FACT optical distribution frame (ODF) system solution

Unlocking the potential of every new day

FACT optical distribution frame (ODF) solution

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

CommScope is fueled by unmatched experience and a history of innovation, will work with you to deliver solutions that unlock the opportunity in your network and keep you moving forward.

As the demand for increased bandwidth grows, the need to install, access, and reconfigure connections is constant. Standard rack and shelf offerings no longer meet the termination, splicing, patching and storage requirements of fiber networks. Network managers need a solution that supports rapid deployment and plug-and-play connectivity, and maximizes the long-term value of the fiber network.

The FACT® optical distribution frame (ODF) solution from CommScope is a compact, customizable, and fully front-accessible solution that maximizes usable density The FACT solution includes four modular frame versions utilizing intuitive clear cable routing and the ability to add adaptor packs, cabled modules, MPO modules and value-added modules. The FACT ODF system provides a flexible, reliable and cost-effective solution to your evolving network needs.
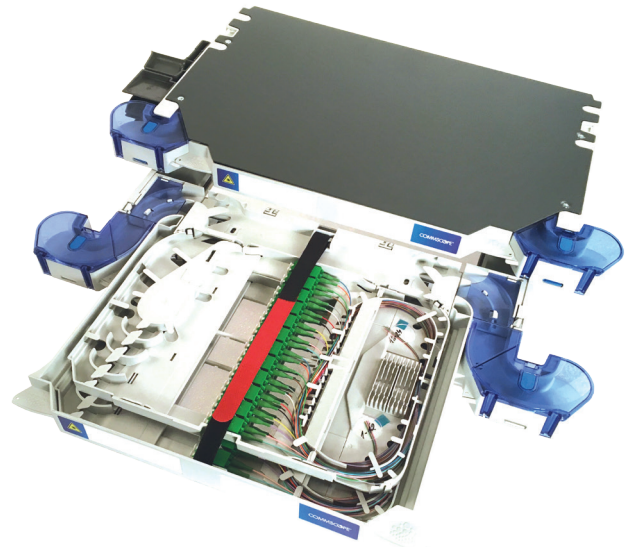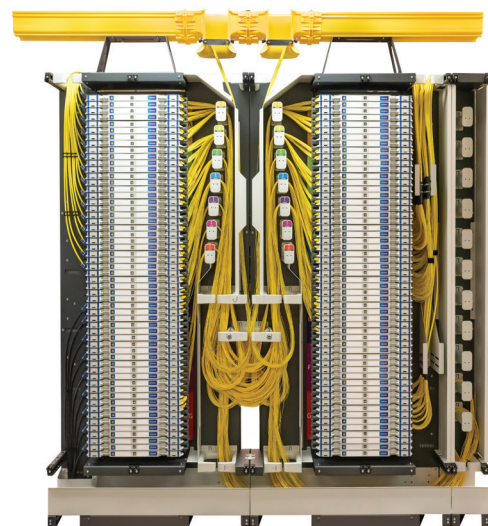

Figure 1: FACT splice-patch chassis

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

Powerful benefits

SCALABLE, MANAGEABLE DENSITY

With a compact, modular frame, high-density plug-and-play elements, and full-frontal access, the FACT ODF systems innovative design reduces installation time and enhances system maintenance:

- Maximize space by installing frames against a wall or back-to-back. configurations

- Support up to 2,880 individually accessible LC fiber connections

- Locate and trace individual fibers along easy-to-follow routing paths

- Complete moves, adds and changes quickly and accurately

- Reduce inventory and increase component availability with a standard patch cord length for all connections

- Manage interconnects as well as cross-connects

- 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 capital

LOWER TOTAL COST OF OWNERSHIP

Agility and better cable management lower the total cost of ownership by maximizing usable density and increasing efficiency:

- Maximize fiber density and manageability
- Deploy standard cable configurations to reduce installation and inventory costs
- Decrease troubleshooting, installation, and maintenance time
- 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

Value-added modules (VAMs)

