# COMMSCOPE<sup>®</sup>



# SYSTIMAX<sup>®</sup> fiber panels solution guide

For high-density and ultra high-density environments

With each passing year, the amount of bandwidth needed for streaming video, cloud computing and the Internet of Things continues to grow exponentially—challenging the underlying infrastructure within data centers.

As IT managers turn to fiber solutions to produce higher interconnect speeds between servers, switches and storage—they must also think ahead and create a clear migration path for future speeds of 100 Gbps and beyond. Annual global data center IP traffic will reach 15.3 zettabytes (ZB) by the end of 2020, up from 4.7 ZB per year in 2015.

Cisco Global Cloud Index: Forecast and Methodology, 2015–2020

http://www.cisco.com/c/dam/en/us/solutions/ collateral/service-provider/global-cloud-index-gci/ white-paper-c11-738085.pdf

## Meeting the surging bandwidth demand challenge

It's with a deep understanding of these challenges that CommScope has developed the SYSTIMAX<sup>®</sup> High Density (HD) and Ultra High Density (UD) fiber optic panels solution. These compact panels are designed to allow for simple plug-and-play deployment even in the most crowded data centers. They also provide for easy changes as well as future modifications without interrupting live channels.



## Supporting increased density and manageability

With the demand for ever-increasing speed comes the need for higher equipment port densities, which naturally leads to dense fiber connectivity. As equipment port densities grow through the use of successively smaller transceivers, data center panels and modules needed to evolve to keep up with the staggering number of fibers deployed.

SYSTIMAX UD and HD solutions are specifically designed for today's high-density data center environments. They combine high-density manageability with the ease of making moves, adds and changes without disrupting live channels. These solutions support both LC and MPO connectivity and permit incremental spend as growth occurs. At the heart of these solutions are our easy-to-install fixed and sliding panels that accept either InstaPATCH<sup>®</sup> 360DM modules, or 360DP LC or 360DP MPO adapter panels.

When switch port densities grow beyond 144 ports per rack unit, our UD panels are an optimal solution for maintaining one-on-one formatting for up to 288 ports. These UD panels can accommodate up to 50 percent more connections than our hard-working HD panels, and do so utilizing the same footprint.



**SYSTIMAX HD-4U** (760209965, SYSTIMAX High Density 4U modular cassette sliding panel)



## Scalable

- Simplifies moves, adds and changes
- Same footprint for simple migration from 10G serial to 40/100G parallel transmission
- Modular design offers more flexibility
- Available in LazrSPEED® and TeraSPEED® to support highperformance applications

## Manageable

- Utilizes same footprint for duplex LC and MPO connections
- Intuitive, flexible labeling solutions for easy port identification
- Large, translucent window provides clear view of the patching field
- Supports imVision<sup>®</sup> automated infrastructure management (AIM) solution

## Agile

- Split tray design provide easy installation while minimizing network downtime
- Tool-less install of rear trunk cables significantly reduces trunk deployment time
- Reduces inventory and simplifies cut-over to the new design
- Utilizes same modules as the current generation of panels

## UD/HD solution comparison

The tables below show the capacity for each InstaPATCH panel based on connector selection. Select a panel based on capacity and select appropriate number of modules.

#### SYSTIMAX FIBER SOLUTIONS

Panel	SYSTIMAX HD 1U		SYSTIMAX HD 2U		SYSTIMAX HD 4U	
Adapter type	Duplex LC	MPO	Duplex LC	MPO	Duplex LC	MPO
Number of ports/rack unit	48	32	96	64	192	128
Maximum fiber count	96	384	192	768	384	1536

Panel	SYSTIMAX UD 2U		SYSTIMAX UD 4U	
Adapter type	Duplex LC MPO		Duplex LC	MPO
Number of ports/rack unit 144		96	288	192
Maximum fiber count	288	1152	576	2304

Panel	SYSTIMAX iPatch HD 1U		SYSTIMAX iPatch HD 2U	
Adapter type	Duplex LC MPO		Duplex LC	MPO
Number of ports/panels	48	32	192	64
Maximum fiber count	96	384	384	786

