

## imVision<sup>®</sup> Automated Infrastructure Management

Unlocking the potential of every new day with real-time visibility into the critical connectivity that drives your business—and the power to optimize it

# Your network drives your business

## So what drives your network?

Data. It's the lifeblood of your company. To keep it flowing efficiently and freely, you need to make business-critical decisions based on information— not assumptions.

imVision® from CommScope gives you the visibility and insight you need to direct your network's functionality with confidence.

CommScope's imVision Automated Infrastructure Management (AIM) solution provides actionable insights and granular visibility into your network's complex, interdependent physical layer as well as the myriad devices connected to it. It shows you exactly what you have, how different pieces interact, and where you can find new optimization opportunities. For a network-driven business like yours, imVision delivers three critical IT advantages:

### Optimizing capacity

With its ability to track utilization of panels, cabling and switch ports, imVision provides real-time data on how physical-layer assets are being used while assisting in the planning process. It can help you address capacity challenges without massive investments in additional infrastructure; rather, imVision's sophisticated tools reveal all active components to show you where you can get more from the infrastructure you already have.

### Optimizing availability

imVision reduces time-intensive manual processes, generating electronic work orders and enabling guided administration of connectivity changes, minimizing human error and network downtime. Visibility into end-to-end circuits means all changes are automatically fully documented. And, in the event of a network failure, a root cause analysis can be quickly established to help you get back online fast.

### Optimizing efficiency

Real-time management of the physical layer ensures that stranded switch ports are identified and repurposed, rather than remaining idle while continuing to consume power. It also optimizes server deployment and commissioning.



#### FINANCIAL INSTITUTION IN SOUTH AMERICA

**Project details:** new office building with over 6,000 ports spread across 130 racks

**Challenges:** manual processes for tracing patching activity and test connectivity; manually documenting trace information using AutoCAD; very time consuming for employees

**Solution:** implemented imVision to document and update patching activity and test connectivity eliminating the need for manually updating trace information on AutoCAD since locations and patching can be related using the layout function provided

#### SERVICE PROVIDER IN ASIA-PACIFIC REGION

**Project details:** 3,000 fiber ports in meet-me-room

**Challenges:** multiple clients connecting to a variety of carriers; manually tracking connection time is difficult and error-prone

**Solution:** installed imVision at the point of interface which resulted in accurate tracking of connections and connection time

#### TELECOM TEST LAB IN NORTH AMERICA

**Project details:** telecom test lab needing to automate internal billing; greater than 1,000 ports

**Challenges:** test lab charges departments based on network usage; difficult to accurately bill based on manual records

**Solution:** Real-time accurate records of connectivity time and work orders automatically generated by imVision resulting in accurate internal billing with audit trail provided

#### WIRELESS OPERATOR IN EUROPE

**Project details:** needs to improve accuracy of moves, adds and changes; data center setting; 20,000 ports

**Challenges:** moves, adds and changes take significant amount of time; errors occurring due to manual process

**Solution:** with imVision, electronic work orders made moves, adds and changes work much quicker and errors were minimized

[Click here for more use case examples](#)



# imVision is an AIM standards-compliant management solution—the intelligent way to manage your network.

## Key features:

- Accurately documents the end-to-end connectivity between networked devices
- Tracks, in real time, all changes to physical-layer connections
- Generates alerts to unauthorized or unplanned changes
- Issues alerts when changes occur on critical circuits
- Discovers and tracks network-connected devices (including Ruckus switches)
- Generates electronic work orders for guided deployment
- Delivers full reporting capabilities, including generation of custom reports
- Identifies unused IT assets and cabling available for reuse
- Simplifies and streamlines workflows through powerful process automation
- Provides ability to define custom fields associated to objects to track asset information

imVision is an integrated platform driving a new level of real-time intelligence and visibility into events that impact your network's physical layer. It provides a holistic view of your network, showing you exactly how the infrastructure and assets are being used, so you can better optimize the allocation and use of your network's resources.

With its intuitive, web-based dashboard, imVision delivers real-time intelligence that allows users to monitor and document their cabling infrastructure while tracking the location of all connected network devices. It's decision making driven by data -actionable, real-time data and performance insights-that establishes imVision as a powerful and critical network resource.

## Key applications in the data center:

- **Manages increasingly higher fiber port densities:** imVision helps manage ultra-high-density systems, with 576 fibers in a 4U LC duplex shelf configuration. The minimized footprint helps contain rackspace costs while reducing the risk of manual error in patching in an ultra-high-density environment.
- **Manages point-to-multipoint connection:** imVision helps manage point-to-multipoint connectivity, which has become commonplace with the advent of 40G and 100G Ethernet connections.
- **Manages heavily-meshed leaf-spine architectures:** imVision provides unprecedented visibility, intelligence and control to meet the challenges associated with leaf-spine architecture, an increasingly popular network architecture.



## Key applications in the commercial building:

- **Manages both power and connectivity:** With the rapid growth in power over Ethernet (PoE) devices and applications, imVision provides the platform to ensure both power and data are fully documented-from power source to powered devices.
- **Single management platform for building applications:** As more and more building applications such as Wi-Fi, IP security, LED lighting, and high-definition audio/visual utilize twisted-pair cabling, imVision provides the single management platform for the physical layer, tracking what had historically been separate IT and Facilities networks.
- **Tracking end devices:** With BYOD and the proliferation of devices in the office, imVision can provide location information on all connected devices. The location of wired devices can be made down to the outlet, and wireless devices can be tracked to the Wi-Fi access point they connect with. This level of insight can help quickly identify and locate unauthorized devices.



# imVision: An integral piece of CommScope's connected and efficient approach to infrastructure management

Driven by rapidly evolving technology and increased pressure to reduce costs and improve efficiency, the dynamics of infrastructure management are undergoing dramatic change.

