

# FACT optical distribution frame (ODF) solution

Unlocking the potential of every new day



## FACT optical distribution frame (ODF) solution

# UNLOCK THE POTENTIAL OF TOMORROW'S HIGH FIBER-COUNT NETWORKS

The demands on your network have never been higher. But where others feel pressure, CommScope finds potential. Fueled by unmatched experience and a history of innovation, we work with you to deliver tailored solutions that unlock the opportunity in your network. Together, we create the cabling and connectivity solutions that keep you moving forward.

In central offices, headends and data centers, demand for bandwidth is growing exponentially. The need to install, access, reconfigure and reroute connections is constant. As the physical layer evolves, termination, splicing, patching and storage requirements surpass the capabilities of standard rack and shelf offerings.

Network managers need a better solution, one that supports rapid deployment, plug-and-play connectivity and high density—all while maximizing the usable density and long-term value of the fiber network. The FACT<sup>®</sup> optical distribution frame (ODF) solution from CommScope is a compact, **fully front-accessible** solution that maximizes usable density and supports the continued growth of your fiber infrastructure.

As a modular solution, the FACT optical distribution frame (ODF) solution is fully customizable: four modular frame versions for simplistic, clear cable routing, configure and incorporate universal adaptor packs, cabled modules, MPO modules and value-added modules to optimize your network needs. The complete FACT solution provides a flexible, reliable and cost-effective solution to your evolving network needs.



Figure 1: FACT splice-patch chassis



Figure 2: Two fully-populated FACT Frames side-by-side

## Powerful benefits

The forward-looking design of the FACT optical distribution frame solution addresses the most pressing needs for your ever-changing fiber network: reliable performance, seamless transition to future applications and a higher overall return on investment.

#### SCALABLE, MANAGEABLE DENSITY

With a compact, modular and lightweight frame, high-density plug-and-play elements, and full-frontal access, the FACT optical distribution frame system scales smoothly and logically. The innovative design reduces installation time by as much as 50 percent. System maintenance is enhanced as well. All fibers are easily identifiable, clearly routed and accessible accessible, allowing technicians to:

- $\cdot$  Maximize space by installing frames up against a wall or in back-to-back configurations
- $\cdot$  Support up to 2,644 individually accessible LC fiber connections in a fully front-accessible frame
- $\cdot$  Locate and trace individual fibers along easy-to-follow cable routing paths
- · Complete moves, adds and changes quickly and accurately
- $\cdot$   $\,$  Minimize installation time to live connections through ample room to work
- Reduce inventory and increase component availability with a single fixed patch cord length for all in-rack and panel connections
- · Manage interconnects as well as cross-connects
- $\cdot$   $\,$  Perform advanced splicing, management and storage from a single point

#### LONG-TERM AGILITY

The FACT ODF solution is designed to flex and grow as the fiber needs of your network continue to evolve. Its modular design and simplified installation and management enable long-term agility to meet tomorrow's challenges.

- · Supports the any-to-any configurations of today's leaf-and-spine architecture
- · Enables on-the-fly addition of splitters, wavelength division multiplexers (WDMs), taps and connectivity modules
- · Supports a grow-as-needed approach that avoids overprovisioning and preserves precious capital

### LOWER TOTAL COST OF OWNERSHIP

Agility and optimized cable management lower total cost of ownership through maximized usable density, more effective capital deployment and improved operational efficiency:

- · Maximize fiber density and manageability
- · Deploy standard cable configurations to reduce installation and inventory costs
- · Decrease troubleshooting time and need to install or reroute fibers
- · Reduce mean time to repair and downtime costs
- · Accelerate time to market and time to revenue
- · Enhance return on investment (ROI)

## CommScope's FACT solution

Minimizes installation time

Simplified installation and management enable long-term agility to meet tomorrow's challenges

Lowers total cost of ownership through maximized usable density

## Modular design



Figure 3: Full frame breakout with horizontal central building blocks

#### FRAME

The FACT optical distribution frame solution begins with CommScope's modular, lightweight FACT frame. Designed modularly with a small footprint, the fully front accessible FACT frame, can be placed up against a wall or back-to-back in a guad formation to maximize usable density. The frame provides dedicated spots for cable routing and color-coded fiber management, supporting up to 2,688 LC connections in a single frame. The FACT frame can be designed and easily installed with cable routing on either side of the frame which includes backplate numbering allowing for simple tracking of fibers whether you route from top to bottom or vice-versa. One standard patch cord length can reach any position in a back-to back configuration, reducing the number of cable lengths required . The FACT frame accommodates not only FACT shelving, but standard shelving as well allowing you to increase your density while utilizing your current equipment. The FACT Frame is compatible with a range of accessories such as side panels, doors and cable attachment plates.

