Fiber

Total Cable Solutions

U elite™ FIBER PATCHING SYSTEM

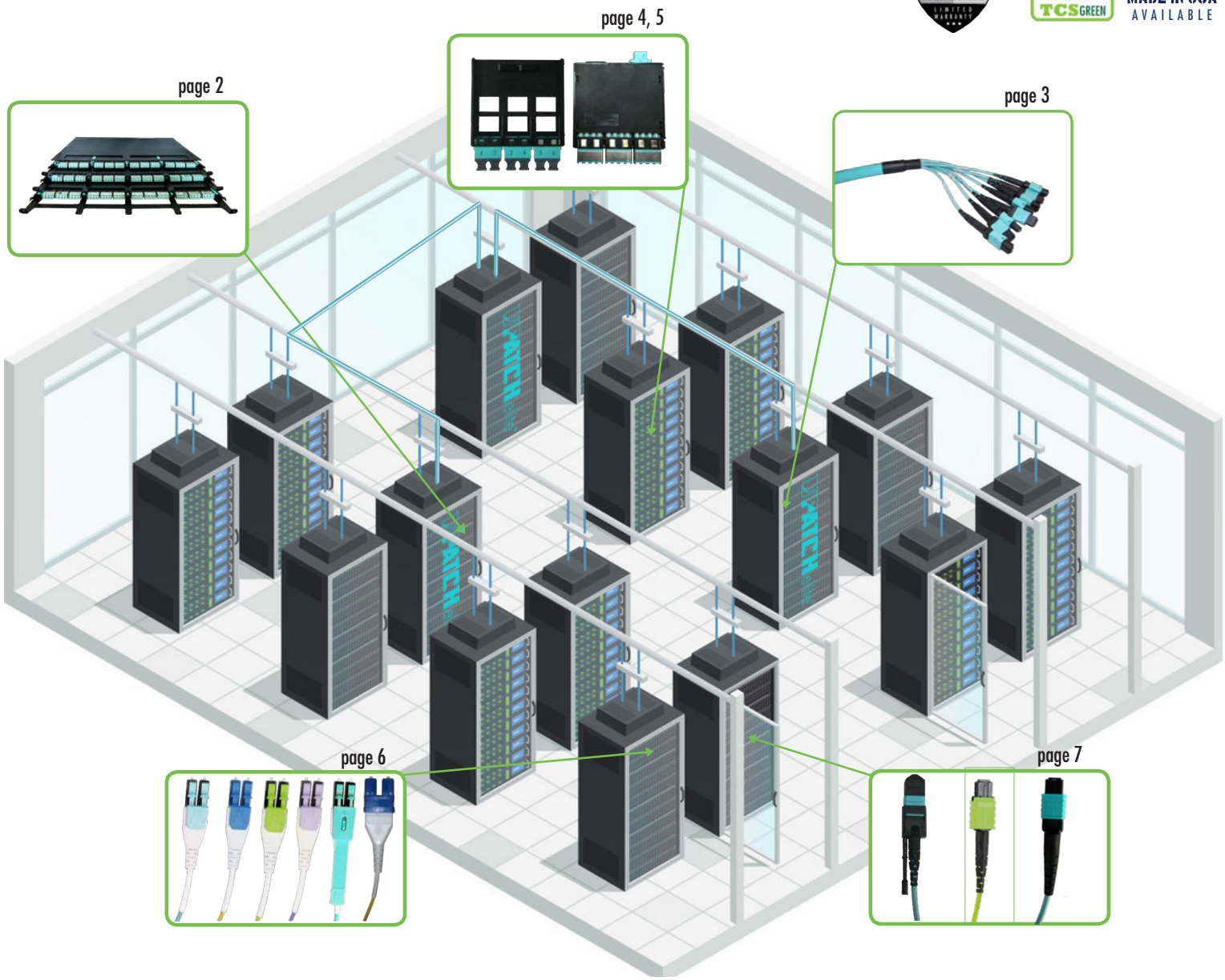
SYSTEM GUIDE

Connectivity within the data center is constantly being challenged to keep pace with increasing density, speed and reliability requirements as technology continues to evolve and grow. The U Elite™ Fiber Patching System is a well-organized, end-to-end solution, consisting of enclosures, modules, trunks and jumpers that provide flexibility within the data center for efficiency in connectivity. The system's modular design and plug-n-play, pre-terminated components allow for easy initial deployment as well as simple moves, adds/changes and migration to new speeds.

TCS 25 YEAR SYSTEM PERFORMANCE LIMITED WARRANTY

TCS GREEN

MADE IN USA AVAILABLE



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FIBER PATCHING SYSTEM

SYSTEM GUIDE COMPONENTS

U Patch Elite™ enclosures provide a termination point for U Trunk Elite™ backbone connections between main and remote patching locations. These rack-mounted housings accommodate a variety of U Elite™ modules to address your patching needs in the data center. Available in 1U and 4U sizes.