CommScope is leading the way with our connected and efficient approach to infrastructure management, a proven model of success characterized by flexible deployment, real-time intelligence and operational efficiency.

The approach includes a comprehensive portfolio of innovative solutions, including our AIM-based imVision solution, and our industry-leading fiber and copper connectivity.

It's a proven approach to infrastructure management—connected and efficient—available only from CommScope.

## Industry Standards

The IT industry has recognized the important role intelligent infrastructure solutions can provide and has developed standards that encompass the capabilities and functions of these solutions.

Using the term Automated Infrastructure Management, or AIM, the TIA TR-42 and ISO/IEC WG3 SC25 groups have developed or are developing the following standards:

- Automated Infrastructure Management systems (AIM) have been recognized by **BICSI** and included on the list of recommended management tools in the recently published new standard - BICSI 009-2019, Data Center Operations and Maintenance Best Practice
- **TIA 606-B:** Administration Standard for Commercial Telecommunications Infrastructure, published in 2012.
- **ISO/IEC 14763-2:** Information Technology—Implementation and operation of customer premise cabling, Part 2: planning and installation, Amendment 1.
- **ISO/IEC 18598:** Automated Infrastructure Management (AIM) Systems—Requirements, Data Exchange and Applications—published in 2016.

The AIM-compliant imVision solution meets or exceeds these existing and evolving standards.



# The imVision platform: hardware and software

The imVision Solution provides users with comprehensive network management and control by documenting and tracking all changes that occur in the physical layer. With complete visibility to all cabling connectivity as well as the devices attached to the network, imVision allows network managers to proactively manage their network rather than react to unplanned outages or requests to add services.

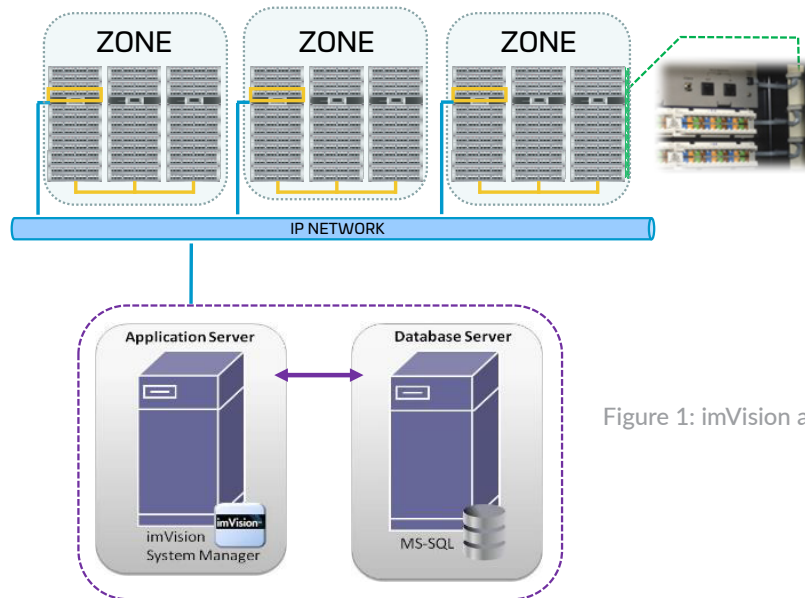


Figure 1: imVision architecture

## The imVision platform (see Figure 1) consists of three interrelated components:

- Intelligent copper panels and fiber shelves monitor port usage.
- imVision Controllers monitor and track all real-time changes to the physical layer.
- imVision System Manager software correlates connection data with information from networking equipment, IP endpoints, and other systems—providing a view of how network-connected devices layer map to the physical layer.

## System Architecture

- Intelligent panels are managed by an imVision Controller.
- the imVision Controller X supports multi-rack capability. It can control a limited number of intelligent panels (up to 10 rack units per rack) in three adjacent racks. Extended-length cables and panel buses in the Rack Extender Kit are required to connect to the adjacent racks.
- All controllers with the same row/zone are daisy-chained together; up to 50 controllers may be daisy-chained within a row/zone.
- imVision System Manager software consists of two components—an application and a SQL database installed on one or separate servers on the same network as the imVision Controller.
- imVision System Manager software provides a Web user interface and, therefore, can be accessed from any Web browser; the software is compatible with Internet Explorer, Safari, Firefox and Chrome browsers.
- imVision System Manager software supports SNMP.

# Intelligent panels

## Best-in-class connectivity



### Copper

iPatch 1100GS3 and 1100GS6 copper patch panels help you intelligently manage your network infrastructure. Working in coordination with imVision System Manager software and building on the industry-leading performance of 1100-series GigaSPEED® XL and GigaSPEED X10D® panels, they provide you with real-time access to changes that occur in the physical layer of your infrastructure.

Available in either 24-port 1U or 48-port 2U models, both 1100GS3 and 1100GS6 panels can be deployed as needed and as budgets allow. As shown in Figure I, upgrades to intelligence are made seamless with our 360 iPatch upgrade kit, and they can be performed in the field without removing patch cords—eliminating the threat of network disruption.



### Fiber

iPatch intelligent fiber-optic panels help alleviate the connectivity challenges associated with panel port densities that are continually on the rise. They can be deployed immediately or in phases, according to user needs and requirements. Future upgrades are made seamless with our 360 iPatch upgrade kit, and they can be performed in the field without removing patch cords—minimizing the threat of network disruptions.

The panels are equipped with low-loss LC distribution modules or MPO pass-through adapters and support the SYSTIMAX® fiber portfolio of LazrSPEED® and TeraSPEED® applications. They are available in 1U and 2U footprints with sliding fiber trays.