#### **ELEMENTS AND CHASSIS**

FACT elements may be deployed individually as a single-element chassis or grouped with other elements for higher density solutions. Each element measures 30.95 mm (1.22 in.) tall, 30 percent less than the standard HU (44.45 mm/

1.75 in.). Each element supports two hinged trays that provide full front access to both sides of all connections and clear visibility of all ports. Four chassis types—patch-only, patch-splice, pre-cabled and NG4—enable customization of the FACT optical distribution frame to support virtually any application.

#### ADAPTOR PACKS

FACT adaptor packs are available in LC 12-pack, SC six-pack and MPO four-pack configurations, and are compatible with singlemode and multimode, angled and ultra-polished connectors. All adaptor packs are compatible with the universal FACT NG4 chassis. Two adaptor packs snap into a single access tray. Staggered adaptor ports improve access for quick and easier connector insertion and removal, and help to clearly identify individual adaptor ports.

#### **MPO MODULES**

FACT MPO modules are used with the universal FACT NG4 chassis. The front of the MPO module offers the same familiar interface as standard LC and SC adaptor modules. The rear of the module features a low-loss MPO adaptor that allows direct connection to preterminated MPO trunk cables—so you can provision up to 24 circuits at a time.

#### VALUE-ADDED MODULES

NG4access® value-added modules enhance optical transport systems by providing flexible, easy-to-incorporate optical components that increase fiber capacity, enhance system monitoring, or distribute signals to multiple subscribers. Value-added modules are used with the universal FACT NG4 chassis.

#### ACCESSORIES (SOLD SEPARATELY)

Accessories for the FACT chassis include cable termination components for all cable sizes and cable types plus doors and panels for the frame.

#### SPLICE-ONLY CHASSISS

The FACT splice-only chassis is a multipurpose splice shelf featuring single-circuit and single-element fiber management.

#### PATCH CORDS

The FACT optical distribution frame system solution works best when using fixed patch cord lengths within the same frame, or between adjacent frames. Patch cords with a diameter of 1.8 mm/0.07 in. or less enable an effective usable density of 2,688 connections per frame.



Optimal access for quick and easy connector insertion and removal

## FACT optical distribution frame (ODF) platform at a glance

APPLICATION
General: Medium to large front access fiber applications
Location: Main distribution area
Function: Cross-connect
DIMENSIONS
Width: 1050mm (42 in.)
Depth: 300 mm (12 in.)
INSTALLATION PRACTICES
Patching direction: In tray
Max frames per lineup at max density (recommended):   4 (without FiberGuide) - equals 10576 single LC connections     16 (with FiberGuide) - equals 42304 single LC connections
Recommended patch cord OD: - SC: <= 2 mm - LC: <= 1.8 mm
Recommended patch cord length within the same frame or within a side-by-side twin frame or a block of four: 5 meters
On-frame splicing: Yes with density reduction
Jumper slack storage location: On frame
Interconnect: Excellent
Cross-connect: Excellent
CAPACITY
Connections/frame: SC/LC 1344/2688 MPO 12 fiber 10752 MPO 24 fiber 21504
Splices/frame: - Splice-Patch chassis: 2688 splices - Splice chassis: 4032 splices (with SMOUV protector)
Connection density for frame width 1050mm: SC 3733/343 LC 7466/686 MPO 29866/2745
Elements per frame: 56
Value-added module (VAM) capacity: Yes (FACT-NG4 chassis only, two per FACT element)
NG4 adaptor packs capacity: Yes (FACT-NG4 chassis only, four per FACT element)
NG4 MPO modules capacity: Yes (FACT-NG4 chassis only, two per FACT element)
NG4 cabled modules capacity: Yes (FACT-NG4 chassis only, two per FACT element)
SPECIFICATIONS
Compliance: IEC 6300-2
Seismic rating: Zone 2
Supported fiber types: 20 mm band radius

## The Frame

CommScope's all-purpose, easy-to-use FACT frame is designed to meet today's and tomorrow's high-density network needs. The front access frame provides full access to both sides of all connections, for a more compact effective footprint. The frame ships in a lightweight, compact kit for easy handling, storage and transport and is easy to install on site—even by a single operator in less than 30 minutes.

The cross-connect FACT frame simplifies the design and ordering process. They can be placed together in multiple configurations to suit any space requirement. The FACT frames can be mounted on the floor or against a wall, side-to-side or back-to-back. For larger lineups, multiple frames can be deployed side-by-side. Each cross-connect frame 2688 single LC connections. Engineered bend control during routing maintains superior optical performance and easy access to cables, pigtails and jumpers during installation, operation, maintenance and upgrades.