ENCLOSURES

UPATCH elite™
THE NEW UNIVERSAL PATCH

1U

4U

- Unique sliding tray design - U Patch Elite™ offers high port density where rack space is increasingly at a premium
- Individual cable management - prevents interference with other connections during moves, adds and changes
- Available compression fittings help secure incoming U Trunk Elite™ connections into the U Patch Elite™
- Modules can be mounted from FRONT or REAR for easy installation

ORDERING INFORMATION	
PART NUMBER	DESCRIPTION
FPP-UPE-1U	U Patch Elite™, 1U Fiber Patch Panel/enclosure, 3 sliding trays, accepts up to (12) U Patch Elite™ adapter panels, cassettes, or splice modules, 19" rack mount, includes internal cable management and mounting hardware
FPP-UPE-4U	U Patch Elite™, 4U Fiber Patch Panel/enclosure, 12 sliding trays, accepts up to (48) U Patch Elite™ adapter panels, cassettes, or splice modules, 19" rack mount, includes internal cable management and mounting hardware

SYSTEM GUIDE COMPONENTS

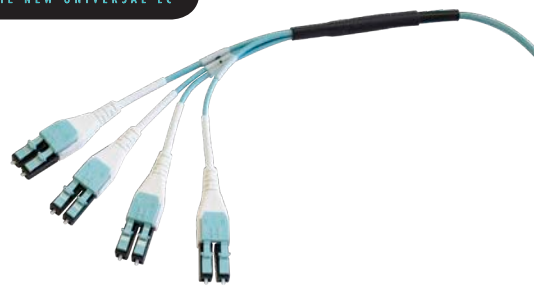
U Trunk Elite™ backbone cables are purpose-built for interconnecting U Patch Elite™ enclosures to provide well protected, high-density, horizontal cabling between patching zones. A variety of configurations are available to support SFP, SFP28, QSFP, QSFP28, QSFP-DD, Base-8 or MTP 12 deployments.

TRUNKS

UTRUNKelite™ UNIVERSAL FIBER TRUNK

MTP® elite (standard)

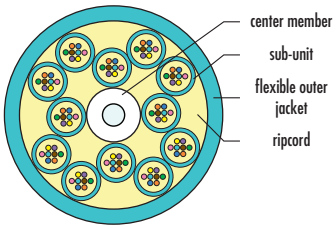
ULCelite™ THE NEW UNIVERSAL LC

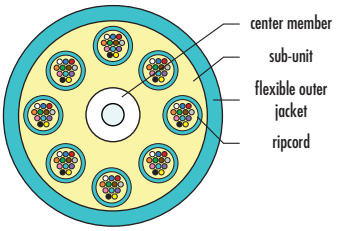


- High-density micro-core fiber trunks - designed to reduce overall diameter (up to 144 fibers)
- Corning® Clearcurve™ Fiber standard on all U Trunk Elite™ assemblies - provides flexibility without compromising performance
- Compression fittings available to secure connection into U Patch Elite™ enclosures

BASE-8

- 8-fiber, 2mm subunits





BASE-12

- 12-fiber, 2mm subunits

ORDERING INFORMATION

□□□□-□□-UTE-□□□□-□P□U-□□□F

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

1 TRUNK TYPE
P = Patch Cord Style
T = Traditional Trunk

2 FIBER COUNT
008 = 8 Fiber
012 = 12 Fiber
024 = 24 Fiber
032 = 32 Fiber
048 = 48 Fiber
064 = 64 Fiber
096 = 96 Fiber
144 = 144 Fiber

3 SUB-UNIT SIZE
08 = 8
12 = 12
24 = 24

4 CONNECTOR A
PF = MTP Female (no pins)
PM = MTP Male (w/pins)
RF = MTP Pro Female
RM = MTP Pro Male

5 CONNECTOR B
PF = MTP Female (no pins)
PM = MTP Male (w/pins)
RF = MTP Pro Female
RM = MTP Pro Male

6 FIBER TYPE
1 = OM1
3 = OM3
4 = OM4
P = OM4+
5 = OM5
S = Singlemode

7 POLISH
P = Plenum

8 TRUNK CONSTRUCTION
M = MicroCore
A = Armored

9 ORIGIN
U = U.S. Made

10 3-DIGIT LENGTH
(in Feet)

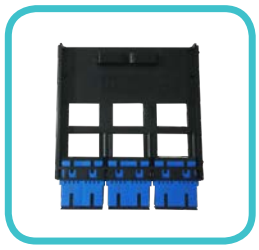
U elite™
FIBER PATCHING SYSTEM

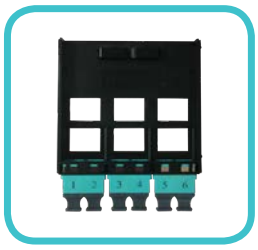
SYSTEM GUIDE COMPONENTS

Modules are mounted inside the panels to provide connectivity between the U Trunk Elites™ entering from the back of the U Patch Elite™ panel and the Universal LC Elite™ or MTP® patch cords that plug into the front to provide direct connections to data center equipment. A variety of modules are available to address port breakout or pass-thru needs as well as different fiber types.

MODULES

LC Duplex Pass-through


SC Pass-through


MTP® Pass-through

MTP® to LC Cassette

Base-8 Cassette (QSFP+, QSFP28 etc.)