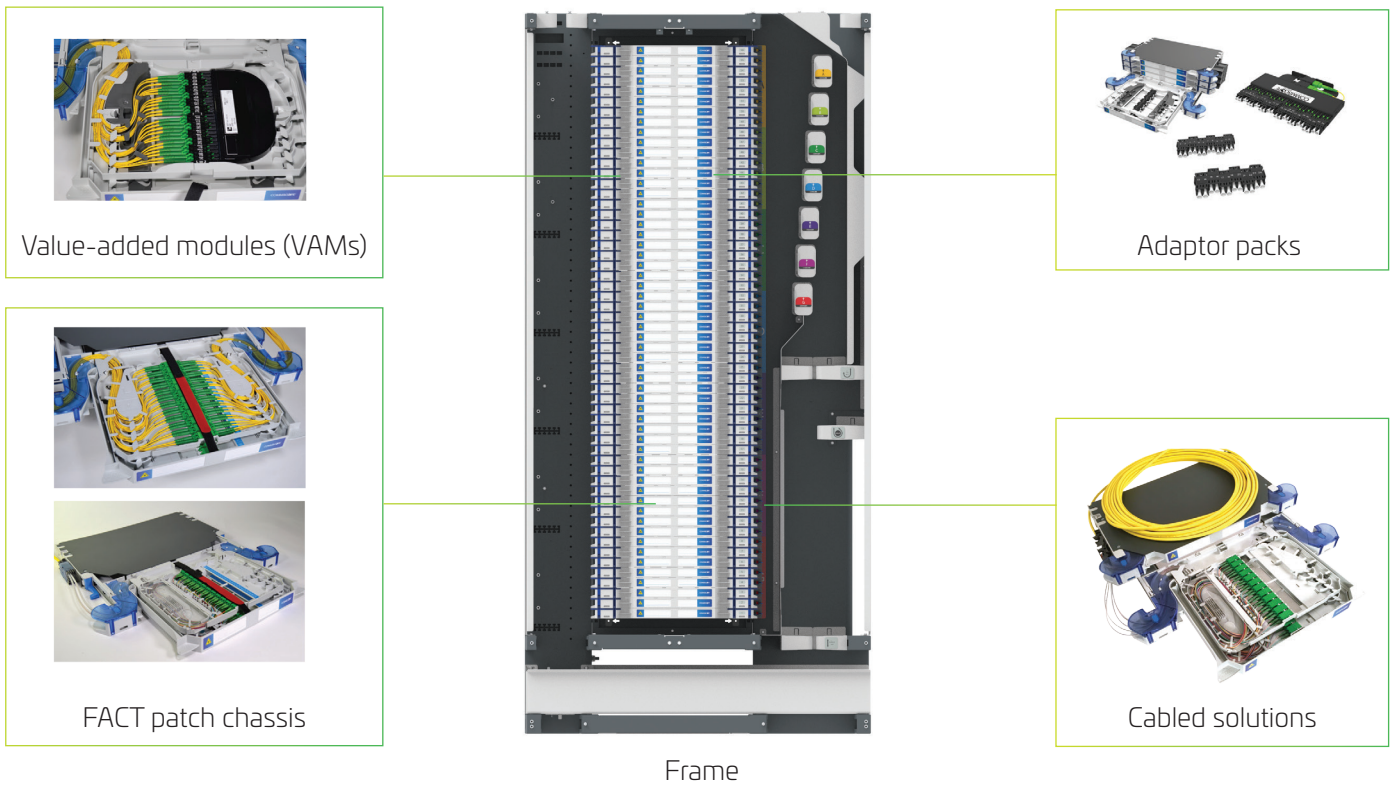FACT patch chassis

Frame

Adaptor packs

Cabled solutions

Figure 3: Cross-connect frame breakout with standard building blocks

FRAME

The FACT ODF solution begins with CommScope's modular and fully front accessible FACT frame. Designed with a small footprint, the frame can be placed up against a wall or back-to-back in a quad formation. The frame provides dedicated cable routing, color-coded fiber management, and supports up to 2,880 LC connections. The cross-connect FACT frame can be installed with cable routing on either side of the frame and includes backplate numbering to enable simple tracking of fibers. 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 both FACT and standard 19 in. shelving, allowing you to add density while using your current equipment. attachment plates.

ELEMENTS AND CHASSIS

FACT elements may be deployed as a single-element chassis or grouped with other elements for higher fiber count chassis. 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 provides full front access and clear visibility to all ports. Six chassis types are available - patch-only, splice/patch, pre-cabled, NG4, splice and splitter – and enable customization.

ADAPTOR PACKS

FACT adaptor packs are available in LC 12-pack, SC 6-pack and MPO 4-pack configurations, and are compatible with single-mode and multimode, angle- and ultra-polished connectors. Two adaptor packs snap into a single access tray in the universal FACT NG4 chassis. Staggered adaptor ports enable quick port identification and improve access for quick and easy connector insertion and removal.

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 an ultra low loss (ULL) 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. All value-added modules are compatible with the universal FACT NG4 chassis.

ACCESSORIES (SOLD SEPARATELY)

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

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.
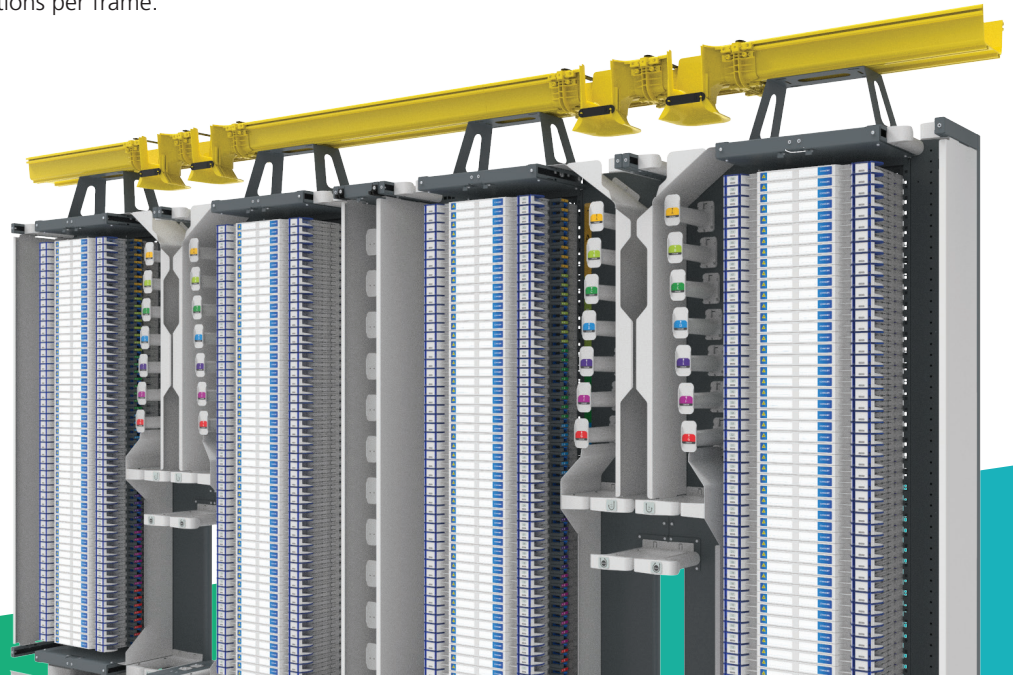
Optimal access for quick and easy connector insertion and removal

FACT optical distribution frame (ODF) platform at a glance

APPLICATION	
General	Medium to large front access any to any fiber connection applications
Location	Main fiber distribution area or head of row
Function	Patching and splice/patching: cross-connect with CC-frame or Interconnect with IC-frame
	Splicing: SPL-frame

DIMENSIONS	
Width	900 mm (IC-frame) or 1050 mm(CC-frame) (35" or 42")
Depth	300 mm (12")
Height	2200 mm (87") or CC-frame only: 1800 mm (71")

INSTALLATION PRACTICES	
Patching Direction	In tray
CC-frame: max frames per lineup at max density (recommended)	4 (without Fiber Guide) - equals 10752 single LC-connections 16 (with Fiber Guide) - equals 43008 single LC-connections
IC-frame	Typically single frame application
Recommended Patch Cord OD	SC: <= 2 mm LC: <= 1.8 mm
On frame splicing	Yes With density reduction
Jumper Slack Storage Location	On Frame
Interconnect (IC and CC-frame)	Excellent
Cross-connect (CC-frame)	Excellent