Cable attachment plates are incorporated into the side ducts, and a range of accessories such as doors, top and side panels, over-length storage bays, and extra cable attachment plates are available as well.



Figure 4: Single frame, recommended patch cord length for all cross-connects is 5 meters (17 ft.).



Figure 5: Twin frame deployed side-by-side.

Recommended patch cord length for all cross connects is 5 meters (17 ft) inside the twin frame.



Figure 6: Four-frame block, deployed side-by-side, with side panels and with overlength storage bay in between the two twin frames.

Recommended patch cord length for the cross connects between the two twin frames is 10 meters (34 ft).

#### FRAME ORDERING INFORMATION

Description	Dimensions: H x W x D	Max. termination capacity	Catalog number	Catalog description				
Cross connect frame, patching on the left	2200 mm x 1050 mm x 300 mm (87 in. x 41 in. x 12 in.)	2688 single LC or 1344 SC connections per frame	760243094	FACT-FRCCLHP22				
Cross connect frame, patching on the right	2200 mm x 1050 mm x 300 mm (87 in. x 41 in. x 12 in.)	2688 single LC or 1344 SC connections per frame	760243095	FACT-FRCCRHP22				
Patch cord overlength management bay	2200 mm x 200 mm X 300 mm (87 in. x 8 in. x 12 in.)	n/a	760243097	FACT-FROLB22				
All frame kits include: - Wall and back-to-back connection kit - Side-to-side connection kit								

- Earthing kit

- Adjustable feet

- Intuitive installation instructions

- Color label kit for spool identification and intuitive patch cord routing

- Required hardware and fasteners

- Pre-installed position number identification strip for FACT-style and 19"-style.

#### FRAME ACCESSORIES ORDERING INFORMATION Description Catalog number Catalog description Cross connect door kit. Set of two doors with two door handles per door. The door handles are 760243098 FACT-FRCCD22 compatible with half cilinder locks according to DIN 18252 (EN 1303). Locks not included. 760243099 Cross connect side panel kit (set of two panels) FACT-FRCCP22 Patch cord overlenght bay door. Set of one door with two door handles. The door handles are 760243101 FACT-FROLBD22 compatible with half cilinder locks according to DIN 18252 (EN 1303). Locks not included. Fiber guide fixation kit 760243110 FACT-FRACCFGS All frame accessory kits include: - Intuitive installation instruction - Required hard ware and fasteners

## FACT chassis types

The building blocks of the FACT optical distribution frame system are the FACT chassis. FACT chassis can be deployed individually as a single-element chassis, or up to six similar elements can be combined into high fiber-count FACT chassis.

The single-element FACT chassis measures 30.95 mm (1.22 in.) tall, 30 percent less than the standard HU/1RU (44.45 mm/1.75 in.). Each FACT element features two hinged trays, providing full front access to both sides of all connections and clear visibility of all ports. There are four FACT chassis types.



Figure 7: Three element patch-only chassis

#### PATCH-ONLY CHASSIS

The FACT patch-only chassis supports cross-connect and interconnect applications and is available with SC and LC adaptors. The FACT patch-only chassis accommodates 24 SC connections or 48 single LC connections per element.

## PATCH-ONLY CHASSIS: ORDERING INFORMATION



#### SPLICE-PATCH CHASSIS

Preterminated with pigtails, the FACT splice-patch chassis enables splicing of OSP or ISP cables directly on the frame with no loss of density. Available with SC or LC preterminated connections, the high-density chassis accommodates 24 SC or 48 single LC connections per FACT element and uses the EIA/TIA 598 color-coding standard.



#### SPLICE-PATCH CHASSIS ORDERING INFORMATION

Figure 8: Two-element splice-patch chassis with left-side patching

Element count      1E   One element     2E   Two elements     3E   Three elements     4E   Four elements     5E   Five elements     6E   Six elements			FAC	Т	-	$\mathbf{X}^{1}$	X	X	Η	Ρ	X	X
1E   One element     2E   Two elements     3E   Three elements     4E   Four elements     5E   Five elements     6E   Six elements	Eler	nent cou	ınt									
2E   Two elements     3E   Three elements     4E   Four elements     5E   Five elements     6E   Six elements     Patch cord side		1E	One element		]							
3E   Three elements     4E   Four elements     5E   Five elements     6E   Six elements		2E	Two elements									
4E Four elements   5E Five elements   6E Six elements		3E	Three elements									
5E Five elements   6E Six elements	1	4E	Four elements									
6E Six elements   Patch cord side		5E	Five elements									
Patch cord side		6F	Six elements									
Patch cord side												
Left-hand natch	Pato	ch cord s	ide									
	-	L	Left-hand patch		]							
R Right-hand patch	2	R	Right-hand patch									
	60										]	
							D					
Fiber I Blue			Fiber I				BI	ue				
Fiber 2 Orange			Fiber 2				Ora	inge				
Fiber 3 Green			Fiber 3				Gr	een				
Fiber 4 Brown			Fiber 4		_		Bro	own				
Fiber 5 Grey			Fiber 5				G	rey				
Fiber 6 White			Fiber 6				W	hite				
Fiber 7 Red	Fiber 7						R	ed				
Fiber 8 Black	Fiber 8						Bla	ack				
Fiber 9 Yellow			Fiber 9				Yel	low				
Fiber 10 Purple	Fiber 10						Pu	rple				
Fiber 11 Pink						Pi	nk					
Fiber 12 Turquoise			Fiber 12				Turq	uoise				