OM5 Modules

- Individual port numbering for easy identification and documentation
- Modules made from high-grade PVC, greatly reducing overall panel weight
- U Elite™ modules provide ultra high performance (low loss) to meet the link budget demands of 10G to 400G speeds

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
MTP® Cassettes (12 Fiber) Elite .5dB Low Loss	
FPP-UPE-CS-PML2-OMx-12	MTP Cassette: 12F/6 port ("x" equals fiber type) LC duplex; internal shutters Aqua OM4 = "4"; Purple OM4+ = "P"; Lime Green OM5 = "5"; Beige OM1 = "1" (1) MTP adapters, Multimode Hydras ; fits TCS U Patch Elite™ panels, Wired for Method B
FPP-UPE-CS-PMLx2-SM-12	MTP Cassette: 12F/6 port ("x" equals Polish type) LC duplex; internal shutters SM Green APC = "A"; SM Blue UPC = "U" (1) MTP adapters, Singlemode Hydras ; fits TCS U Patch Elite™ panels, Wired for Method B
MTP® Cassettes (12 Fiber) HIgh Performance Elite .35dB Ultra Low Loss	
FPP-UPE-CS-PML2U-OMx-12	MTP Cassette: 12F/6 port ("x" equals fiber type) LC duplex; internal shutters Aqua OM4 = "4"; Purple OM4+ = "P"; Lime Green OM5 = "5"; Beige OM1 = "1" (1) MTP adapters, Multimode Hydras ; fits TCS UPATCH ELITE panels, Wired for Method B
FPP-UPE-CS-PMLx2U-SM-12	MTP Cassette: 12F/6 port ("x" equals Polish type) LC duplex; internal shutters SM Green APC = "A"; SM Blue UPC = "U" (1) MTP adapters, Singlemode Hydras ; fits TCS UPATCH ELITE panels, Wired for Method B
MTP® Cassettes (8 Fiber) Elite .5dB Low Loss	
FPP-UPE-CS-PML2-OMx-08	MTP Cassette: 8F/4 port ("x" equals fiber type) LC duplex; internal shutters Aqua OM4 = "4"; Purple OM4+ = "P"; Lime Green OM5 = "5"; Beige OM1 = "1" (1) MTP adapters, Multimode Hydras; fits TCS UPATCH ELITE panels, Wired for Method B
FPP-UPE-CS-PMLx2-SM-08	MTP Cassette: 8F/4 port ("x" equals Polish type) LC duplex; internal shutters SM Green APC = "A"; SM Blue UPC = "U" (1) MTP adapters, Singlemode Hydras ; fits TCS UPATCH ELITE panels, Wired for Method B
MTP® Cassettes (8 Fiber) HIgh Performance Elite .35dB Ultra Low Loss	
FPP-UPE-CS-PML2U-OMx-08	MTP Cassette: 8F/4 port ("x" equals fiber type) LC duplex; internal shutters Aqua OM4 = "4"; Purple OM4+ = "P"; Lime Green OM5 = "5"; Beige OM1 = "1" (1) MTP adapters, Multimode Hydras; fits TCS UPATCH ELITE panels, Wired for Method B
FPP-UPE-CS-PMLx2U-SM-08	MTP Cassette: 8F/4 port ("x" equals Polish type) LC duplex; internal shutters SM Green APC = "A"; SM Blue UPC = "U" (1) MTP adapters, Singlemode Hydras ; fits TCS UPATCH ELITE panels, Wired for Method B
Adapter Panels (Pass-through)	
FPP-UPE-AD-x2-12-y	Adapter plate: 12F/6 port ("x" = connector type) LC = "L"; SC = "S" ("y" = color) Aqua = "A"; Beige = "I"; Lime Green = "L"; Purple = "V" LC Duplex; internal shutters; fits TCS UPatch Elite panels
FPP-UPE-AD-xy2-12-z	Adapter plate: 12F/6 port ("x" = connector type) LC = "L"; SC = "S" ("y" = polish) SM Green APC = "A"; SM Blue UPC = "U" ("z" = color) Aqua = "A"; Beige = "I"; Lime Green = "L"; Purple = "V" LC Duplex; internal shutters; fits TCS UPatch Elite panels
FPP-UPE-AD-MTP-x-y	Adapter plate: 12F/2,4, or 6 port; MTP; fits TCS UPatch Elite panels ("x" = port count) 6 fiber = "6"; 4 fiber = "4"; 2 fiber = "2" ("y" = color) Aqua = "A"; **Black** = "K"
FPP-UPE-AD-Sx2-6-y	Adapter plate: 6F/3 port; MTP; internal shutters; fits TCS UPatch Elite panels ("x" = polish type) = SM Green APC = "A"; SM Blue UPC = "U" ("y" = color) Blue = "B"; = Green = "K"
Splice Cassettes	
FPP-UPE-CS-L2xx-OM4-12	Splice Cassette: 12 Fiber OM4 Aqua LC Duplex; internal shutters; Telcordia color code; ("x" = style; Single Fiber) = "BL"; Ribbon Fiber = "RB" low loss .25dB; heat shrink splice sleeves included
FPP-UPE-CS-Lx2yy-SM-12	Splice Cassette: 12 Fiber LC Duplex; internal shutters; Telcordia color code; low loss .25dB; heat shrink splice sleeves included ("x" = polish type) = SM Green APC = "A"; SM Blue UPC = "U" ("yy" = style) Single Fiber = "BL"; Ribbon Fiber = "RB"
FPP-UPE-CS-LU2BL-EM-12	Splice Cassette: 12 Fiber LC Duplex; internal shutters only (EMPTY)