CAPACITY	
SC/LC Connections/Frame	CC-frame: 1056/2112 (1,8m) or 1344/2688 (2,2m) IC-frame: 1440/2880
Connections/Frame MPO 12 Fiber	CC-frame: 10752 - IC-frame: 11520
Connections/Frame MPO 24 Fiber	CC-frame: 21504 - IC-frame: 23040
Splices/Frame: Splice-Patch chassis	CC-frame: 2688 IC-frame: 2880
Splices/Frame: Splice Chassis	SPL-frame: 4320 (stranded fiber) or 8640 (12f RR fiber)
Elements per Frame	CC-frame: 44 (1,8m) or 56 (2,2m) IC-frame: 60 SPL-frame: 60
VAM (Value Added Module) Capacity	Yes (FACT-NG4 chassis only)
NG4 Adapter packs Capacity	Yes (FACT-NG4 chassis only)
NG4 MPO Modules Capacity	Yes (FACT-NG4 chassis only)
NG4 Cabled Modules Capacity	Yes (FACT-NG4 chassis only)

SPECIFICATIONS	
Compliance	IEC 61300-2

The Frame

THE FRAME

CommScope's FACT frames are designed to meet todays and tomorrow's high-density network needs. The FACT frame provides full front access to both sides of all connections in a compact, effective footprint. The frame ships in a lightweight, condensed kit for smooth handling, storage and transport. Installation can easily be completed by a single operator in under 30 minutes.

FACT frames can be placed stand-alone or together and can be floor- or wall-mounted side-by-side or back-to-back. Engineered bend control maintains superior optical performance during routing and easy access to components during installation and throughout the life of the frame.

Cable attachment plates are integrated into the side ducts, and a range of accessories such as door kits, top and side panels, over-length storage bays, and extra cable attachment plates are also available.

AVAILABLE FOR CROSS-CONNECT OR INTERCONNECT APPLICATIONS

The FACT cross-connect frame is best-in-class for applications with a medium or high "moves, adds and changes" frequency (MAC-frequency). FACT cross-connect frames accommodate up to 2688 single LC connections and can be used in a single frame application or placed together. Multiple frame configurations can be used to suit space requirements and to ease access to cables during operation, maintenance and upgrades. For larger lineups, multiple FACT cross-connect frames can be deployed side-by-side.

The interconnect FACT frame is typically used in a single frame application with lower MAC-frequency, offering superior density with 2880 single LC connections on a smaller footprint.
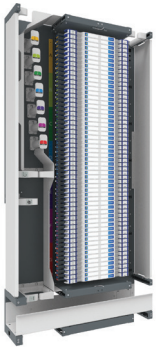
Figure 4: Single Cross Connect frame, recommended patch cord length for all cross-connects is 5 meters (17 ft.).
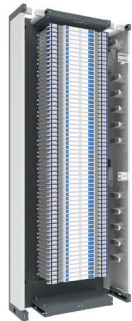
Figure 4b: Interconnect frame with side panels

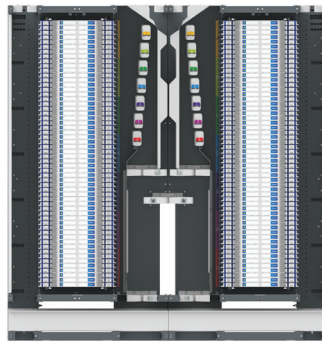Figure 5: Cross Connect twin frame deployed side-by-side.

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

Figure 6: Cross Connect 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 HxWxD	Maximum capacity	Catalog number	Catalog description
1.8m Cross-connect frame, patching on the left	1800 mm x 1050 mm x 300 mm (71 in. x 41 in. x 12 in.)	44 FACT elements (2112 single LC connecitons or 1056 SC connections)	760245374	FACT-FRCCLHP18
1.8m Cross-connect frame, patching on the right	1800 mm x 1050 mm x 300 mm (71 in. x 41 in. x 12 in.)		760245375	FACT-FRCCRHP18
1.8m Patch cord overlength management bay (OLB)	1800 mm x 200 mm x 300 mm (71 in. x 8 in. x 12 in.)	n/a	760245376	FACT-FROLB18
2.2m Cross-connect frame, patching on the left	2200 mm x 1050 mm x 300 mm (87 in. x 41 in. x 12 in.)	56 FACT elements (2688 single LC connections or 1344 SC connections)	760243094	FACT-FRCCLHP22
2.2m Cross-connect frame, patching on the right	2200 mm x 1050 mm x 300 mm (87 in. x 41 in. x 12 in.)		760243095	FACT-FRCCRHP22
2.2m Patch cord overlength management bay (OLB)	2200 mm x 200 mm x 300 mm (87 in. x 8 in. x 12 in.)	n/a	760243097	FACT-FROLB22
2.2m Interconnect frame, patching on the right	2200 mm x 900 mm x 300 mm (87 in. x 35 in. x 12 in.)	60 FACT elements (2880 single LC connections or 1440 SC connections)	760243096	FACT-FRICRHP22
2.2m Splice frame	2200 mm x 900 mm x 300 mm (87 in. x 35 in. x 12 in.)	60 FACT splice elements	760253816	FACT-FRSPL22

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 DOORS AND PANELS ORDERING INFORMATON

Description	Catalog number	Catalog description
Door kit for 1.8m cross-connect frame. Set of two doors for one frame, one door handle per set, lock included.	760245377	FACT-FRCCD18
Side panel kit for 1.8m cross-connect frame (set of two panels for one frame)	760245378	FACT-FRCCP18
Door kit for 1.8m patch cord overlenght bay. Set of one door with handle, lock included.	760245379	FACT-FROLBD18
Door kit for 2.2m cross-connect frame. Set of two doors for one frame, one door handle per set, lock included.	760243098	FACT-FRCCD22
Side panel kit for 2.2m cross-connect frame (set of two panels for one frame)	760243099	FACT-FRCCP22
Door kit for 2.2m patch cord overlenght bay. Set of one door with door handle, lock included.	760243101	FACT-FROLBD22
Door kit for 2.2m Interconnect frame and 2.2m Splice frame. Set of two doors fpr one frame, one door handle per set, lock included.	760243100	FACT-FRICD22
Fiber Guide System (FGS) fixation kit	760243110	FACT-FRACCFGS

All frame accessory kits include:
- Intuitive installation instruction
- Required hardware and fasteners

FACT chassis types

The building blocks of the FACT ODF system are the FACT chassis. FACT chassis can be deployed individually as a single-element chassis, or up to six 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 access to both sides of all connections and clear visibility of all ports. There are six FACT chassis types.
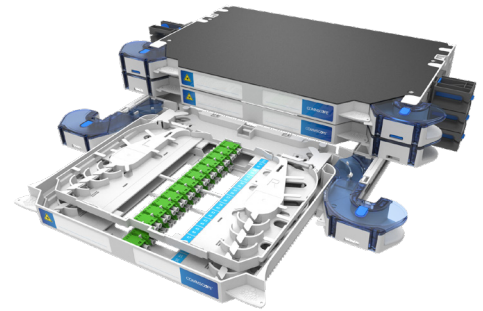

Figure 7: Three element patch-only chassis

PATCH-ONLY CHASSIS

The FACT patch-only chassis supports cross-connect and interconnect applications and is available with SC and LC adaptors in standard density and in high density.