# imVision Controller

## Easy-to-use interface—at the rack

The imVision Controller X acts as the gateway for the imVision system, delivering the real-time information necessary to take precise control over network processes.

The controller simplifies the oversight of network connectivity changes by displaying the work orders generated by the imVision System Manager software. For unguided operations, all connectivity changes are detected by the controller and forwarded to the imVision System Manager, which then forwards alerts to systems administrators. These changes may then be confirmed or reversed by the administrator.

The controller is equipped with a capacitive touchscreen user interface, designed for optimum user-friendliness. Its graphical interface is intuitive, and delivers a comprehensive level of detail far beyond what is possible by using traditional port or cord labels, thus allowing users to easily trace existing connections and the locations of patch cords and connected devices.

### imVision Controller X features:

- 5.0-inch (12.7-centimeter) diagonal multicolor capacitive touchscreen interface with activity LED
- Compatible with SYSTIMAX 360 imVision controllers (760161380)
- Integrated (adjustable) horizontal cable management
- Display slides up/down for easy access to cords in tight spaces
- USB-attached display
- Dual power inputs for redundancy
- For the complete set of imVision Controller X (760237876 | imV-CNTRL-X) design guidelines, please reference the imVision Controller X User Guide.

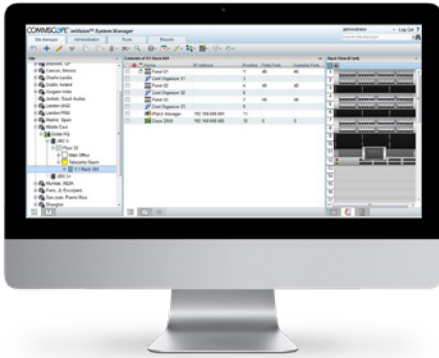


# imVision System Manager software

The power to plan, implement, and document changes to your network infrastructure

## Overview

imVision System Manager software allows you to document and monitor your infrastructure through a standard web browser, providing you with comprehensive insights about the configuration of your physical infrastructure.



The software provides you with a complete view of your physical infrastructure, revealing scheduling and tracking changes to panels, faceplates, network equipment and other IP devices. It recommends optimal connections and initiates guided patching jobs for operators, which is particularly useful for data center applications where a new server requires six or more connections. The software tracks the status of each work order and can alert an operations manager if a job is not completed on schedule. Upon job completion, it automatically enables the switch ports, ensuring that service is granted only to authorized users.

When new connections are made, System Manager remotely traces the complete path from an end device (server, workstation, IP phone or printer) to the service-providing port on a switch.

System Manager tracks all devices—even those operating wirelessly—as they move about a network. For services requiring Power over Ethernet (PoE), the software can integrate with PoE devices, verifying that power is available to a connection.

## Making sense of data and information

imVision System Manager continually monitors and communicates with your network's physical infrastructure, collecting and assessing multiple data points in delivering the information needed to maintain, document and enhance the entire network. For instance, iPatch intelligent copper and fiber panels initiate real-time alerts whenever they detect unexpected changes to your network. These alerts appear as pop-up notifications on the user interface, as emails or text messages, or as SNMP traps to external network management systems. And, with its capability of communicating with LAN switches, SAN switches and other IP-enabled devices, System Manager is able to determine the precise location of all devices that are connected to the network, generating customized reports that document any changes.

System Manager provides several different methods, such as SNMP service, XML interface, and RESTful API for integration with external systems and applications such as NMS, CMDB, DCIM, Asset Management and more.



# Gain control of your network

imVision System Manager empowers you with unprecedented control of your physical-layer infrastructure. With its Web-based interface and customized alert system, users can monitor and manage their infrastructure—any time and anywhere—from the convenience of a Web browser.

The software links with intelligent service provisioning, saving significant time and resources when an unexpected network event occurs.

## Key features:

- Integration with floor layouts using CAD drawings and diagrams to enable intuitive and interactive infrastructure management interface
- Discovers switch port VLAN configuration and PoE capability/status which can be used for intelligent service provisioning
- Automatically discovers network names, IP and MAC addresses for end devices
- Supports LAN and SAN deployments in a wide variety of environments, including data centers, traditional workplaces, intelligent buildings and campuses

## Data center features:

- SAN device and VSAN discovery with support for many popular SAN switches
- Provides workflow for server deployment and server decommissioning tasks
- Tracks rack capacity, including information about available RU spaces, rack power, equipment port by type
- Intelligent circuit provisioning

## Outside plant features:

- Documents cable vault layouts
- Documents cable conduits through cable vaults
- Documents splice enclosures and splice trays
- Integration with geomaps supported

## Language support:

- Supports multiple languages

## Reports:

- Accessible from a browser
- Prints, exports or emails reports to third parties
- Memorizes reports and runs them automatically on user-defined intervals

## Software integration options:

- Integrates with other external systems and applications
- Integrates with external network management systems

## Software assurance:

- A 12-month subscription entitles customers to software updates and upgrades, plus anytime access to a dedicated support website
- First-year cost is waived with the purchase of imVision System Manager in certified installations
- Renewals invoiced annually

## Support website:

- Portal for product registration, downloadable software updates, upgrades, utilities and new switch support files
- Access to KnowledgeBase, FAQs and Application Notes

## Technical specifications:

- Compatible with Windows OS
- Utilizes MS SQL Server for the database
- Packaged with MS SQL Express

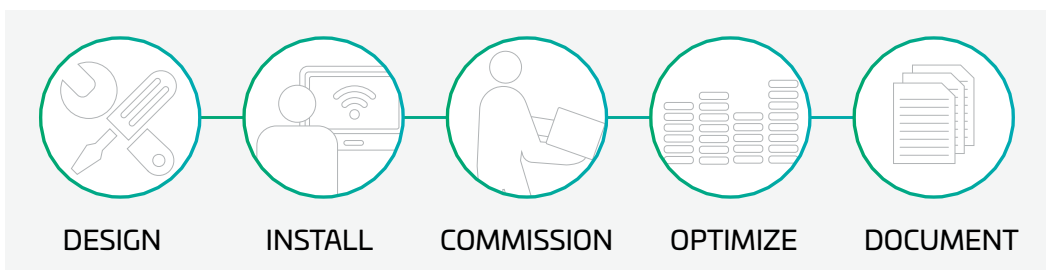
# imVision support

## imVision services

CommScope offers a variety of services associated with an imVision installation. These services are unique to each deployment and can be provided directly by CommScope or via an authorized CommScope imVision Integrator within CommScope's global PartnerPRO® Network.