SYSTEM GUIDE COMPONENTS

MODULES

Splice Cassette

Single Tap
Cassette Module

Double Tap
Cassette Module

TAP MODULE ORDERING INFORMATION

FPP- UPE - TP ☐ - ☐☐☐ - ☐☐/☐☐ - ☐☐☐

1 2 3 4

1 TAP COUNT

1 = Single Tap
2 = Double Tap

2 CONNECTOR

L2 = Multimode duplex LC
LU2 = Singlemode duplex LC UPC
LA2 = Singlemode duplex LC APC

3 SPLIT/RATIO

90/10
80/20
70/30
60/40
50/50

4 FIBER TYPE

OM1
OM2
OM3
OM4
OM5
SM

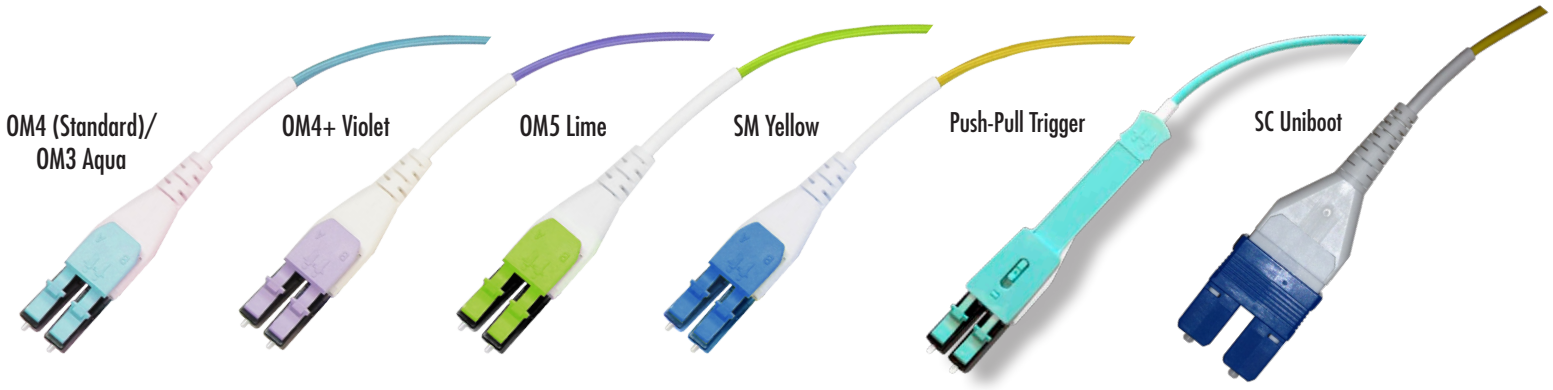
U elite™
FIBER PATCHING SYSTEM

SYSTEM GUIDE COMPONENTS

U Elite™ patch cords provide high-performance connections from the front side of the U Patch Elite™ enclosures to servers, switches, storage and other equipment in the data center. At 50% less diameter than standard patch cords, they greatly reduce cable congestion for high-density patching in panels and racks for LC duplex, MPO/MTP and SC duplex connections.

PATCH CABLES

VLC elite™
THE NEW UNIVERSAL LC



Tooless Reversible Polarity
Easy 3-step reversible polarity; never exposes fiber, cutting risk of breakage

Color Coding System
Easy identification & differentiation of network/ fabric connections; 10 distinct colors available

Low Profile Design
Helps maintain connections

COLOR-CODED TRIGGER SYSTEM

ORDERING INFORMATION

U L E □-□□□2□□-□□□□

1 2 3 4 5 6 7 8 9

1 CONNECTOR
LC to LC = Blank
LC to SC = S
LC to LC with Push Pull = T
LC to SC with Push Pull = X

2 FIBER TYPE
OM1 = 1
OM2 = 2
OM3 = 3
OM4 = 4
OM4+ = P
OM5 = 5
SM = S

3 FLAME RATING
Riser = R
Plenum = P (TCS Standard)
LSZH = L

4 CABLE COLOR
Red = R
Aqua = A (Standard OM3/OM4)
Yellow = Y (Standard SM)
Violet = V (Standard OM4+)
Green = N
Black = K
Orange = O
White = W
Blue = B
Gray = G
Lime = L (Standard OM5)

5 JACKET SIZE
2MM = 2

6 TRIGGER COLOR
Red = R
Aqua = A (Standard OM3/OM4)
Yellow = Y
Violet = V (Standard OM4+)
Green = N
Black = K
Orange = O
White = W
Blue = B (Standard SM)
Gray = G
Lime = L (Standard OM5)