The FACT patch-only chassis accommodates 24 SC connections or 48 single LC connections per element in standard density or 36 SC, 36 LC duplex or 72 LC simplex connections in high density.

STANDARD DENSITY PATCH-ONLY CHASSIS ORDERING INFORMATION

FACT- [XX]¹ PAT [XX]²

Element count

1	1E	One element
	2E	Two elements
	3E	Three elements
	4E	Four elements
	5E	Five elements
	6E	Six elements

Adaptor types, Port count

2	S1	SC UPC, 24 ports per element
	S2	SC APC, 24 ports per element
	S4	SC OM4, 24 ports per element
	L1	LC UPC, 48 single LC ports per element
	L2	LC APC, 48 single LC ports per element
	L4	LC OM4, 48 single LC ports per element

HIGH DENSITY PATCH-ONLY CHASSIS ORDERING INFORMATION

FACT- [XX]¹ PATHD [XXX]²

Element count

1	1E	One element
	2E	Two elements
	3E	Three elements
	4E	Four elements
	5E	Five elements
	6E	Six elements

Adaptor types, Port count

2	SC	SC, 36 SC ports
	LCS	LC Simplex, 72 single LC ports per element (*)
	LCD	LC Duplex, 36 duplex LC ports per element (*)

(*) to be used with 1,2 mm simplex cords or 1,5 mm Unitboot cords

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.
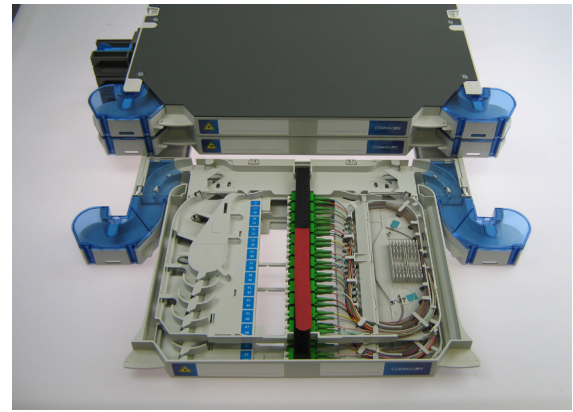

Figure 8: Two-element splice-patch chassis with left-side patching

SPLICE-PATCH CHASSIS ORDERING INFORMATION

F A C T - [1] XX [2] X H P [3] XX [4] X

Element count

1	1E	One element
	2E	Two elements
	3E	Three elements
	4E	Four elements
	5E	Five elements
	6E	Six elements

Patch cord side

2	R	Right-hand patch
	L	Left-hand patch

Splice holder/protector

4	S	SMOUV
	A	ANT
	R	12f rollable ribbon (only LC)

Adaptor/connector types, Port count

3	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 617551

COLOR CODING

Fiber 1	Blue
Fiber 2	Orange
Fiber 3	Green
Fiber 4	Brown
Fiber 5	Grey
Fiber 6	White
Fiber 7	Red
Fiber 8	Black
Fiber 9	Yellow
Fiber 10	Purple
Fiber 11	Pink
Fiber 12	Turquoise
Note: All fibered standard FACT products us EIA/TIA 598 color coding	

PRE-CABLED CHASSIS

The FACT pre-cabled chassis is supplied with connectorized Microsheath cables from 24 to 144 fibers, and a stub on the far end. It is available for indoor/outdoor and indoor cables in lengths up to 300 meters. 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.
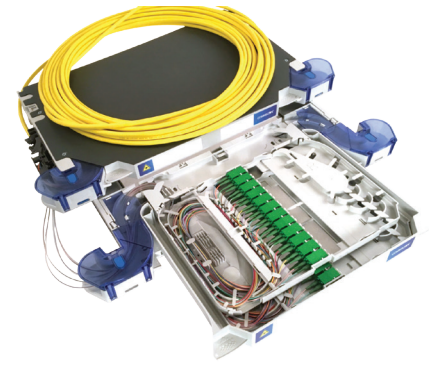

Figure 9: Two-element pre-cabled chassis with 96f. indoor Microsheath cable and right-side patching

PRE-CABLED CHASSIS ORDERING INFORMATION

FACT- [1]XX [2]X H P [3]XX [4]X - [5]XXX [6]XX

Element count

1	1E	One element
	2E	Two elements
	3E	Three elements
	4E	Four elements
	5E	Five elements
	6E	Six elements

Patch cord side

| 2 | R | Right-hand patch |
| | L | Left-hand patch |

Adaptor/connector types, Port count

3	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 617551

Splice holder/protector

| 4 | S | SMOUV |
| | A | ANT |

Cable type

6	CD	24 fiber Indoor Microsheath cable, Fiber: G657A1, Yellow jacket, EN50575 CPR Cable EuroClass Cca
	CF	48 fiber Indoor Microsheath cable, Fiber: G657A1, Yellow jacket, EN50575 CPR Cable EuroClass Cca
	CG	72 fiber Indoor Microsheath cable, Fiber: G657A1, Yellow jacket, EN50575 CPR Cable EuroClass Cca
	CK	"96 fiber Indoor Microsheath cable, Fiber: G657A1, Yellow jacket, EN50575 CPR Cable EuroClass Cca"
	CH	144 fiber Indoor Microsheath cable, Fiber: G657A1, Yellow jacket, EN50575 CPR Cable EuroClass Cca
	OD	24 fiber In/Outdoor Microsheath Breakout cable, G657A1, black, EN50575 CPR Cable EuroClass Dca
	OF	48 fiber In/Outdoor Microsheath cable G657A1, black, EN50575 CPR Cable EuroClass Dca
	OG	72 fiber In/Outdoor Microsheath cable, G657A1, black, EN50575 CPR Cable EuroClass Dca
	OK	96 fiber In/Outdoor Microsheath cable (SM = black) G657A1, black, EN50575 CPR Cable EuroClass Dca
	OH	144 fiber In/Outdoor Microsheath cable (SM = black) G657A1, black, EN50575 CPR Cable EuroClass Dca

Note: Cable fiber count needs to match the FACT-chassis port count

Cable length

5	010	10 m (33 ft.)	100	100 m (328 ft.)
	020	20 m (66 ft.)	150	150 m (492 ft.)
	030	30 m (98 ft.)	200	200 m (656 ft.)
	050	50 m (164 ft.)	250	250 m (820 ft.)
	075	75 m (246 ft.)	300	300 m (984 ft.)