### imVision services include:

- Customized onsite training
- Proof-of-concept installations (includes parts and configuration services)
- Implementation services
- Technical consulting for software integration projects
- Technical consulting for workflow integration
- Day-two maintenance
- Day-two imVision system administration



## Commissioning process and roles

The imVision commissioning process is an integral part of the imVision system, designed to maximize benefits for the customer. The commissioning process is segmented into three phases, each supported by CommScope sales, technical support, channel management, and product management teams.

- Pre-sales phase details the value proposition for the appropriate entities and users within the customer's organization while identifying implementation requirements.
- Implementation phase ensures the solution is deployed successfully, addressing any challenges identified in the pre-sales phase.
- Post-sales phase ensures complete customer satisfaction, addressing any questions or concerns.

The imVision commissioning process is compliant with the commissioning requirements of the ISO/IEC 18598 standard for Automated Information Management (AIM) systems.

## Warranty information

The passive components qualify for the SYSTIMAX Structured Connectivity Solutions 25-Year Extended Product Warranty and Applications Assurance as standard SYSTIMAX copper panels when included in a certified SYSTIMAX PowerSUM, GigaSPEED XL or GigaSPEED X10D channel.

The active components, including the patch panels' tracing modules, are covered by the SYSTIMAX iPatch System Active Components Three-Year Product Warranty.

## Bottom-line returns

Incorporating CommScope's connected and efficient approach, the imVision Automated Infrastructure Management Solution delivers actionable insights that allow operators to optimize their network's performance—quickly, easily and predictably.

### The results?

- Quicker deployments
- Reduced costs
- Enhanced efficiencies
- Greater insights into network performance

# imVision Controller

## imVision Controller

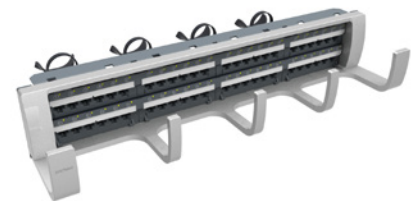
Material ID	Product Description	Name
760237876	imV-CNTRL-X	imVision Controller X
760237879	imV-CNTRL-RK-XT	Rack Extender Kit



# imVision Copper

## imVision Copper Panels

Material ID	Product Description	Name
760201137	360-iP-1100-E-GS3-1U-24	360 iPatch 1100 GS3 Evolve 24P Panel
760201111	360-iP-1100-E-GS3-2U-48	360 iPatch 1100 GS3 Evolve 48P Panel
760201145	360-iP-1100-E-GS6-1U-24	360 iPatch 1100 GS6 Evolve 24P Panel
760201129	360-iP-1100-E-GS6-2U-48	360 iPatch 1100 GS6 Evolve 48P Panel
760202531	360-iP-1100A-E-GS3-1U-24	360 iPatch 1100 Angled GS3 Evolve 24 Port Panel
760202549	360-iP-1100A-E-GS3-2U-48	360 iPatch 1100 Angled GS3 Evolve 48 Port Panel
760202556	360-iP-1100A-E-GS6-1U-24	360 iPatch 1100 Angled GS6 Evolve 24 Port Panel
760202572	360-iP-1100A-E-GS6-2U-48	360 iPatch 1100 Angled GS6 Evolve 48 Port Panel
760201178	360-iP-MFTP-E-HD6B-1U-24	360 iPatch FTP Evolve 24P Panel
760201186	360-iP-MFTP-E-HD6B-2U-48	360 iPatch FTP Evolve 48P Panel
760202564	360-iP-MFPA-E-HD6B-1U-24	360 iPatch 1100 Angled FTP Evolve 24 Port Panel
760202580	360-iP-MFPA-E-HD6B-2U-48	360 iPatch 1100 Angled FTP Evolve 48 Port Panel
760201244	360-iP-PMAX-GS3-24	360 iPatch PatchMax GS3 24P Panel
760201210	360-iP-PMAX-GS3-48	360 iPatch PatchMax GS3 48P Panel
760201269	360-iP-PMAX-GS6-24	360 iPatch PatchMax GS6 24P Panel
760201236	360-iP-PMAX-GS6-48	360 iPatch PatchMax GS6 48P Panel



# imVision Copper

## imVision Copper Panels

Material ID	Product Description	Name
760073866	iP-M4200i-24	iPatch M4200i 24P UTP, Blank
760201152	360-iP-1100-E-1U-BLANK	360 iPatch 1100 Evolve 24P, Blank
760201160	360-iP-1100-E-2U-BLANK	360 iPatch 1100 Evolve 48P, Blank
760202598	360-iP-1100A-E-1U-BLANK	360 iPatch 1100 Angled Evolve 24P; Blank
760202606	360-iP-1100A-E-2U-BLANK	360 iPatch 1100 Angled Evolve 48P, Blank
760201194	360-iP-MFTP-E-1U-BLANK	360 iPatch FTP Evolve 24P Panel, Blank
760201202	360-iP-MFTP-E-2U-BLANK	360 iPatch FTP Evolve 48P Panel, Blank
760202614	360-iP-MFTP-A-E-1U-BLANK	360 iPatch FTP Angled Evolve 24P Panel, Blank
760202622	360-iP-MFTP-A-E-2U-BLANK	360 iPatch FTP Angled Evolve 48P Panel, Blank