7 U.S. MADE
U.S. = U
Other = Blank

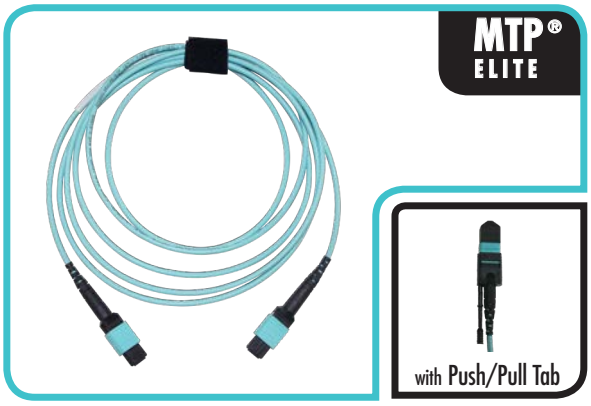
8 LENGTH
3-Digit Length
Examples:
001, 010, 01.5

9 UNIT OF MEASURE
Meters = M
Feet = F

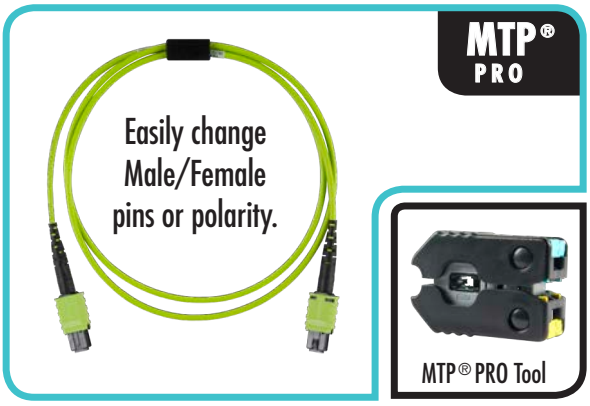
SYSTEM GUIDE COMPONENTS

PATCH CABLES

MTP® CABLES



- Authentic USConec MTP® Elite connectors
- Corning® Clearcurve™ Bend Insensitive Fiber
- Low loss connectors (.25dB)



- Easily change male/female pins or polarity (with tool)
- Add or remove alignment pins with MTP® Pro Tool without removing the housing (Male to Female/Female to Male)

AVAILABLE BOOT COLORS

ORDERING INFORMATION

□□□□-□□-UTE-□□□□-□P□U-□□□F

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PM = MTP Male (w/pins)
RF = MTP Pro Female
RM = MTP Pro Male

5 CONNECTOR B
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PM = MTP Male (w/pins)
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RM = MTP Pro Male