# Configuring SYSTIMAX HD/UD with InstaPATCH 360 is as easy as 1-2-3

#### **STEP 1: SELECT YOUR PANELS**

#### SYSTIMAX HD Panels

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760209940	HD-1U	SYSTIMAX HD 1U sliding fiber panel, accepts (4) InstaPATCH 360 modules or MPO panels, providing up to 48 duplex LC ports, or up to 32 MPO ports
760209957	HD-2U	SYSTIMAX HD 2U sliding fiber panel, accepts (8) InstaPATCH 360 modules or MPO panels, providing up to 96 duplex LC ports or up to 64 MPO ports
760209965	HD-4U	SYSTIMAX HD 4U sliding fiber panel, accepts (16) InstaPATCH 360 modules or MPO panels, providing up to 192 duplex LC ports or up to 128 MPO ports
760210732	HD-1U-FX	SYSTIMAX HD 1U fixed fiber panel, accepts (4) InstaPATCH 360 modules or MPO panels, providing up to 48 duplex LC ports, or up to 32 MPO ports
760210740	HD-2U-FX	SYSTIMAX HD 2U fixed fiber panel, accepts (8) InstaPATCH 360 modules or MPO panels, providing up to 96 duplex LC ports or up to 64 MPO ports
760210757	HD-4U-FX	SYSTIMAX HD 4U fixed fiber panel, accepts (16) InstaPATCH 360 modules or MPO panels, providing up to 192 duplex LC ports or up to 128 MPO ports
760231506	HD-1U-SP	SYSTIMAX HD 1U splice panel, accepts (4) InstaPatch 360 modules or MPO panels, accepts splice wallets, RoloSplice trays and stackable splice trays
760231514	HD-2U-SP	SYSTIMAX HD 2U splice panel, accepts (8) InstaPatch 360 modules or MPO panels, accepts splice wallets, RoloSplice trays and stackable splice trays
760231522	HD-4U-SP	SYSTIMAX HD 4U splice panel, accepts (12) InstaPatch 360 modules or MPO panels, accepts splice wallets, RoloSplice trays and stackable splice trays



#### SYSTIMAX UD panels

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760227306	UD-2U	SYSTIMAX UD 2U sliding fiber panel, accepts (12) InstaPATCH 360 modules or MPO panels, providing up to 144 duplex LC ports or up to 96 MPO ports
760227314	UD-4U	SYSTIMAX UD 4U sliding fiber panel, accepts (24) InstaPATCH 360 modules or MPO panels, providing up to 288 duplex LC ports or up to 192 MPO ports
760218461	UD-2U-FX	SYSTIMAX UD 2U fixed fiber panel, accepts (12) InstaPATCH 360 modules or MPO panels, providing up to 144 duplex LC ports or up to 96 MPO ports
760218479	UD-4U-FX	SYSTIMAX UD 4U fixed fiber panel, accepts (24) InstaPATCH 360 modules or MPO panels, providing up to 288 duplex LC ports or up to 192 MPO ports

#### SYSTIMAX HD/UD panels accessories



Manage your fiber complexity with Automated Infrastructure Management

#### Features and benefits

- Ensures that moves, adds and changes are implemented accurately and efficiently
- Best in class fiber array connectivity planning, documentation and management capabilities
- Real time monitoring of connectivity changes
- Risk mitigation capabilities for reducing MTTR

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.

#### InstaPATCH 360 imVision-compatible modules

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760109884	360DM-24LC-LS	InstaPATCH 360 LazrSPEED Standard Module, 24 LC fibers (12 duplex ports)
760210609	360DM-24LC-WB	InstaPATCH 360 LazrSPEED OM5 WideBand Module, 24 LC ports
760109892	360DM-24LC-SM	InstaPATCH 360 TeraSPEED Standard Module, 24 LC fibers (12 duplex ports)



#### SYSTIMAX iPatch HD panels

iPatch options are for use with our imVision automated infrastructure management platform

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760235602	HD-iP-1U-96F-LC-DM-WB-SD	HD iPATCH 1U 96F-LC distribution module, LazrSPEED wideband, sliding shelf
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
760235603	HD-iP-2U-192F-LC-DM-WB-SD	HD iPATCH 2U 192F-LC distribution module, LazrSPEED OM5 wideband, 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
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

#### STEP 2: SELECT MODULES AND ADAPTER PANELS

With the HD and UD fiber panels, improved 360DM MPO-LC modules and 360DP LC pass-thru panels are added to the portfolio. Those new modules and adapter panels come with internal, spring-loaded shutters and latch assists.