COLOR CODING

Fiber 1	Blue	Fiber 7	Red
Fiber 2	Orange	Fiber 8	Black
Fiber 3	Green	Fiber 9	Yellow
Fiber 4	Brown	Fiber 10	Purple
Fiber 5	Grey	Fiber 11	Pink
Fiber 6	White	Fiber 12	Turquoise

Note: All fibered standard FACT products us EIA/TIA 598 color coding

FACT NG4 CHASSIS

The universal FACT NG4 chassis supports NG4access connectivity packs and modules that snap into the 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
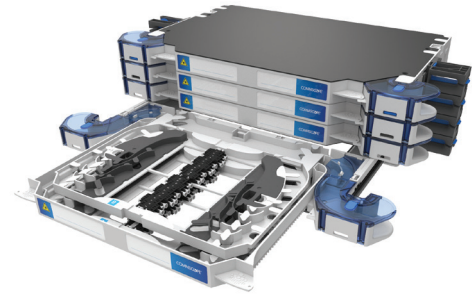- Two single high value-added modules (VAMs)

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

Element count	Catalog number	Catalog description
One element	760239975	FACT-1ENG4
Two elements	760239976	FACT-2ENG4
Three elements	760239977	FACT-3ENG4
Four elements	760239978	FACT-4ENG4
Six elements	760242087	FACT-6ENG4

FACT SPLICE CHASSIS

The FACT splice chassis is a multipurpose splice shelf featuring ANT, single fiber SMOUV or 12f rollable ribbon SMOUV splices. In combination with the FACT-ACCCTU accessories, the splice chassis supports multiple applications, including:

- Outdoor-to-indoor loose-tube cable
- Loose-tube cable to pigtails (single aramid yarn termination)
- Loose-tube cable to breakout or intra-facility (IFC) cable
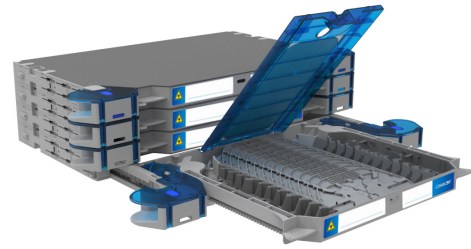- Pigtail to pigtail (single aramid yarn termination)

Figure 12: Four-element splice chassis, 12 trays per element, 4 SMOUVs per tray

SPLICE CHASSIS ORDERING INFORMATION

Splice holder type	Catalog number	Catalog description	Splices per tray	Trays per FACT chassis	Fibers per chassis
SMOUV (heat shrink, 45 mm single fiber)	760239957	FACT-1ESPLS04	4	12	48
	760239961	FACT-2ESPLS04		24	96
	760239965	FACT-3ESPLS04		36	144
	760239972	FACT-4ESPLS04		48	192
	760239959	FACT-1ESPLS12	12	6	72
	760239963	FACT-2ESPLS12		12	144
	760239967	FACT-3ESPLS12		18	216
	760239970	FACT-4ESPLS12		24	288
ANT or micro SMOUV (heat shrink, 30 mm single fiber)	760239958	FACT-1ESPLA04	4	12	48
	760239962	FACT-2ESPLA04		24	96
	760239966	FACT-3ESPLA04		36	144
	760239971	FACT-4ESPLA04		48	192
	760239960	FACT-1ESPLA12	12	8	96
	760239964	FACT-2ESPLA12		16	192
	760239968	FACT-3ESPLA12		24	288
	760239969	FACT-4ESPLA12		32	384
SMOUV 12f ribbon	760254635	FACT-1ESPLR02	2 x 12f (*)	6	144 (*)
	760254636	FACT-2ESPLR02		12	288 (*)
	760254637	FACT-3ESPLR02		18	432 (*)
	760254638	FACT-4ESPLR02		24	576 (*)
	760254639	FACT-5ESPLR02		30	720 (*)
	760254640	FACT-6ESPLR02		36	864 (*)

(*) Max. Capacity with two 12f ribbon splices per tray, cannot be met with A1 fiber with 1st generation CTU's and outdoor temperature range (-40C to +70C)

SPLITTER CHASSIS

The FACT splitter chassis comes with high quality factory installed splitter modules and is available for all common split ratio's.

It offers the optimal combination of intuitive plug and play installation on day one with long term usable density and network manageability.

Figure 13: Single element splitter chassis with two factory installed 1:32 splitter modules

SPLITTER CHASSIS ORDERING INFORMATION								
Catalog number	Catalog description	Element count	Split ratio	Connector type	Splitter circuits	Patch cord side	Output	Splitter Grade
760253640	FACT-1ESXHPP10200L2	1	1:2	LC/APC	24 (2x12)	L & R	Symmetrical	Planar
760253969	FACT-1ESXHPP10400L2	1	1:4	LC/APC	14 (2x7)	L & R	Symmetrical	Planar
760253639	FACT-1ESXHPP10800L2	1	1:8	LC/APC	8 (2x4)	L & R	Symmetrical	Planar
760253638	FACT-1ESXHPP11600L2	1	1:16	LC/APC	4 (2x2)	L & R	Symmetrical	Planar
760253640	FACT-1ESXHPO132000L2	1	1:32	LC/APC	2 (2x1)	L & R	Symmetrical	Low Loss Planar
760252886	FACT-1ESRHPO164A00L2	1	1:64	LC/APC	1	R	Symmetrical	Low Loss Planar
760252887	FACT-1ESLHPO164A00L2	1	1:64	LC/APC	1	L	Symmetrical	Low Loss Planar