## imVision Copper Upgrade Kits

Material ID	Product Description	Name
760198747	360-iP-UP-KIT-E-24	360 iPatch Upg Kit Evolve 24P 10pk
760198754	360-iP-UP-KIT-E+PMAX-48	360 iPatch Upg Kit Evolve & PM 48P 5pk
760198762	360-iP-UP-KIT-PMAX-2U-24	360 iPatch Upg Kit PMax 2U 24P 10pk
760202630	360-iP-UP-KIT-AE-2	360 iPatch Upg Kit Angled Evolve 24P10pk
760202648	360-iP-UP-KIT-AE-48	360 iPatch Upg Kit Angled Evolve 48P 5pk



# imVision Fiber

## HD Panel

Material ID	Product Description	Name
760217414	HD-iP-1U-96F-LC-DM-LS-SD	HD iPATCH 1U 96F-LC Distribution Module, LazrSPEED, Sliding Shelf
760217422	HD-iP-1U-96F-LC-DM-TS-SD	HD iPATCH 1U 96F-LC Distribution Module, TeraSPEED, Sliding Shelf
760217448	HD-iP-2U-192F-LC-DM-LS-SD	HD iPATCH 2U 192F-LC Distribution Module, LazrSPEED, Sliding Shelf
760217455	HD-iP-2U-192F-LC-DM-TS-SD	HD iPATCH 2U 192F-LC Distribution Module, TeraSPEED, Sliding Shelf
760218396	HD-iP-1U-48F-LC-DM-LS-SD	HD iPATCH 1U 48F-LC Distribution Module, LazrSPEED, Sliding Shelf
760218404	HD-iP-1U-48F-LC-DM-TS-SD	HD iPATCH 1U 48F-LC Distribution Module, TeraSPEED, Sliding Shelf
760218420	HD-iP-2U-96F-LC-DM-LS-SD	HD iPATCH 2U 96F-LC Distribution Module, LazrSPEED, Sliding Shelf
760218438	HD-iP-2U-96F-LC-DM-TS-SD	HD iPATCH 2U 96F-LC Distribution Module, TeraSPEED, Sliding Shelf



## HD Panel (continued)

Material ID	Product Description	Name
760217463	HD-iP-1U-32-MPO-DP-SD	HD iPATCH 1U 32-MPO Distribution Panel, Sliding Shelf
760217471	HD-iP-2U-64-MPO-DP-SD	HD iPATCH 2U 64-MPO Distribution Panel, Sliding Shelf
760236401	HD-iP-1U-96F-LC-DM08-ULL-LS-SD	HD iPATCH 1U 96F-LC Distribution MPO08 ULL Module, LazrSPEED, Sliding Shelf
760236400	HD-iP-1U-96F-LC-DM08-ULL-WB-SD	HD iPATCH 1U 96F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236405	HD-iP-1U-96F-LC-DM12-ULL-LS-SD	HD iPATCH 1U 96F-LC Distribution MPO12 ULL Module, LazrSPEED, Sliding Shelf
760236404	HD-iP-1U-96F-LC-DM12-ULL-WB-SD	HD iPATCH 1U 96F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236409	HD-iP-1U-96F-LC-DM24-ULL-LS-SD	HD iPATCH 1U 96F-LC Distribution MPO24 ULL Module, LazrSPEED, Sliding Shelf
760236408	HD-iP-1U-96F-LC-DM24-ULL-WB-SD	HD iPATCH 1U 96F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236403	HD-iP-2U-192F-LC-DM08-ULL-LS-SD	HD iPATCH 2U 192F-LC Distribution MPO08 ULL Module, LazrSPEED, Sliding Shelf
760236402	HD-iP-2U-192F-LC-DM08-ULL-WB-SD	HD iPATCH 2U 192F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236407	HD-iP-2U-192F-LC-DM12-ULL-LS-SD	HD iPATCH 2U 192F-LC Distribution MPO12 ULL Module, LazrSPEED, Sliding Shelf
760236406	HD-iP-2U-192F-LC-DM12-ULL-WB-SD	HD iPATCH 2U 192F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236411	HD-iP-2U-192F-LC-DM24-ULL-LS-SD	HD iPATCH 2U 192F-LC Distribution MPO24 ULL Module, LazrSPEED, Sliding Shelf
760236410	HD-iP-2U-192F-LC-DM24-ULL-WB-SD	HD iPATCH 2U 192F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237316	HD-iP-4U-192F-LC-DM-LS-SD	HD iPATCH 4U 192F-LC Distribution Module, LazrSPEED, Sliding Shelf
760237317	HD-iP-4U-192F-LC-DM-TS-SD	HD iPATCH 4U 192F-LC Distribution Module, TeraSPEED, Sliding Shelf
760237318	HD-iP-4U-384F-LC-DM-LS-SD	HD iPATCH 4U 384F-LC Distribution Module, LazrSPEED, Sliding Shelf
760237319	HD-iP-4U-384F-LC-DM-TS-SD	HD iPATCH 4U 384F-LC Distribution Module, TeraSPEED, Sliding Shelf
760237320	HD-iP-4U-384F-LC-DM-WB-SD	HD iPATCH 4U 384F-LC Distribution Module, LazrSPEED WideBand, Sliding Shelf
760237321	HD-iP-4U-384F-LC-DM08-ULL-LS-SD	HD iPATCH 4U 384F-LC Distribution MPO08 ULL Module, LazrSPEED, Sliding Shelf
760237322	HD-iP-4U-384F-LC-DM08-ULL-WB-SD	HD iPATCH 4U 384F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237323	HD-iP-4U-384F-LC-DM12-ULL-LS-SD	HD iPATCH 4U 384F-LC Distribution MPO12 ULL Module, LazrSPEED, Sliding Shelf
760237324	HD-iP-4U-384F-LC-DM12-ULL-WB-SD	HD iPATCH 4U 384F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237325	HD-iP-4U-384F-LC-DM24-ULL-LS-SD	HD iPATCH 4U 384F-LC Distribution MPO24 ULL Module, LazrSPEED, Sliding Shelf
760237326	HD-iP-4U-384F-LC-DM24-ULL-WB-SD	HD iPATCH 4U 384F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237327	HD-iP-4U-128-MPO-DP-SD	HD iPATCH 4U 128-MPO Distribution Panel, Sliding Shelf
760237332	HD-iP-4U-384F-LC-DM-LS-FX	HD iPATCH 4U 384F-LC Distribution Module, LazrSPEED, Fixed Shelf
760237333	HD-iP-4U-384F-LC-DM-TS-FX	HD iPATCH 4U 384F-LC Distribution Module, TeraSPEED, Fixed Shelf
760237334	HD-iP-4U-384F-LC-DM-WB-FX	HD iPATCH 4U 384F-LC Distribution Module, LazrSPEED WideBand, Fixed Shelf
760237335	HD-iP-4U-384F-LC-DM08-ULL-LS-FX	HD iPATCH 4U 384F-LC Distribution MPO08 ULL Module, LazrSPEED, Fixed Shelf
760237336	HD-iP-4U-384F-LC-DM08-ULL-WB-FX	HD iPATCH 4U 384F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Fixed Shelf
760237337	HD-iP-4U-384F-LC-DM12-ULL-LS-FX	HD iPATCH 4U 384F-LC Distribution MPO12 ULL Module, LazrSPEED, Fixed Shelf
760237338	HD-iP-4U-384F-LC-DM12-ULL-WB-FX	HD iPATCH 4U 384F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Fixed Shelf
760237339	HD-iP-4U-384F-LC-DM24-ULL-LS-FX	HD iPATCH 4U 384F-LC Distribution MPO24 ULL Module, LazrSPEED, Fixed Shelf
760237340	HD-iP-4U-384F-LC-DM24-ULL-WB-FX	HD iPATCH 4U 384F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Fixed Shelf
760237341	HD-iP-4U-128-MPO-DP-FX	HD iPATCH 4U 128-MPO Distribution Panel, Fixed Shelf
760239559	HD-SP-iP-1U-96F-LC-DP	HD SP iPATCH 1U 96F-LC Distribution Panel
760239558	HD-SP-iP-1U-48F-LC-DP	HD SP iPATCH 1U 48F-LC Distribution Panel