#### Features and benefits

- Shutters automatically actuated by connector insertion and removal, allowing for one-handed operation
- New latch assist provides easier module removal for faster moves, adds and changes
- Shutters designed to avoid ferrule contact during connector installation
- Shutter door will illuminate when hit with visual fault locator (VFL)

Note: Internal shutters are not compatible with iPatch



#### SYSTIMAX InstaPATCH 360 internal shuttered modules

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760206532	360DMis-24LC-LS	InstaPATCH 360 LazrSPEED module, 24 LC, internal shutter, aqua
760206540	360DMis-24LC-SM	InstaPATCH 360 TeraSPEED module, 24 LC, internal shutter, blue
760206557	360DMis-24LC-MM	InstaPATCH 360 OptiSPEED module, 24 LC, internal shutter, beige
760206565	360DMis-24LCA-SM	InstaPATCH 360 TeraSPEED module, 24 LCAPC, internal shutter, green
760216721	360DMis-24LC-LS-6PK	InstaPATCH 360 LazrSPEED module, 24 LC, internal shutter, aqua, 6 Pack
760216739	360DMis-24LC-SM-6PK	InstaPATCH 360 TeraSPEED module, 24 LC, internal shutter, blue, 6 Pack
760224071	360DMis-12LC-LS	InstaPATCH 360 LazrSPEED module, 12 LC, internal shutter, aqua
760224089	360DMis-12LC-SM	InstaPATCH 360 TeraSPEED module, 12 LC, internal shutter, blue
760224105	360DMis-12LC-MM	InstaPATCH 360 OptiSPEED module, 12 LC, internal shutter, beige
760224238	360DMis-12LCA-SM	InstaPATCH 360 TeraSPEED module, 12 LC, internal shutter, green
760224113	360DMis-12LC-LS-WB	InstaPATCH 360 LazrSPEED OM5 module, 12 LC, internal shutter, lime green



#### SYSTIMAX InstaPATCH 360 internal shuttered adapter panels

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760216754	360DPis-24LC-LS	InstaPATCH 360 LazrSPEED distribution panel, 24 LC, internal shutter, aqua
760216762	360DPis-24LC-SM	InstaPATCH 360 TeraSPEED distribution panel, 24 LC, internal shutter, blue
760216796	360DPis-24LC-MM	InstaPATCH 360 OptiSPEED distribution panel, 24 LC, internal shutter, beige
760216770	360DPis-24LCA-SM	InstaPATCH 360 TeraSPEED distribution panel, 24 LCAPC, internal shutter, green

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#### SYSTIMAX InstaPATCH 360 MPO distribution panels

MATERIAL ID	PRODUCT CODE	DESCRIPTION
760107490	DP360-2MPO	InstaPATCH 360 2-MPO adapter panel
760107508	DP360-4MPO	InstaPATCH 360 4-MPO adapter panel
760107516	DP360-6MPO	InstaPATCH 360 6-MPO adapter panel
760107524	DP360-8MPO	InstaPATCH 360 8-MPO adapter panel

#### STEP 3: SELECT TRUNKS, ARRAYS, RUGGEDIZED FANOUTS, JUMPERS

#### SYSTIMAX InstaPATCH 360 preterminated trunk cables



- Available in LazrSPEED OM5, 550 & 300 and TeraSPEED solutions
- 12-fiber MPO connector-based modular design enables simple connections
- Factory terminated and tested trunk cables for instant field connections and guaranteed quality and performance
- Designed for administrative convenience-guaranteed transmit-to-receive connectivity
- Supports easy reconfiguration for moves, adds and changes
- Easy upgrade path to parallel transmission and associated applications, while preserving the initial investment

#### InstaPATCH 360 preterminated trunk cables configurator



#### SYSTIMAX InstaPATCH 360 ruggedized fanout cables



- 12-fiber MPO connector-based modular design enables simple connections
- Ruggedized fanouts are constructed with LazrSPEED OM5, 550 & 300 or TeraSPEED fibers
- Factory terminated and tested for instant field connections and guaranteed quality and performance
- Designed for administrative convenience-guaranteed transmit-to-receive connectivity
- No special or non-standard polarity components