Splice holder/protector (included)

4	S	SMOUV
4	А	ANT

#### Adaptor/connector types, Port count

7

S1	SC UPC, C-grade, 24 ports per element
S2	SC APC 8°, C-grade, 24 ports per element
SF	SC UPC, B-grade, 24 ports per element
SG	SC APC 8°, B-grade, 24 ports per element
S4	SC OM4, 24 ports per element
L1	LC UPC, C-grade, 48 single LC ports per element
L2	LC APC, C-grade, 48 single LC ports per element
LF	LC UPC, B-grade, 48 single LC ports per element
LG	LC APC, B-grade, 48 single LC ports per element
L4	LC OM4, 48 single LC ports per element

\*Single mode connector performance grades B & C according to IEC 61755-1.

#### **PRE-CABLED CHASSIS**

The FACT pre-cabled chassis is supplied with connectorized cables from 48 fibers to 144 fibers, and a stub on the far end. It is available for indoor cable in lengths up to 350 meters/13.78 in. The pre-cabled chassis accommodates 24 SC or 48 single LC connections per FACT element. All pre-cabled FACT chassis use EIA/TIA 598 color-coding standard.

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#### PRE-CABLED CHASSIS ORDERING INFORMATION

1 2

Figure 9: Two-element pre-cabled chassis with 96f. indoor microsheet cable and right-side patching

FA	ACT-	XX X H P XX	Х -	XXX	X	X				
			Ľ							
Elen	nent cou	nt			Cable	e type				
	1E	One element				ID	24 · ON	fiber Indoor Micro-Tub 4 = Aqua, EN50575 C	e cable, PR Cable	SM G657A1 = yellow; e EuroClass Dca
	20						48	fiber Indoor Micro-Tub	e cable,	SM G657A1 = yellow;
1	3E						ON	4 = Aqua, EN50575 C	PR Cable	e EuroClass Dca
	4E 5E	Five elements					72 · ON	fiber Indoor Micro-Tub  4 = Aqua, EN50575 C	e cable, PR Cable	SM G657A1 = yellow; e EuroClass Dca
	6E	Six elements					96 <sup>-</sup> OIV	fiber Indoor Micro-Tub 4 = Aqua, EN50575 C	e cable, PR Cable	SM G657A1 = yellow; e EuroClass Dca
Pato	ch cord s	ide			6		144 ON	fiber Indoor Micro-Tu 4 = Aqua, EN50575 C	ibe cable PR Cable	e, SM G657A1 = yellow; e EuroClass Dca
2	R	Right-hand patch					24 G6	fiber In/Outdoor Micro 57A1, black, EN50575	sheath E CPR Cab	Breakout cable, Ile EuroClass Dca
Ada	ptor/con	nector types, Port count					48 G6	fiber In/Outdoor Micro 57A1, black, EN50575	osheath o CPR Cab	cable de EuroClass Dca
	S1	SC UPC, C-grade, 24 ports per element					72 <sup>-</sup> G6'	fiber In/Outdoor Micro 57A1 black EN50575	osheath o CPR Cab	cable, ole EuroClass Dca
	S2	SC APC 8°, C-grade, 24 ports per element					96 ·	fiber In/Outdoor Micro	osheath o	cable (SM = black) $E_{\rm sec}$
	SF	SC UPC, B-grade, 24 ports per element					144	fiber In/Outdoor Micr	rosheath	cable (SM = black)
	SG	SC APC 8°, B-grade, 24 ports per element				Note: Ca	able fibe	er count needs to match the	FACT-chas	sis port count
	S4	SC OM4, 24 ports per element								
3	L1	LC UPC, C-grade, 48 single LC ports per element				Cable le	ength			
	L2	LC APC, C-grade, 48 single LC					010 020	10 m (33 ft.) 20 m (66 ft )	100 150	100 m (328 ft.) 150 m (492 ft )
	LF	LC UPC, B-grade, 48 single LC				5	030	30 m (98 ft.)	200	200 m (656 ft.)
	LG	LC APC, B-grade, 48 single LC					050 07 <u>5</u>	50 m (164 ft.) 75 m (246 ft.)	250 3 <u>00</u>	250 m (820 ft.) 300 m (984 ft.)
	L4	LC OM4, 48 single LC ports				Splice I	holde	r/protector		, <i>,</i> ,
*	Cingle me						S	SMOUV		
	grades B &	$\alpha$ C according to IEC 61755-1.	L			4		ΔΝΙΤ		

