	Category 6 UTP interconnect patch cord for use with PanView iQ™ patch panel, Communications (CM) rated.	3	—	Blue	1	10
PVQ-BIU6C1MBU^	Category 6 UTP interconnect patch cord for use with PanView iQ™ patch panel, Communications (CM) rated.	—	1	Blue	1	10
PVQ-BIU6L1MBU^	Category 6 UTP interconnect patch cord for use with PanView iQ™ patch panel, Low Smoke Zero Halogen (LSZH) rated.	—	1	Blue	1	10

Additional lengths and colors available:
*For lengths of 5, 7, 10, 14, or 20 feet, change the length designation in the part number to the desired length. For standard cable color other than BU (Blue), replace BU in the part number with GR (Green). For example, the part number for a green, 5-foot patch cord is PVQ-BIU6C5GR.
^For lengths of 2, 3, 5, or 10 meters, change the length designation in the part number to the desired length. For standard cable color other than BU (Blue), replace BU with WH (White). For example, the part number for a white 2-meter patch cord is PVQ-BIU6L2MWH.
Contact Panduit Customer Service for lead times and for non-standard lengths and colors.



PVQ-ES6X3BU

Part Number	Part Description	Length		Cable Color	Std. Pkg. Qty.	Std. Ctn. Qty.
		Ft.	m			
PVQ-EU6AC3BU*	10Gig™ UTP Enhanced Interconnect Patch Cord for use with PanView iQ™ Patch Panel, Communications (CM rated).	3	—	Blue	1	10
PVQ-EU6AC1MBU^	10Gig™ UTP Enhanced Interconnect Patch Cord for use with PanView iQ™ Patch Panel, Communications (CM rated).	—	1	Blue	1	10
PVQ-ES6X3BU*	10Gig™ STP Enhanced Interconnect Patch Cord for use with PanView iQ™ Patch Panel, dual rated.	3	—	Blue	1	10
PVQ-ES6X1MBU^	10Gig™ STP Enhanced Interconnect Patch Cord for use with PanView iQ™ Patch Panel, dual rated.	—	1	Blue	1	10

Additional lengths and colors available:
*For lengths of 5, 7, 10, 14, or 20 feet, change the length designation in the part number to the desired length. For standard cable color other than BU (Blue), replace BU in the part number with WH (White). For example, the part number for a white, 5-foot patch cord is PVQ-EU6AC5WH.
^For lengths of 2, 3, 5, or 10 meters, change the length designation in the part number to the desired length. For standard cable color other than BU (Blue), replace BU with WH (White). For example, the part number for a white 2-meter patch cord is PVQ-ES6X2MWH.
Contact Panduit Customer Service for lead times and for non-standard lengths and colors.

PanView iQ™ Patch Cords (continued)



PVQXPE10LQM



PVUTSPC*BBUY



PVSTP6X*MBBU



PVF9L10-10M*Y

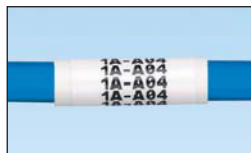
Part Number	Part Description	Length^		Std. Pkg. Qty.	Std. Ctn Qty
		Ft.	m		
Fiber Interconnect Patch Cords					
PVQXPE10LQM00.5	PanView iQ duplex LC to duplex standard LC, OM3, fiber interconnect patch cord, plenum rated, 1.6mm jacketed cable.	—	0.5	1	10
PVQZPE10LQM00.5	PanView iQ duplex LC to duplex standard LC, OM4, fiber interconnect patch cord, plenum rated, 1.6mm jacketed cable.	—	0.5	1	10
PVQ9PE10LQM00.5	PanView iQ duplex LC to duplex standard LC, OS1/OS2, fiber interconnect patch cord, plenum rated, 1.6mm jacketed cable.	—	0.5	1	10

[^]Available in lengths up to 10 meters, in 1/2-meter increments. To order another length, replace 0.5 with desired length.

Part Number	Part Description	Length^		Std. Pkg. Qty.	Std. Ctn. Qty.
		Ft.	m		
Cross-Connect Patch Cords					
PVUTSPC3BBUY	Category 6 UTP patch cord for use with modular patch panel.	3	—	1	10
PVUTSPC1MBBUY	Category 6 UTP patch cord for use with modular patch panel.	—	1	1	10
PVSTP6X1MBBU	Category 6A, STP modular 10Gig™ Patch Cord.	—	1	1	10
PVUTP6X1MBBU	Category 6A, UTP modular 10Gig™ Patch Cord.	—	1	1	10
PVF9L10-10M0.5Y	Singlemode LSZH LC-LC patch cord.	—	1	1	10
PVFXL10-10M0.5Y	Multimode LSZH OM3 LC-LC patch cord.	—	1	1	10

[^]Additional lengths available: PVUTSPC3BBUY also available in lengths of 5, 7, 9, 14, and 20 feet. PVUTSPC1MBBUY also available in lengths of 2, 3, 5, 7, and 10 meters. PVSTP6X1MBBU also available in lengths of 2, 3, 5, and 10 meters. PVF9L10-10M0.5Y and PVFXL10-10M0.5Y also available in 1/2-meter increments up to 10 meters. Contact Panduit Customer Service for lead times. Consult www.panduit.com/pim for additional colors and lengths available.

Labels for PanView iQ™ Patch Cords



Suggested Label Solutions for TIA/EIA-606-A Compliance				
Patch Cord Part Number	Laser/Ink Jet Desktop Printer Label	TDP43ME Thermal Transfer Desktop Printer Label	PanTher™ LS8E Hand-Held Printer Label	Cougar™ LS9 Hand-Held Printer Label
All Patch Cords on Page I.10 and I.11	S100X150YAJ	S100X150VATY	S100X150VAC	T100X000CBC-BK

For complete labeling solutions and product information, reference charts on pages O.1 – O.25.