All FACT Splitter chassis with LC-ports have to be used with 1,2 mm simplex cords

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.
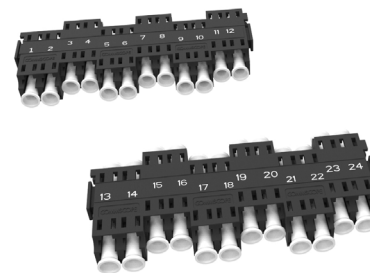

Figure 14: LC12 universal adaptor packs

UNIVERSAL ADAPTOR PACKS ORDERING INFORMATION		
Catalog number	Catalog description	Capacity
NG4-APLC120000	Snap-in LC12 universal adaptor pack. (two packs w/labels)	24 single LC connections (2x12)
NG4-APSC060000	Snap-in SC6 universal adaptor pack. (two packs w/labels)	12 SC connections (2x6)
NG4-APMP040000	Snap-in MPO adapter four-pack, Method A (key up/down) (two packs w/labels)	8 MPO connections (2x4)
NG4-APMP0400EB	Snap-in MPO adaptor four-pack, enhanced Method B (key up/up) (two packs w/labels)	8 MPO connections (2x4)

MPO modules

FACT MPO modules enable technicians to quickly and easily route and install higher fiber counts. The front of the module features an LC interface that is identical to the cabled module, while the rear integrates a low-loss MPO adaptor that allows installers to connect MPO trunk cables for rapid turn-up. MPO modules also support direct connection to electronics, fiber tie cables or top-of-rack systems such as CommScope's Rapid or MFPS panels. Up to two MPO modules can be snapped into place within a single FACT NG4 element, and both Method A and Method B Enhance standard wiring methods are available.
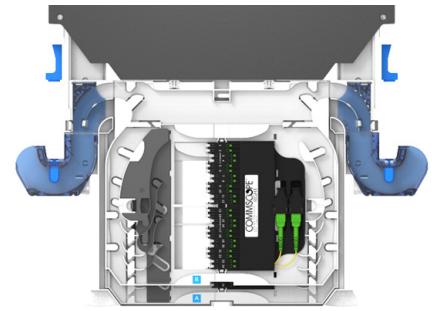

Figure 15: Right cable exit MPO module with LC/APC ports

MPO MODULES ORDERING INFORMATION

Catalog number	Catalog description	Polarity:	Back MPO connector type	Front connector type	Module installs Left or Right in chassis (= MPO cable side)	Patch cord side in chassis Right (RHP) or Left (LHP)	Port numbering
760244923	FACT-MMDLMB-A: SM, 2MPO12-LCAPC,L,RHP,MAs	Method A (straight)	SM, 2x12f MPO	LC-APC	Left	RHP	Simplex
760244924	FACT-MMDRMB-A: SM, 2MPO12-LCAPC,R,LHP,MAs	Method A (straight)	SM, 2x12f MPO	LC-APC	Right	LHP	Simplex
760244560	FACT-MMDLMB-B: SM, 2MPO12-LCAPC,L,RHP,MBe	Method B enhanced	SM, 2x12f MPO	LC-APC	Left	RHP	Simplex
760244561	FACT-MMDRMB-B: SM, 2MPO12-LCAPC,R,LHP,MBe	Method B enhanced	SM, 2x12f MPO	LC-APC	Right	LHP	Simplex
760244921	FACT-MMDLKE-A: SM, 2MPO12-LCUPC,L,RHP,MAs	Method A (straight)	SM, 2x12f MPO	LC-UPC	Left	RHP	Duplex
760244922	FACT-MMDRKE-A: SM, 2MPO12-LCUPC,R,LHP,MAs	Method A (straight)	SM, 2x12f MPO	LC-UPC	Right	LHP	Duplex
760244558	FACT-MMDLKE-B: SM, 2MPO12-LCUPC,L,RHP,MBe	Method B enhanced	SM, 2x12f MPO	LC-UPC	Left	RHP	Duplex
760244559	FACT-MMDRKE-B: SM, 2MPO12-LCUPC,R,LHP,MBe	Method B enhanced	SM, 2x12f MPO	LC-UPC	Right	LHP	Duplex
760244853	FACT-MMDLCH-A: OM4, 2MPO12-LC,L,RHP,MAs	Method A (straight)	OM4, 2x12f MPO	LC-OM4	Left	RHP	Duplex
760244854	FACT-MMDRCH-A: OM4, 2MPO12-LC,R,LHP,MAs	Method A (straight)	OM4, 2x12f MPO	LC-OM4	Right	LHP	Duplex
760244650	FACT-MMDLCH-B: OM4, 2MPO12-LC,L,RHP,MBe	Method B enhanced	OM4, 2x12f MPO	LC-OM4	Left	RHP	Duplex
760244651	FACT-MMDRCH-B: OM4, 2MPO12-LC,R,LHP,MBe	Method B enhanced	OM4, 2x12f MPO	LC-OM4	Right	LHP	Duplex
760244855	FACT-MMDLC2-A: OM4, 1MPO24-LC,L,RHP,MAs	Method A (straight)	OM4, 24f MPO	LC-OM4	Left	RHP	Duplex
760244856	FACT-MMDRC2-A: OM4, 1MPO24-LC,R,LHP,MAs	Method A (straight)	OM4, 24f MPO	LC-OM4	Right	LHP	Duplex
760244652	FACT-MMDLC2-B: OM4, 1MPO24-LC,L,RHP,MBe	Method B enhanced	OM4, 24f MPO	LC-OM4	Left	RHP	Duplex
760244653	FACT-MMDRC2-B: OM4, 1MPO24-LC,R,LHP,MBe	Method B enhanced	OM4, 24f MPO	LC-OM4	Right	LHP	Duplex
760244849	FACT-MMDL5H-B: OM5, 2MPO12-LC,L,RHP,MBe	Method B enhanced	OM5, 2x12f MPO	LC-OM5	Left	RHP	Duplex
760244850	FACT-MMDR5H-B: OM5, 2MPO12-LC,R,LHP,MBe	Method B enhanced	OM5, 2x12f MPO	LC-OM5	Right	LHP	Duplex
760244851	FACT-MMDL52-B: OM5, 1MPO24-LC,L,RHP,MBe	Method B enhanced	OM5, 24f MPO	LC-OM5	Left	RHP	Duplex
760244852	FACT-MMDR52-B: OM5, 1MPO24-LC,R,LHP,MBe	Method B enhanced	OM5, 24f MPO	LC-OM5	Right	LHP	Duplex
760251229	FACT-MMDL5H-A: OM5, 2MPO12-LC,L,RHP,MAs	Method A (straight)	OM5, 2x12f MPO	LC-OM5	Left	RHP	Duplex
760251230	FACT-MMDR5H-A: OM5, 2MPO12-LC,R,LHP,MAs	Method A (straight)	OM5, 2x12f MPO	LC-OM5	Right	LHP	Duplex

Value-added modules (VAMs)

VAMs FOR COARSE/DENSE WAVELENGTH DIVISION MULTIPLEXING

The FACT portfolio 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 use existing fiber more efficiently.