ANT

#### FACT NG4 CHASSIS

The universal FACT NG4 chassis supports NG4access connectivity packs and modules that snap into the FACT NG4 chassis. In addition to SC, LC and MPO adaptor packs, it also accommodates MPO-to-LC or MPO-to-SC modules, cabled modules and single high value-added modules (VAMs).

The FACT NG4 element includes two trays; each element can accommodate:

- · Four LC or SC adaptor packs
- · Two MPO modules
- · Two 24-fiber LC cabled modules
- · Two 12-fiber SC cabled modules
- · Two single high value added modules (VAMs)



Figure 10: Four-element FACT NG4 chassis with LC adaptor pack



Figure 11: Single-element FACT NG4 chassis with right-exit MPO module

#### FACT NG4 CHASSIS: ORDERING INFORMATION



## Universal adaptor packs

FACT universal adaptor packs are designed to accept singlemode and multimode connections with ultra-polished or angle-polished connectors. A staggered adaptor design allows technicians to easily identify and access individual connections without disturbing adjacent circuits and eliminates the need for insertion or extraction tools.

Each FACT element supports up to four universal adaptor packs; two LC12, SC6 or MPO4 adaptor packs can be installed per tray.





Figure 12: LC12 universal adaptor packs

UNIVERSAL ADAPTOR PACKS ORDERING INFORMATION							
Description	Capacity	Dimensions (H x W x D)	Catalog number				
Snap-in LC12 universal adaptor pack (two packs w/labels)	24 single LC connections		NG4-APLC120000				
Snap-in SC6 universal adaptor pack (two packs w/labels)	12 SC connections	84 mm x 33 mm x 10 mm	NG4-APSC060000				
Snap-in MPO adaptor four-pack, Method A (key up/down) (two packs w/labels)	8 MPO connections	(3.3 in. x 1.3 in. x 0.4 in.)	NG4-APMP040000				
Snap-in MPO adaptor four-pack, Enhanced Method B (key up/up) (two packs w/labels);	8 MPO connections		NG4-APMP0400EB				

## MPO modules

FACT MPO modules enable technicians to route and install higher fiber counts faster and more easily, while simplifying inventory and ordering. The front interface for LC connectors is identical to the cabled module, while the rear integrates a low-loss MPO adaptor—enabling installers to quickly connect MPO trunk cables for rapid installation and turn-up. This module also supports direct connection to electronics, fiber tie cables or top-of-rack systems such as CommScope's Rapid panels or MFPS panel. The MPO module snaps into place within the FACT NG4 tray, and each FACT NG4 element supports up to two MPO modules. Standard outings are method A and Method B Enhanced.



Figure 13: Right-exit MPO module with LC adaptors



#### MPO MODULES METHOD A: ORDERING INFORMATION

## Value-added modules (VAMs)

# VAMs FOR COARSE/DENSE WAVELENGTH DIVISION MULTIPLEXING

The FACT portfolio also includes Single High value-added modules (VAMs) for coarse Wavelength Division Multiplexing (CWDM) and Dense Wavelength Division Multiplexing (DWDM). These VAMs are used to combine (or separate) two or more signals with different wavelengths to more efficiently use existing fiber.

CWDM VAM modules provide a wide range of wavelength combinations typically from 4 to 8 channels while DWDM VAM modules are typically used for higher channel count requirements and combine up to 16 DWDM channels in a single high module.

Both CWDM and DWDM VAMs support 12 SC or 24 LC front facing connectors. Optional test and upgrade ports enable rapid signal turn-up and simplified test access.

For details on available configurations, please contact your account manager or field application engineer.



Figure 14: Value-added module shown loaded into a FACT NG4 chassis

#### VAMs FOR MONITORING CIRCUITS

The FACT portfolio also includes Single high value-added modules (VAMs), which enable monitoring and testing of single-mode and multimode optical signals. These non-intrusive monitoring VAMs provide a wide range of tap ratios to meet specific application requirements. Technicians can easily monitor traffic at a single point to identify signal degradation and locate failures more quickly. Multimode monitoring VAMs operate at data rates of 10Gbps or below. Monitoring VAMs support 12 SC or 24 LC front facing connectors.