# imVision Fiber

## UD Panel

Material ID	Product Description	Name
760236362	UD-iP-2U-96-MPO-DP-SD	UD iPATCH 2U 96-MPO Distribution Panel, Sliding Shelf
760236364	UD-iP-2U-288F-LC-DM-LS-SD	UD iPATCH 2U 288F-LC Distribution Module, LazrSPEED, Sliding Shelf
760236365	UD-iP-2U-288F-LC-DM-TS-SD	UD iPATCH 2U 288F-LC Distribution Module, Tera Speed, Sliding Shelf
760236363	UD-iP-2U-288F-LC-DM-WB-SD	UD iPATCH 2U 288F-LC Distribution Module, LazrSPEED WideBand, Sliding Shelf
760236367	UD-iP-2U-288F-LC-DM08-ULL-LS-SD	UD iPATCH 2U 288F-LC Distribution MPO08 ULL Module, LazrSPEED, Sliding Shelf
760236366	UD-iP-2U-288F-LC-DM08-ULL-WB-SD	UD iPATCH 2U 288F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236369	UD-iP-2U-288F-LC-DM12-ULL-LS-SD	UD iPATCH 2U 288F-LC Distribution MPO12 ULL Module, LazrSPEED, Sliding Shelf
760236368	UD-iP-2U-288F-LC-DM12-ULL-WB-SD	UD iPATCH 2U 288F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Sliding Shelf
760236371	UD-iP-2U-288F-LC-DM24-ULL-LS-SD	UD iPATCH 2U 288F-LC Distribution MPO24 ULL Module, LazrSPEED, Sliding Shelf
760236370	UD-iP-2U-288F-LC-DM24-ULL-WB-SD	UD iPATCH 2U 288F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237344	UD-iP-4U-576F-LC-DM-LS-SD	UD iPATCH 4U 576F-LC Distribution Module, LazrSPEED, Sliding Shelf
760237345	UD-iP-4U-576F-LC-DM-TS-SD	UD iPATCH 4U 576F-LC Distribution Module, TeraSPEED, Sliding Shelf
760237346	UD-iP-4U-576F-LC-DM-WB-SD	UD iPATCH 4U 576F-LC Distribution Module, LazrSPEED WideBand, Sliding Shelf
760237347	UD-iP-4U-576F-LC-DM08-ULL-LS-SD	UD iPATCH 4U 576F-LC Distribution MPO08 ULL Module, LazrSPEED, Sliding Shelf
760237348	UD-iP-4U-576F-LC-DM08-ULL-WB-SD	UD iPATCH 4U 576F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237349	UD-iP-4U-576F-LC-DM12-ULL-LS-SD	UD iPATCH 4U 576F-LC Distribution MPO12 ULL Module, LazrSPEED, Sliding Shelf
760237350	UD-iP-4U-576F-LC-DM12-ULL-WB-SD	UD iPATCH 4U 576F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237351	UD-iP-4U-576F-LC-DM24-ULL-LS-SD	UD iPATCH 4U 576F-LC Distribution MPO24 ULL Module, LazrSPEED, Sliding Shelf
760237352	UD-iP-4U-576F-LC-DM24-ULL-WB-SD	UD iPATCH 4U 576F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Sliding Shelf
760237353	UD-iP-4U-192-MPO-DP-SD	UD iPATCH 4U 192-MPO Distribution Panel, Sliding Shelf
760237358	UD-iP-4U-576F-LC-DM-WB-FX	UD iPATCH 4U 576F-LC Distribution Module, LazrSPEED WideBand, Fixed Shelf
760237356	UD-iP-4U-576F-LC-DM-LS-FX	UD iPATCH 4U 576F-LC Distribution Module, LazrSPEED, Fixed Shelf
760237357	UD-iP-4U-576F-LC-DM-TS-FX	UD iPATCH 4U 576F-LC Distribution Module, TeraSPEED, Fixed Shelf