CWDM VAM modules provide a wide range of wavelength combinations, typically from 4 to 8 channels. DWDM VAM modules are typically used for higher channel count requirements and combine up to 20 DWDM channels in a single high module.

Both CWDM and DWDM VAMs support 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 16: 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) that enable monitoring and testing of single-mode and multimode optical signals. Monitoring VAMs support 24 LC front facing connectors and 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.

Figure 17: Single high NG4access VAM

SINGLEMODE MONITOR VAMs ORDERING INFORMATION			
Description	Connector	Orientation	MID
4 circuits 90/10 Tap Ratio	LC UPC	Left	NG4-VMKLF4A
4 circuits 50/50 Tap Ratio	LC UPC	Left	NG4-VMKLF4C
4 circuits 90/10 Tap Ratio	LC APC	Left	NG4-VMMLF4A
4 circuits 70/30 Tap Ratio	LC APC	Left	NG4-VMMLF4H
4 circuits 60/40 Tap Ratio	LC APC	Left	NG4-VMMLF4J

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 Splitter value-added modules (VAMs), which split (or combine) optical signal power from one fiber to multiple fibers. Splitter VAMs support 24 LC front facing connectors and can be used for signal distribution in PON networks.
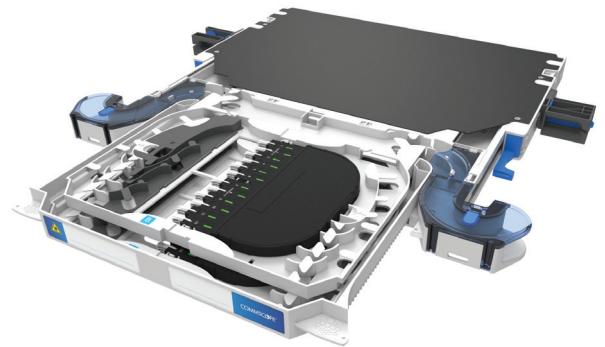

Figure:18: Single element FACT NG4 chassis with two single high VAMs

Accessories

FACT CABLE TERMINATIONS AND ATTACHMENTS

FACT Cable Termination and Attachment Kits enable easy termination using either Cable Termination Units (CTUs) directly on the chassis or Cable Attachment Plates for larger cables in the side duct.

FACT CTUs are specifically designed for termination of commonly used cables (diameter range: 5 mm to 15mm) and allow an installer to pre-terminate a cable on the CTU outside the frame. The FACT- FRACCCTUxE series is recommended for use with the FACT frame solution, as it accommodates stiffer cables with diameter up to 15mm directly on the chassis.

FACT Cable Attachment Plates are used for the fixation of very stiff and/or thick fiber rich cables as well as fanout cables in the side duct. If you are using the FACT chassis in CommScope's FIST-GR3 frame or another compatible frame, please use the FACT-ACCCTU series and check the FIST-GR3 cable attachment and backplates listed in the appendix.
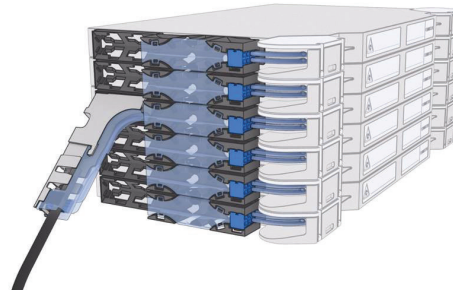

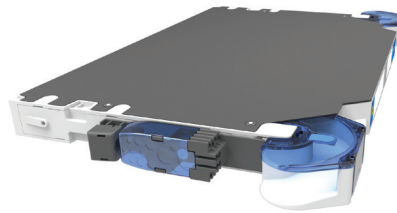Figure:19: Installed FACT-FRACCCTU6E with cable exit in the left bottom corner.
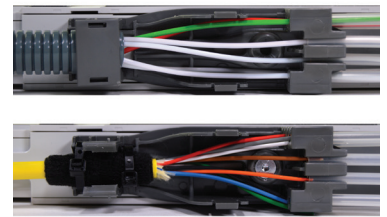