Figure 15: Single high NG4access VAM

SINGLEMODE MONITOR VAMs ORDERING INFORMATION							
Description	Connector	Orientation	MID				
4 circuits 60/40 Tap Ratio	LC UPC	Left	NG4-VMKLF4J				
4 circuits 50/50 Tap Ratio	LC UPC	Left	NG4-VMKLF4C				

MULTIMODE MONITOR VAMs ORDERING INFORMATION								
Description	Connector	Orientation	MID					
4 circuits 70/30 Tap Ratio	LC Multimode	Left	NG4-VMKNLF4H010GM					
4 circuits 60/40 Tap Ratio	LC Multimode	Left	NG4-VMKNLF4J010GM					
4 circuits 50/50 Tap Ratio	LC Multimode	Left	NG4-VMKNLF4C010GM					

#### VAMs FOR SPLITTING SIGNAL

The FACT portfolio also includes Single high value-added modules (VAMs). Splitter VAMs are used to split (or combine) optical signal power from one fiber to multiple fibers splitter VAMs can be used for signal distribution in PON networks. Splitter VAMs support 12 SC or 24 LC front facing connectors.



Figure:16: Element FACT NG4 chassis chassis with two single high VAMs.

ORDERING INFORMATION							
Description	Connector	Orientation	MID				
8 Circuits symmetrical split (1x2 splitter)	LC / APC	Left	NG4-VSMLF8C				
4 Circuits symmetrical split (1x4 splitter)	LC / APC	Left	NG4-VSMLF44				
2 Circuits symmetrical split (1x8 splitter)	LC / APC	Left	NG4-VSMLF28				
1 Circuits symmetrical split (1x16 splitter)	LC / APC	Left	NG4-VSMLF116				

## Accessories

#### FACT CABLE TERMINATION KITS

FACT cable termination kits enable quick and easy termination of all commonly used cables either with Cable Termination Units (CTUs) directly on the FACT chassis or with Cable Attachment Plates for the larger and stiff cables in the cable side duct.

FACT CTUs are specifically designed for termination of most commonly used cables (diameter range: 5 mm to 15mm) directly on the FACT chassis. This allows the installer to pre-terminate a cable on the CTU outside the frame. When using the FACT Frame solution, it is recommended to use the FACT-FRACCCTUXE series. This CTU series which can only be used with the FACT frame, accommodates with stiffer cables and cable diameters up to 15 mm.



Figure:17: Installed FACT-FRACCCTU6E with cable exit in the left bottom corner.

FACT Cable Attachment Plates are used for securing very stiff and/or thick cables and fanout cables in the side duct.

If you are using a FACT shelf in a FIST-GR3 frame or another compatible frame, please use the FACT-ACCCTU series and FIST-GR3 cable attachment and backplates listed in the appendix.

CABLE TERMINATION UNIT (CTU) FACT FRAME ORDERING INFORMATION							
Description	Compatible Frame Type(s)	Diameter range (cable or flex tube)	Catalog Number	Catalog Description			
CTU kit for 1E Chassis	FACT	1 to 4 cables with diameter 5 to 8,5 mm or 1 cable with diameter 8,5 to 15 mm	760243102	FACT-FRACCCTU1E			
CTU kit for 2EChassis	FACT	1 to 4 cables with diameter 5 to 8,5 mm or 1 cable with diameter 8,5 to 15 mm	760243103	FACT-FRACCCTU2E			
CTU kit for 3E Chassis	FACT	1 to 4 cables with diameter 5 to 8,5 mm or 1 cable with diameter 8,5 to 15 mm	760243104	FACT-FRACCCTU3E			
CTU kit for 4E Chassis	FACT	1 to 4 cables with diameter 5 to 8,5 mm or 1 cable with diameter 8,5 to 15 mm	760243105	FACT-FRACCCTU4E			
CTU kit for 5E Chassis	FACT	1 to 4 cables with diameter 5 to 8,5 mm or 1 cable with diameter 8,5 to 15 mm	760243106	FACT-FRACCCTU5E			
CTU kit for 6E Chassis	FACT	1 to 4 cables with diameter 5 to 8,5 mm or 1 cable with diameter 8,5 to 15 mm	760243107	FACT-FRACCCTU6E			
Note: All FACT-FRACCCTU kits include one side guide channel part per chassis element count and one angled part per kit.							