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## UD Panel (continued)

Material ID	Product Description	Name
760237359	UD-iP-4U-576F-LC-DM08-ULL-LS-FX	UD iPATCH 4U 576F-LC Distribution MPO08 ULL Module, LazrSPEED, Fixed Shelf
760237360	UD-iP-4U-576F-LC-DM08-ULL-WB-FX	UD iPATCH 4U 576F-LC Distribution MPO08 ULL Module, LazrSPEED WideBand, Fixed Shelf
760237361	UD-iP-4U-576F-LC-DM12-ULL-LS-FX	UD iPATCH 4U 576F-LC Distribution MPO12 ULL Module, LazrSPEED, Fixed Shelf
760237362	UD-iP-4U-576F-LC-DM12-ULL-WB-FX	UD iPATCH 4U 576F-LC Distribution MPO12 ULL Module, LazrSPEED WideBand, Fixed Shelf
760237363	UD-iP-4U-576F-LC-DM24-ULL-LS-FX	UD iPATCH 4U 576F-LC Distribution MPO24 ULL Module, LazrSPEED, Fixed Shelf
760237364	UD-iP-4U-576F-LC-DM24-ULL-WB-FX	UD iPATCH 4U 576F-LC Distribution MPO24 ULL Module, LazrSPEED WideBand, Fixed Shelf
760237365	UD-iP-4U-192-MPO-DP-FX	UD iPATCH 4U 192-MPO Distribution Panel, Fixed Shelf

## imVision Fiber Modules

Material ID	Product Description	Name
760093344	360-iP-HD-MOD-LC-LS	360™ iPatch G2 HD LS Module
760093351	360-iP-HD-MOD-LC-LS-3	360™ iPatch G2 HD LS Module - 3pk
760093369	360-iP-HD-MOD-LC-TS	360™ iPatch G2 HD TS Module
760093377	360-iP-HD-MOD-LC-TS-3	360™ iPatch G2 HD TS Module - 3pk



## imVision Fiber Upgrade Kits

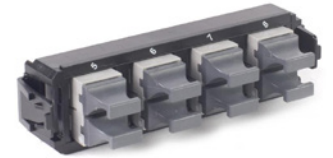
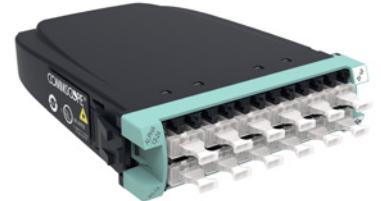
Material ID	Product Description	Name
760105148	360 iPatch Upg Kit G2 LC - 5pk	360 iPatch Upg Kit G2 LC - 5pk
760168443	360G2-iP-96F-LC-SD-KIT-5PK	360G2 iPatch 96F-LC, Sliding Shelf 5PK Kit
760169151	360G2-iP-32-MPO-SD-KIT-5PK	360G2 iPatch 32-MPO, Sliding Shelf 5PK



## imVision-compatible Fiber Distribution Modules and Panels

Application Note: When ordering Distribution Modules for future upgrade to imVision, select DMs from the table below. The modules contain external shutters which can be easily removed to accommodate the upgrade kit