6 FIBER TYPE
1 = OM1
3 = OM3
4 = OM4
P = OM4+
5 = OM5
S = Singlemode

7 POLISH
P = Plenum

8 TRUNK CONSTRUCTION
M = MicroCore
A = Armored

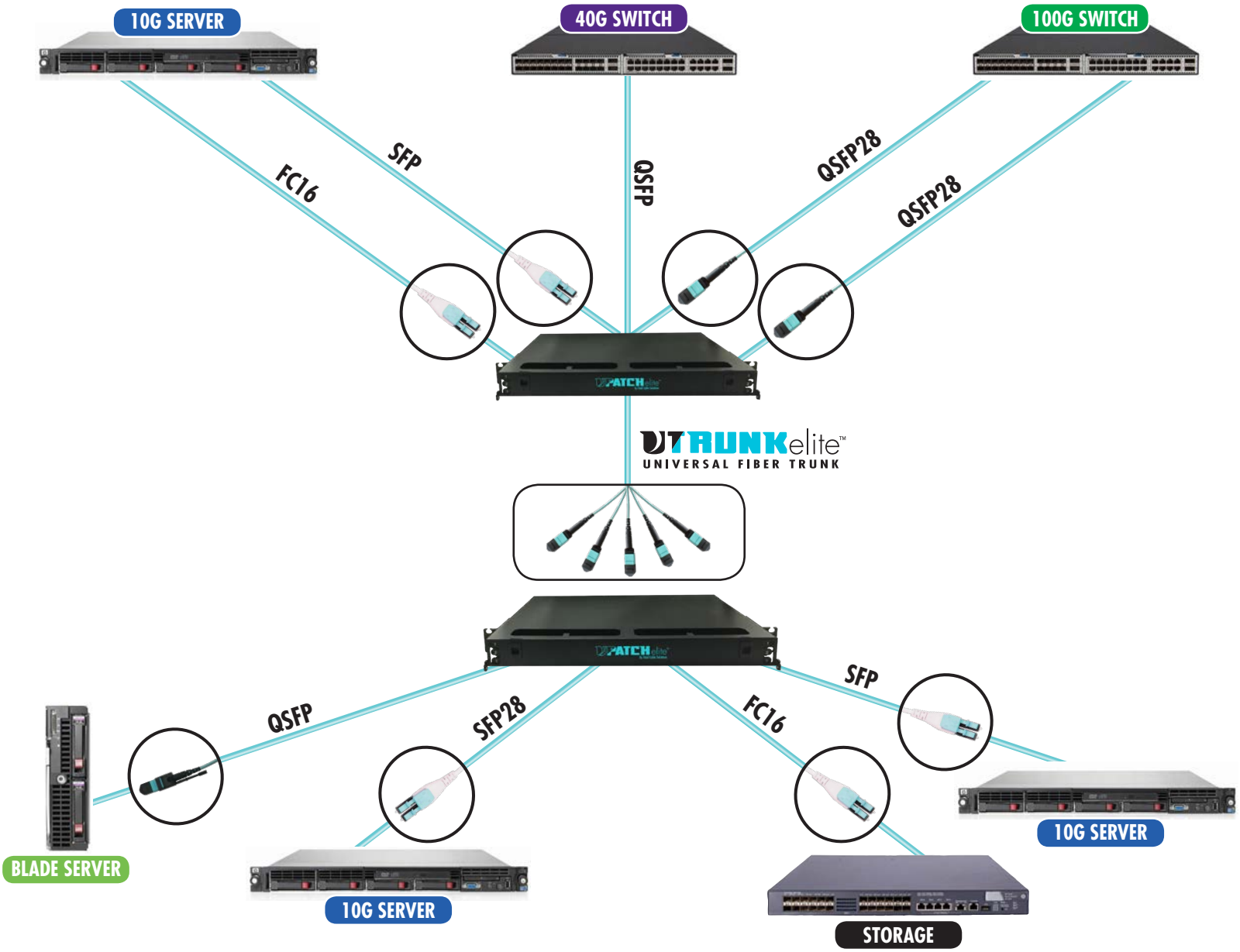
9 ORIGIN
U = U.S. Made

10 3-DIGIT LENGTH
(in Feet)

SYSTEM GUIDE VERSATILITY

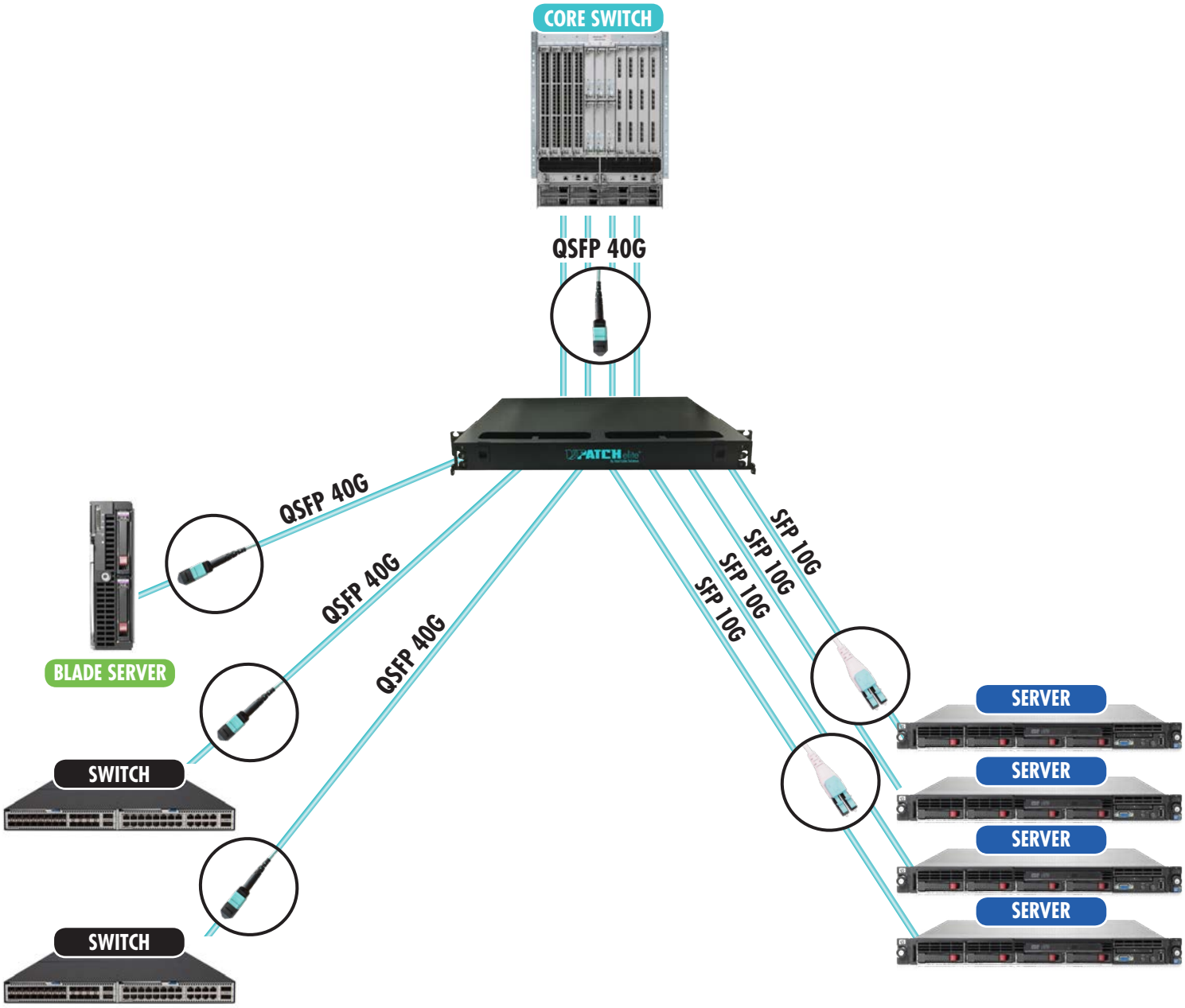
HYPERSCALE

The U elite™ Fiber Patching System is designed to provide the flexibility needed for today's constantly changing data center connection environment. The U Elite™ system uses a structured cabling approach that accommodates current 10G thru 400G network speeds as well as Fiber Channel storage connectivity. Modular panel design supports a variety of connector types, fiber media and can be populated as your needs grow.