## FACT CABLE ATTACHMENT PLATE ORDERING INFORMATION

Description - Kit content	Compatible with frame	Catalog Number	Catalog Description
One cable attachment plate for frame side duct & One cable to flex conversion component set	FACT	760243108	FACT-FRACCCAPL
One cable to flex conversion component set for cable attachment plate	FACT	760243111	FACT-FRACCCTF
One fan out fixation plate for frame side duct & Eight fan out fixation component sets	FACT	760243109	FACT-FRACCFOPL
Eight fan out fixation component sets (for fan out fixation plate)	FACT	760243112	FACT-FRACCFOFK-8

## FACT Splice chassis

The FACT splice chassis is a multipurpose splice shelf featuring up to 96 ANT splices or 72 SMOUV splices per FACT element. In combination with the FACT-ACCCTU accessories, the FACT splice chassis supports multiple splice applications, including:

- · Outdoor-to-indoor loose-tube cable
- · Loose-tube cable to pigtails (single aramid yarn termination)

FACT SPLICE CHASSIS ORDERING INFORMATION

- · Loose-tube cable to breakout or intra-facility (IFC) cable
- · Pigtail to pigtail (single aramid yarn termination)



#### Figure 19: Four-element splice chassis, six trays per element, 12 SMOUVs per tray

		FAC	T- ×	1 ( X	SPL	XX			
Elei	ment cou	Int					Tray	types	
	1E	One element						A04	Four ANT splices
1	2E	Two elements					2	S04	Four SMOUV splices
	ЗE	Three elements					_ 2	A12	12 ANT splices
	4E	Four elements						S12	12 SMOUV splices

NUMBER OF TRAYS PER FACT-CHASSIS						
	A04	S04	A12	S12		
lE	12	12	8	6		
2E	24	24	16	12		
ЗE	36	36	24	18		
4E	48	48	32	24		

## Let's shape the future together.

The transition to centralized radio access networks (C-RAN), the increasing use of virtual fiber in support of small cells, the need to migrate to higher lane speeds—trends and technologies like these are reshaping today's central office and driving demand for fiber to levels unimagined just a few years ago. As fiber counts grow, fiber management grows more demanding.

At CommScope, we know exactly what you're up against. We don't just participate in trends—we pioneer them. For over 40 years, we have partnered with our customers to identify, design and build specialized solutions for data centers, headends and central offices.

So relax. With CommScope and solutions like our FACT optical distribution frame (ODF) system, you're set. One modular platform—one innovative and experienced partner to help you evolve and grow your network, unimpeded and with the confidence you need.

For more information on the FACT ODF, contact CommScope. Let's shape the future together.



FIST-GR3 FRAME ORDERING INFORMATION						
Description	Dimensions: H x W x D	Max. termination capacity	Catalog number	Catalog description		
Frame with 2 x 150 mm side ducts	2,200 mm x 900 mm x 300 mm (87 in. x 35 in. x 12 in.)	2,688 LC or 1,344 SC connections per frame	CS6171-000	FIST-GR3-R-150/150-2-22		
Frame with 150 mm and 300 mm side duct	2,200 mm x 1,050 mm x 300 mm (87 in. x 41 in. x 12 in.)	2,688 LC or 1,344 SC connections per frame	CS6177-000	FIST-GR3-R-150/300-2-22		
Frame with 2 x 300 mm side ducts	2,200 mm x 1,200 mm x 300 mm (87 in. x 47 in. x 12 in.)	2,688 LC or 1,344 SC connections per frame	CS6174-000	FIST-GR3-R-300/300-2-22		

All frames include:

• Two side ducts with integrated ETSI mounting profiles: manage and house cables, pigtails, patch cords

Base duct measures 8HU

Loose drums (15x)

Cable attachment plates and drum plates integrated into management panel

• Wall and back-to-back connection kits

Earthing kit

Adjustable feet

· Intuitive installation instructions and footprint template

Rack-painted (powder-coated) light gray (RAL-7035)