Material ID	Product Description	Name
760242973	360DMiP-24LC-WB	InstaPATCH® 360 LazrSPEED® WideBand Module, 24 LC ports
760242971	360DMiP-24LC-LS	InstaPATCH® 360 LazrSPEED® Standard Module, 24 LC fibers (12 duplex ports)
760242967	360DMiP-12LC-LS	InstaPATCH® 360 LazrSPEED® Standard Module, 12 LC fibers (6 duplex ports)
760242972	360DMiP-24LC-SM	InstaPATCH® 360 TeraSPEED® Standard Module, 24 LC fibers (12 duplex ports)
760242974	360DMiP-24LCA-SM	InstaPATCH® 360 TeraSPEED® APC Module, 24 LC fibers (12 duplex ports)
760242968	360DMiP-12LC-SM	InstaPATCH® 360 TeraSPEED® Standard Module, 12 LC fibers (6 duplex ports)
760242970	360DMiP-12LCA-SM	InstaPATCH® 360 TeraSPEED® APC Module, 12 LC fibers (6 duplex ports)
760242975	360DPiP-12LC-LS	InstaPATCH® 360, LazrSPEED® SYSTIMAX 360 Distribution Panel 12 LC Aqua iPatch Ready
760242979	360DPiP-24LC-LS	InstaPATCH® 360, LazrSPEED® SYSTIMAX 360 Distribution Panel 24 LC, Aqua
760242976	360DPiP-12LC-SM	InstaPATCH® 360, TeraSPEED® SYSTIMAX 360 Distribution Panel 12 LC Blue iPatch Ready
760242978	360DPiP-12LCA-SM	InstaPATCH® 360, TeraSPEED® SYSTIMAX 360 Distribution Panel 12 LC Angled Green iPatch Ready
760242980	360DPiP-24LC-SM	InstaPATCH® 360, TeraSPEED® SYSTIMAX 360 Distribution Panel 24 LC, Blue
760242982	360DPiP-24LCA-SM	InstaPATCH® 360, TeraSPEED® SYSTIMAX 360 Distribution Panel 24 LC APC, Green
760107524	360DP-8MPO	InstaPATCH® 360 Distribution Panel, 360DP-8MPO, 8 x MPO
760236120	DM24ip-24LC-LS	G2 ULL LazrSPEED® MPO-24 Distribution Module, 1x24F MPO unpinned to 24F LC Aqua, Method B Enhanced, iPatch Ready OM4
760242969	360DMiP-12LC-LS	G2 Multimode OM4 Standard Module, 12 LC fibers iPatch Ready (6 duplex ports)
760242977	360DPiP-12LC-WB	360 Distribution Adapter Pack 12 LC Multimode OM5 Lime Green iPatch Ready
760242981	360DPiP-24LC-WB	760236041   360DPis-24LC-WB iPatch Ready
760236121	DM24ip-24LC-WB	G2 ULL LazrSPEED® MPO-24 Distribution Module, 1x24F MPO unpinned to 24F LC Lime Green, Method B Enhanced, iPatch Ready OM5
760236118	DM12ip-24LC-LS	G2 ULL LazrSPEED® MPO-12 Distribution Module, 2x12F MPO unpinned to 24F LC Aqua, Method B Enhanced, iPatch Ready, OM4
760236119	DM12ip-24LC-WB	G2 ULL LazrSPEED® MPO-12 Distribution Module, 2x12F MPO unpinned to 24F LC Lime Green, Method B Enhanced, iPatch Ready, OM5





# imVision Fiber

## imVision-compatible Fiber Distribution Modules and Panels (continued)

Material ID	Product Description	Name
760236116	DM08ip-24LC-LS	G2 ULL LazrSPEED® MPO-8 Distribution Module, 3x8F MPO unpinned to 24F LC Aqua, Method B Enhanced, iPatch Ready, OM4
760236117	DM08ip-24LC-WB	G2 ULL LazrSPEED® MPO-8 Distribution Module, 3x8F MPO unpinned to 24F LC Lime Green , Method B Enhanced, iPatch Ready, OM5
760238084	DM08iP-24LC-SM-ULL	G2 ULL Singlemode MPO-8 Distribution Module, 3x8F MPO unpinned to 24F LC Blue, Method B Enhanced, iPatch Ready
760238085	DM12iP-24LC-SM-ULL	G2 ULL Singlemode MPO-12 Distribution Module, 2x12F MPO unpinned to 24F LC Blue, Method B Enhanced, iPatch Ready
760243043	DM12iP-12LC-LS-ULL	G2 ULL Multimode OM4 MPO-12 Distribution Module, 1x12F MPO unpinned to 12F LC Aqua, Method B Enhanced, iPatch ready
760243044	DM12iP-12LC-SM-ULL	G2 ULL Singlemode MPO-12 Distribution Module, 1x12F MPO unpinned to 12F LC Blue, Method B Enhanced, iPatch Ready
760243045	DM12iP-12LC-WB-ULL	G2 ULL Multimode OM5 MPO-12 Distribution Module, 1x12F MPO unpinned to 12F LC Lime Green, Method B Enhanced, iPatch Ready



# imVision Software

Material ID	Product Description	Name
760165621	im-SYS-MGR-ENT-1K (SW)	imVision System Manager Enterprise 1000
760111187	im-SYS-MGR-ENT-2K (SW)	imVision System Manager Enterprise 2000
760165639	im-SYS-MGR-ENT-5K (SW)	imVision System Manager Enterprise 5000
760111195	im-SYS-MGR-ENT-10K (SW)	imVision System Manager Enterprise 10000
760090068	im-SYS-MGR-ENT-UNL (SW)	imVision System Manager Enterprise Unlimited
760165076	im-SYS-MGR-EXT-XML	imVision System Manager Extended XML
760165514	im-UP-SYSMGR-1K-2K (SW)	imVision Upgrade System Manager Enterprise 1000–2000
760165522	im-UP-SYSMGR-1K-5K (SW)	imVision Upgrade System Manager Enterprise 1000–5000
760165530	im-UP-SYSMGR-1K-10K (SW)	imVision Upgrade System Manager Enterprise 1000–10000
760165548	im-UP-SYSMGR-1K-UNL (SW)	imVision Upgrade System Manager Enterprise 1000–Unlimited
760165555	im-UP-SYSMGR-2K-5K (SW)	imVision Upgrade System Manager Enterprise 2000–5000
760111203	im-UP-SYSMGR-2K-10K (SW)	imVision Upgrade System Manager Enterprise 2000–10000
760111211	im-UP-SYSMGR-2K-UNL (SW)	imVision Upgrade System Manager Enterprise 2000–Unlimited
760165563	im-UP-SYSMGR-5K-10K (SW)	imVision Upgrade System Manager Enterprise 5000–10000
760165571	im-UP-SYSMGR-5K-UNL (SW)	imVision Upgrade System Manager Enterprise 5000–Unlimited
760111229	im-UP-SYSMGR-10K-UNL (SW)	imVision Upgrade System Manager Enterprise 10000–Unlimited
760219618	im-SYS-MGR-ENT- STA	imVision System Manager -Stand Alone



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