Figure 20: Cable termination unit (CTU) on chassis

Figure 21: Installed FACT-ACCCTULLT

CABLE TERMINATION UNIT (CTU) ORDERING INFORMATION

Description - Element count	Compatible frame type(s)	Diameter range (cable and/or flex tube)	Note	Catalog Number	Catalog Description
CTU kit (angled) for 1E Chassis	FACT	1 cable 2.5-14mm or 2 cables 2.5-8.5mm or 4 cables 2.5-5mm or 1 flex tube ID 12mm	Kit content includes: - one angled part - one side guide channel part per chassis element - all other components for the complete CTU installation (incl. CTU covers for all chassis elements, tubes and tube holders for 4 tubes per chassis element, ...)	760243102	FACT-FRACCCTU1E
CTU kit (angled) for 2E Chassis				760243103	FACT-FRACCCTU2E
CTU kit (angled) for 3E Chassis				760243104	FACT-FRACCCTU3E
CTU kit (angled) for 4E Chassis				760243105	FACT-FRACCCTU4E
CTU kit (angled) for 5E Chassis				760243106	FACT-FRACCCTU5E
CTU kit (angled) for 6E Chassis				760243107	FACT-FRACCCTU6E
CTU kit for small cables	FACT and FIST-GR3	1 to 6 cables with OD 2 mm to 7 mm	One CTU per FACT element	760249062	FACT-ACCCTU6X7MM
CTU kit large for loose tube cable, with transparant cover, for one cable with maximum diameter of 15 mm (.6 in.) or one flex tube ID 12 mm. Includes 12 fiber transportation tubes.		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.)	One CTU per max 3 FACT Elements	760239897	FACT-ACCCTULLT
CTU kit for medium for loose tube cable one cable with maximum diameter of 15 mm (.6 in.) or one flex tube ID 12 mm		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.)	One CTU per FACT element	760239898	FACT-ACCCTUMLT
CTU kit for one IFC-cable		15 mm (max.) (.6 in. max.)	One CTU per FACT Element	760239899	FACT-ACCCTUMIFC
CTU kit includes trumpet and KTUs for 24 pigtails		1.8 mm (min.) 2.4 mm (max.) (.07 in. min.) (.09 in. max)	One CTU per FACT Element	760239900	FACT-ACCCTUMP24
CTU kit for one or two IFC-cables		One cable: 8.5 mm (max.) (.3 in. max.) Two cables: 6 mm (max.) (.2 in. max.)	One CTU per FACT Element	760239951	FACT-ACCCTUSIFC
CTU kit small for loose tube cable one max 8,5 mm cable or one ID 6 mm or ID 10 mm flex tube		Cable: 8.5 mm (fiber cable max.) (.3 in. fiber cable max.) Flex tube: 1 x 10 mm (1 x .4 in.)	One CTU per FACT Element	760239952	FACT-ACCCTUSLT
One single fiber cord aramid yarn termination unit For use in FACT splice-only chassis. Multiple order qty: 100 pc		max 1,8 mm	Max 48 pc per FACT splice-only element	CC6994-000	FIST-SF-KTU-(100)

Accessories

CABLE ATTACHMENT PLATES AND ACCESSORIES ORDERING INFORMATION			
Description - Kit content	Compatible frame type(s)	Catalog number	Catalog description
One fan out fixation plate for frame side duct & Eigth fan out fixation component sets	FACT	760243109	FACT-FRACCFOPL
Eight fan out fixation component sets (for fan out fixation plate)		760243112	FACT-FRACCFOFK-8
One cable attachment plate ""cable to flex"" for small to medium size cables and one cable to flex conversion component set. For use with ID 12 mm flex tube (Can also be used in the FIST-GR3 frame)	FACT and FIST-GR3	760243108	FACT-FRACCCAPL
One cable to flex conversion component set for cable fixation plate For use with ID 12mm flex tube		760243111	FACT-FRACCCTF
One cable attachement plate for small cables. Up to 80 5mm cables or 40 7mm cables per plate.		760252459	FACT-FRACCCAPLSC
One cable attachement plate for large high fiber count cables. Kit content for attaching up to five (ID) 17mm FIST flex tubes and/or up to five cables. For use with (ID) 17mm FIST corrugated transportation tube (not included) and FIST cable clamps (FIST-GR3-CAA-... series, not included).		760254593	FACT-FRACC-CAP-HFC
One cable attachement extension kit for FACT-FRACC-CAP-HFC for up to five extra (ID) 17mm FIST corrugated transportation tubes and/or up to five additional large high fiber count cables.		760254594	FACT-FRACC-CAP-HFC-EXT
Flex tube (ID) 10 mm, roll of 50m		882028-000	FIST-GS-FLEX-10-50
Flex tube (ID) 12 mm, roll of 50m		E43826-000	FIST-GS-FLEX-12-50
Flex tube (ID) 17 mm, roll of 10m		847270-000	FIST-GS-FLEX-17-10
Flex tube (ID) 17 mm, roll of 50m		902710-000	FIST-GS-FLEX-17-50
One cable clamp, for one cable, diameter 8-12 mm		CK8121-000	FIST-GR2-CAA-1-8/12
One cable clamp, for one cable, diameter 12-16 mm		C77358-000	FIST-GR2-CAA-1-12/16
Five cable clamp kit, clamps for one cable, diameter 12-16 mm		C72308-000	FIST-GR2-CAA-1-12/16-5
One cable clamp, for two cables, diameter 12-16 mm (bothe cables to be installed at the same time)		F55585-000	FIST-GR2-CAA-2-12/16
One cable clamp, for one cable, diameter 16-22 mm		A69617-000	FIST-GR2-CAA-1-16/22
One cable clamp, for two cables, diameter 16-22 mm (both cables to be installed at the same time)		C29771-000	FIST-GR2-CAA-2-16/22
One cable clamp, for one cable, diameter 22-28 mm		307152-000	FIST-GR2-CAA-1-22/28
One cable clamp, for one cable, diameter 28-34 mm		C77537-000	FIST-GR2-CAA-1-28/34
Adaptation bracket kit for mounting 2 FACT elements in 19" frame	19" frame	EG8117-000	FACT-BPLATE-19 W/ H ETSI-2E-S
Adaptation bracket kit for mounting 4 FACT elements in 19" frame		EG8116-000	FACT-BPLATE-19 W/ H 19/ETSI-4E-S

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.

Appendix

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 elements 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	n/a	CC9465-000	FIST-GR3-STS
Kit to route jumpers from front to back of rack; required when using extended base duct	215 mm (D) (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

Appendix

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

FACT IN 19-INCH RACK

Description - Kit content	Compatible FACT product	Catalog Number	Catalog Description
Adaptation bracket kit for max 2 FACT elements in rear mount 19-Inch rack	standard FACT chassis	EG8117-000	FACT-BPLATE-19 W/ H ETSI-2E-S
Adaptation bracket kit for up to 4 FACT elements in rear mount 19-Inch rack	standard FACT chassis	EG8116-000	FACT-BPLATE-19 W/ H 19/ETSI-4E-S
2U Equipment panel, Full front access 19-Inch/ETSI installation with multiple mounting depths WxDxH: 430x278x88 mm Up to 6x single height NG4 style modules (inlc CMODs and MPO) Front cable/patch cord management: all left, all right, left and right CMOD breakout or MPO cable diameter: max 3.4 mm	FACT cabled modules (CMODs) and FACT MPO modules: all FACT- " "right side in-stalled" "-configurations and NG4 MPO modules	760252389	EQP-2U-6X MOD-NG4

Figure 22: 2U equipment panel with
FACT 144f CMOD

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

COMMSCOPE®