• Label kit for color identification of the spools

All hardware and fasteners

#### FIST-GR3 FRAME ACCESSORIES ORDERING INFORMATION

Description	Dimensions	Catalog number	Catalog description
FACT back plate, mounts four FACT elements in GR3 frame	120 mm x 531.5 mm (H x W) (4.8 in. x 20.9 in.)	760239955	FACT-ACCBPL4E
FACT back plate, mounts 28 FACT ele- ments in GR3 frame (recommended)	873 mm x 531.5 mm (H x W) (34.4 in. x 20.9 in.)	760239956	FACT-ACCBPL28E
Door for 150 mm side duct	2,200 mm x 150 mm (H x W) (87 in. x 6 in.)	CZ9821-000	FIST-GR3-D-150-22-2
Door for 300 mm side duct	2,200 mm x 300 mm (H x W) (87 in. x 12 in.)	CZ9825-000	FIST-GR3-D-300-22-2
Door for 600 mm side duct, w/lock	2,200 mm x 600 mm (H x W) (87 in. x 24 in.)	CZ9827-000	FIST-GR3-D-600-22-2
Top cover for 150 mm side duct	150 mm x 300 mm (W x D) (6 in. x 12 in.)	CZ9047-000	FIST-GR3-T-150
Top cover for 300 mm side duct	300 mm x 300 mm (W x D) (12 in. x 12 in.)	CW5887-000	FIST-GR3-T-300
Top cover for 600 mm central section	600 mm x 300 mm (W x D) (24 in. x 12 in.)	CK8631-000	FIST-GR3-T-600
Set (of two) side or back panels	2,200 mm x 300 mm (H x W) (87 in. x 12 in.)	CS9084-000	FIST-GR3-P-300-22
Storage bay (includes a fiber passage for back-to-back configuration)	2,200 mm x 300 mm x 300 mm (H x W x D) (87 in. x 12 in. x 12 in.)	CV7092-000	FIST-GR3-SB-300-22-2
Extended base duct for 150 mm side duct; increases patch cord capacity at bottom of frame; incoming feeder cable must come from top of frame	215 mm (D) (8.5 in.)	EF7794-000	FIST-GR3-BD-150/215
Extended base duct for 300 mm side duct; increases patch cord capacity at bottom of frame; incoming feeder cable must come from top of frame	215 mm (D) (8.5 in.)	EF7793-000	FIST-GR3-BD-300/215
Set (of two) side-by-side brackets	Set (of two) side-by-side brackets n/a		FIST-GR3-STS
Kit to route jumpers from front to back of rack; required when using extended base duct (8.5 in.)		EF8196-000	FIST-GR3-BD-BTB-600/215
Containment brackets—maintain patch cords in side duct	n/a	315826-000	FIST-GR2-PCBR-10



Figure 17: Cable termination unit (CTU) on chassis





Figure 18: Installed cable termination units (CTUs) on FACT chassis

FACT CABLE TERMINATION UNIT (CTU) ORDERING INFORMATION						
Cable type—termination capacity	Compatible Frame Type(s).	Diameter range	Catalog number	Catalog description		
CTU for one cable with maximum diameter of 15 mm (.6 in.) or one flex tube of 12-16 mm (.5 in.–.6 in.) (with transparent cover)	FACT and FIST-GR3	Cable: 9 mm to 15 mm (.4 in. to .6 in.) Flex tube: 1 x ID 12 mm, or 2 x ID 10 mm (1 x ID .5 in., or 2 x ID .4 in.)	760239897	FACT-ACCCTULLT		
CTU for one cable with maximum diameter of 15 mm (.6 in.) or one flex tube of 12-16 mm (.5 in.–.6 in.)	FACT and FIST-GR3	Cable: 9 mm to 15 mm (.4 in. to .6 in.) Flex tube: 1 x ID 12 mm, or 2 x ID 10 mm (1 x ID .5 in., or 2 x ID .4 in.)	760239898	FACT-ACCCTUMLT		
One IFC-cable	FACT and FIST-GR3	15 mm (max.) (.6 in. max.)	760239899	FACT-ACCCTUMIFC		
Trumpet, KTUs for 24 pigtails	FACT and FIST-GR3	1.8 mm (min.) 2.4 mm (max.) (.07 in. min.) (.09 in. max)	760239900	FACT-ACCCTUMP24		
One or two IFC-cables	FACT and FIST-GR3	One cable: 8.5 mm (max.) (.3 in. max.) Two cables: 6 mm (max.) (.2 in. max.)	760239951	FACT-ACCCTUSIFC		
One fiber cable or one flex tube 6/10 mm	FACT and FIST-GR3	Cable: 8.5 mm (fiber cable max.) (.3 in. fiber cable max.) Flex tube: 1 x 10 mm (1 x .4 in.)	760239952	FACT-ACCCTUSLT		

FIST-GR3 CABLE ATTACHMENT PLATE ORDERING INFORMATION					
Description	Catalog number	Catalog description			
L-cable attachment plate—supports up to 10 IFC or breakout cables; mounts perpendicularly in side duct	EG5792-000	FIST-GR3-BOIC-LPL			
Back plate for 300 mm (11.8 in.) duct—accommodates up to nine FIST-GR2-BOIC-LPL; mounts flat on 300 mm (11.8 in.) side duct	D35100-000	FIST-GR2-BOIC-BPL			
Internal extension cable attachment plate for 150 mm (5.9 in.) side duct	CW8226-000	FIST-GR3-CAP-150-INT			
Internal extension cable attachment plate for 300 mm (11.8 in.) side duct	EG0850-000	FIST-GR3-CAP-300-INT			
Containment brackets; manage patch cords in side duct	315826-000	FIST-GR2-PCBR-10			

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