#### InstaPATCH 360 preterminated trunk cables configurator



- Duplex zipcord construction provides better mechanical performance with less risk of damage from crimping
- Rugged 1.6 mm or 3.0 mm cordage for durable and easily handled connections
- Outer jacket colored for easy identification

#### InstaPATCH 360 preterrminated trunk cables configurator



#### SYSTIMAX InstaPATCH 360 array cords



- 12-fiber MPO connector-based modular design enables simple connections
- Array cords are constructed with LazrSPEED OM5, 550 & 300 or TeraSPEED fibers
- Factory-terminated and tested for instant field connections and guaranteed quality and performance
- No special or non-standard polarity components
- MPO-LC/SC/ST array fanouts are constructed with 1.6 mm reinforced zipcord furcation tubing for outstanding durability and dependability
- Array fanout assemblies are available in fanout length of 48" for cables over 10 feet; Cables 3-9 feet, 24 inch fanout; Cables 2 feet, 12 inch fanout



#### InstaPATCH 360 array fanout cord configurator

## Physical specifications

## HD

#### HD sliding fiber panel dimensions

1U	=	1.75 in H x 19 in W x 16.3 in D (44mm x 483mm x 414.5mm)
2U	=	3.50 in H x 19 in W x 16.3 in D (89mm x 483mm x 414.5mm)
4U	=	7.00 in H x 19 in W x 16.3 in D (178mm x 483mm x 414.5mm)

Panel depth (behind mounting angles) 16.3 in (414.5mm) Panel projection (in front of mounting angles) 5.2 in (132mm) Tray travel = 5.00 in (127mm)

#### HD sliding fiber panel weight (installation weight)

1U =	12.4 lbs (5.62 kg)
2U =	17.0 lbs (7.71 kg)
4U =	24.8 lbs (11.25 kg)

#### HD fixed fiber panel dimensions

1U =	1.75 in H x 19 in W x 17.9 in D (44mm x 483mm x 455mm)
2U =	3.50 in H x 19 in W x 18.2 in D (89mm x 483mm x 462mm)
4U =	7.00 in H x 19 in W x 18.2 in D (178mm x 483mm x 462mm)

#### HD fixed fiber panel weight (installation weight)

1U =	9.0 lbs (4.08 kg)
2U =	11.6 lbs (5.26 kg)
4U =	16.0 lbs (7.26 kg)

#### HD capacity

1U =	4 InstaPATCH 360DM data modules or 360DP distribution panels
2U =	8 InstaPATCH 360DM data modules or 360DP distribution panels
4U =	16 InstaPATCH 360DM data modules or 360DP distribution panels

#### UD sliding fiber panel dimensions

2U -	=	3.50 in H x 19 in W x 16.3 in D (89mm x 483mm x 414.5mm)
4U :	=	7.00 in H x 19 in W x 16.3 in D (178mm x 483mm x 414.5mm)

#### UD sliding fiber panel weight (installation weight)

2U =	21.2 lbs (9.62 kg)
4U =	35.2 lbs (16.0 kg)

#### UD fixed fiber panel dimensions

2U =	3.50 in H x 19 in W x 18.2 in D (89mm x 483mm x 462mm)
4U =	7.00 in H x 19 in W x 18.2 in D (178mm x 483mm x 462mm)

#### UD fixed fiber panel weight (installation weight)

2U =	11.6 lbs (5.26 kg)
4U =	16.0 lbs (7.26 kg)

#### UD capacity

2U =	12 InstaPATCH 360DM data modules or 360DP distribution panels
4U =	24 InstaPATCH 360DM data modules or 360DP distribution panels

## Cable entry

Trunk cable entry in the back; patch cords/fanouts entry in the front

Termination types	LC, MPO	
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#### Side cable entries

1U =	6 trunk cable entries (3 per side)
2U =	12 trunk cable entries (6 per side)
4U =	24 trunk cable entries (12 per side)

#### Additional rear cable entries with optional cable extension kit

1U =	6 trunk cable rear entries (HD-1U-REAR-EXT)
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- 2U = 6 trunk cable rear entries (HD-2U-REAR-EXT-06-KIT)
- 4U = 6 trunk cable rear entries (HD-4U-REAR-EXT-06-KIT)
- 4U = 12 trunk cable rear entries (HD-4U-REAR-EXT-12-KIT)

Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.



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