PORT REPLICATION/BREAKOUT

Allows you to represent your core switch ports inside a patch panel elsewhere in your data center which can be used for your moves/adds/changes to individual equipment. Connections to your core switch then remain more permanent, secure and free from the "cable jungle". By using QSFP breakout cassettes, you have the additional capability of breaking out backbone QSFP ports down to multiple SFP ports to better match the speeds needed by edge equipment.

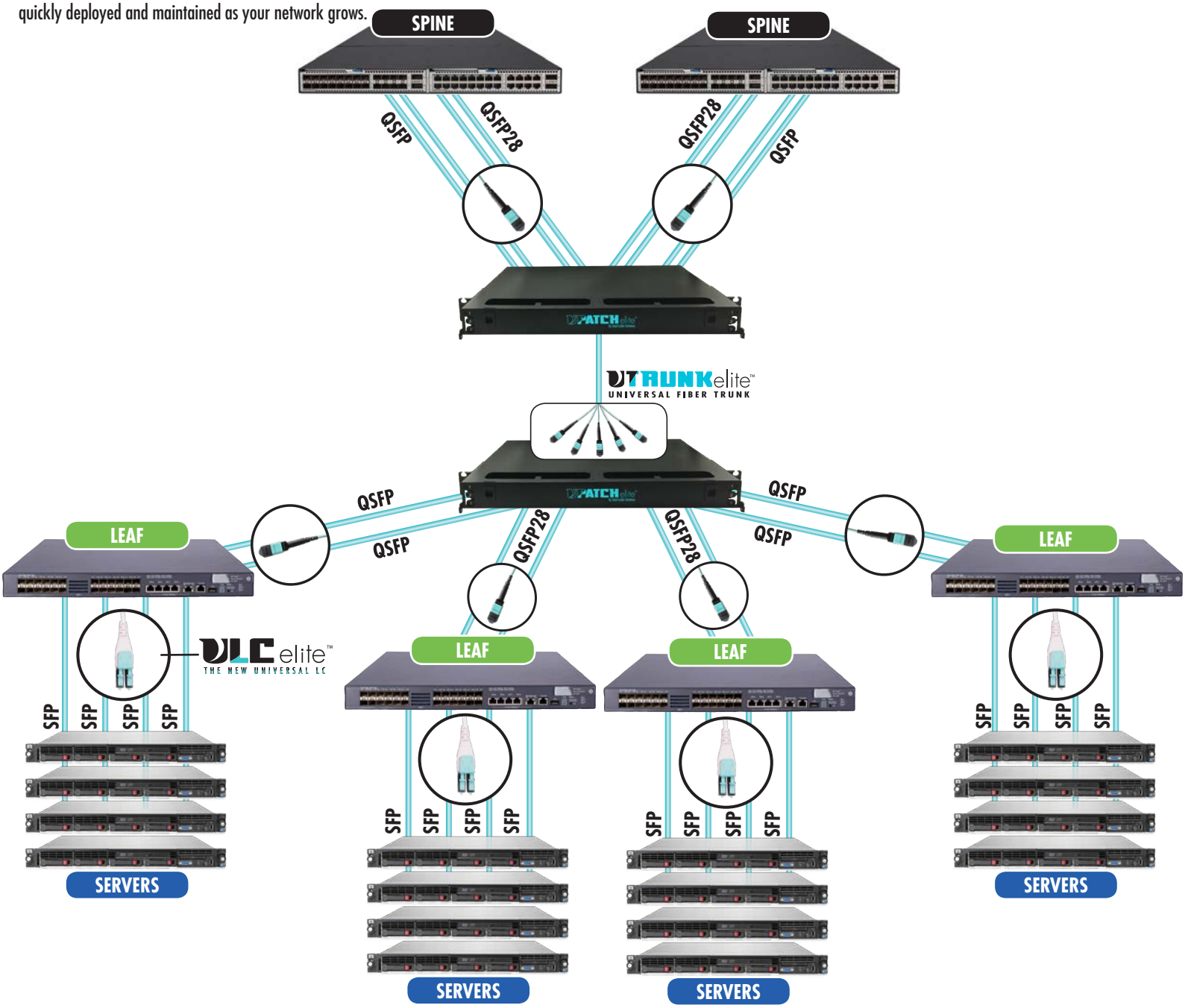


U elite™
FIBER PATCHING SYSTEM

SYSTEM GUIDE VERSATILITY

SPINE & LEAF

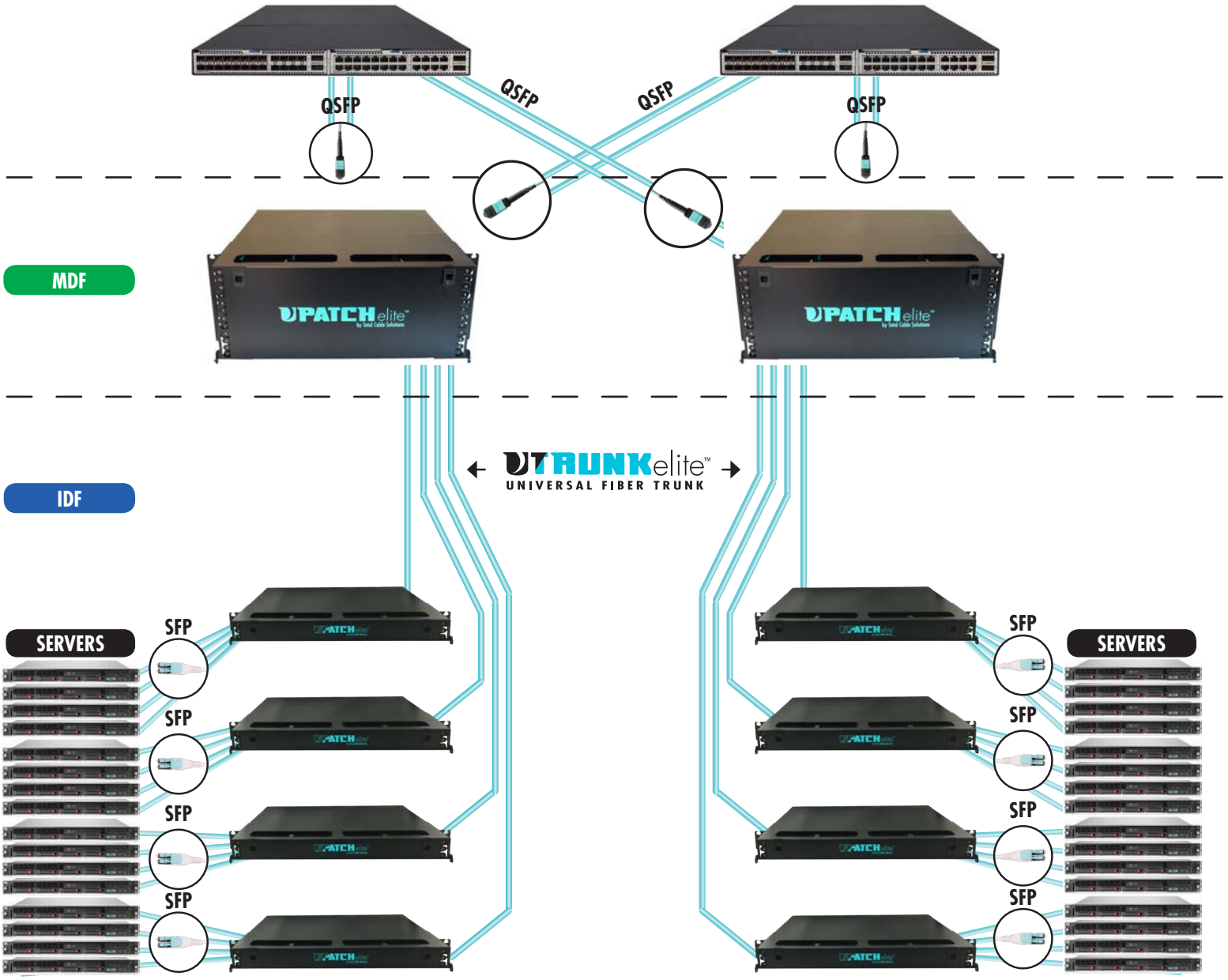
With the evolution of network topologies in the data center, it's important for a cabling system to evolve with it. The U Elite™ Fiber Patching System easily accommodates traditional 12-fiber, 2-fiber and modern 8-fiber (Base-8) topologies allowing you to mix-n-match connection types for greater flexibility. This allows up-links between Spine & Leaf switches to be quickly deployed and maintained as your network grows.



SYSTEM GUIDE VERSATILITY

ENTERPRISE

Enterprise and Co-location data centers are constantly being challenged to provide cross-connections between network, storage and servers across an ever-increasing footprint. As distance grows, the U Elite™ Fiber Patching System can provide an ideal platform for consolidating remote IDF connections into a centralized MDF area allowing for any-to-any connectivity patching. This approach allows equipment to be connected quickly to the network and SAN using short patch cords versus installing long "home runs".



U elite™
FIBER PATCHING SYSTEM

SYSTEM GUIDE SUPPORT

BENEFITS

The U Elite™ Fiber Patching system is backed by Total Cable Solutions' 25-year Complete System warranty.

- Replace any failing or defective parts for up to 25 years after TCS certified installation
- Provides tip-to-tip protection on entire system investment
- Personalized design assistance by TCS data center experts and on-site support during field installation
- Access to our authorized network of skilled installers/contractors

ACCESSORIES

VELCRO GT.75X9000
- 75' x 3/4" rolled
- Double-sided, black
- Cut to length
- Perfect for securing and dressing cables

1U SIDE CABLE MANAGER MET-1U-SM
- Fits 24" or wider cabinets
- Saves RU space by eliminating the need for horizontal cable managers
- Compatible with all TCS enclosures/bulkheads

RACK EXTENSION PA2319001BK1
- Available in 1U, 2U & 4U sizes
- Adapts 19" panels for mounting into 23/24" racks