EXTREME™

SST

CAT 6A UTP MILLENNIUM™ SYSTEM

The enhanced **global** Cat 6A UTP structured cabling system features EXTREME jacks and SST cable. It is ideal for applications where superior 10GBASE-T performance is required. MILLENNIUM Systems are global solutions available everywhere.

RECOMMENDED FOR:

10GBASE-T network applications

Enterprise systems

Optimal total cost of ownership for education environments and commercial buildings

Applications requiring PoE support up to 100 watts

IP-based security and building automation systems utilizing UTP cabling

Wireless applications supporting IEEE 802.11ac/Wi-Fi 5 and higher

Systems requiring optimal support for Energy Efficient Ethernet in the building

Audiovisual system installations for conference rooms and classrooms

Intelligent Building applications optimizing environmental sustainability

Global customers that want high performing 6A systems everywhere

The **EXTREME SST** MILLENNIUM Cat 6A system pairs high-quality, guaranteed performance with a user-friendly design to support fast, easy installations. With enhanced performance and unmatched system longevity, EXTREME jacks with SST cable are well suited for an extensive range of enterprise and commercial networks, and exceeds PoE standards up to 100 watts.

EXTREME Cat 6A QUICKPORT™ jacks feature patented CONE OF SILENCE® covers for additional alien crosstalk (AXT) suppression and include Retention Force Technology™ to promote consistent network performance over the life of the system.

Our **SST** UTP cable features a specially designed, insulated isolation wrap to provide superior heat management and noise-reducing performance, preventing electrical energy from transferring between cables while eliminating the need for grounding.

Use Cases

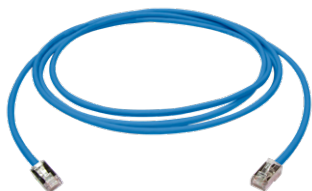| Enterprise Systems	Security and Building Automation	Sustainable Networks for Intelligent Buildings	Education Applications
Enable office applications, including video conferencing and VoIP, that require a reliable UTP solution for network speeds up to 10 Gb/s.	Integrate new smart building systems on a network that can meet the bandwidth and power demands of today, while allowing for future growth and applications in the future.	As part of a ULAN™ network design, install cable and connectivity tailored to provide PoE and data to workstations and IoT devices, like clocks, weather trackers, and key card scanners.	A practical Cat 6A solution to meet the increasingly high bandwidth demands of classrooms, labs, and libraries of new and retrofit K-12 and higher-ed applications.

Environmentally Conscious Design

Environmentally optimized components have been selected for this system to minimize environmental impact, while delivering strong performance beyond category specifications, as well as user-friendly design to enable fast, easy installations.

Bulk Packaging for Jacks
Select colors are available in 12-pack GREENPACK™, a compact, reusable, and recyclable packaging, which reduces jobsite waste.

Sustainably Smart Packaging
Multiple product packaging options that are entirely recyclable and use no single-use plastics.

Less Material Required for New Patch Cord Plug and Boot
Using 72% less plastic in our new patch cord boot also makes our cords lighter to reduce shipping energy and cost.

Sustainable Product Design
The copper, insulation, or filler materials in our category cables incorporate recycled materials to reduce the overall carbon footprint.

Look for this leaf on the following pages for specific points of environmentally conscious product design.

LEVITON

- Exceeds ISO/IEC 11801-1 Class E_A and ANSI/TIA-568.2-D Cat 6A requirements for channel and permanent link requirements to support 10GBASE-T (IEEE 802.3an) networks

- Enhanced system performance with additional margin guarantees

- Third-party tested and certified

- Error-free performance up to 10 Gigabit Ethernet with full duplex transmission up to 500MHz

- Backwards compatible with Gigabit Ethernet to provide seamless migration to 10GBASE-T and supports all Cat 6A, Cat 6, and Cat 5e system requirements

- Exceeds PoE standards up to 100 watts

Guaranteed[1] System Performance Parameters

Parameter	Margin Guarantee
Insertion Loss	
NEXT	
PSNEXT	
ACR-F (ELFEXT)	
PSACR-F (PSELFEXT)	
Return Loss	For performance data, contact your local sales person. Leviton.com/ns/global-locations
ACR-N	
PSACR-N	
PSANEXT	
PSAACR-F	
TCL	
ELTCTL	

[*] Values represent guaranteed margins to ANSI/TIA-568.2-D standard at 20°C ambient temperature. All parameters comply with ANSI/TIA-568.2-D Cat 6A and ISO/IEC 11801-1 Class E_A requirements across the entire frequency range. All values represent worst-case margins for 17 to 100 meter channel configurations (or 17 to 93 meters when using 28 AWG (H6A10) patch cords). System performance margin guarantees are representative of the specific components and topologies as listed on page 7 of this solution data sheet document. Contact your Leviton technical representative for more information on alternative components and channel configurations. Details at Leviton.com/NS/Warranty. Guaranteed System Performance applies exclusively when the system is installed and tested by Leviton Network Solutions Certified Installers. Guaranteed margin values apply at the time of installation.

Extended Application Distances
Expected Values (Non-PoE)

The configurations and products in the system topologies on page 7 will support the applications listed in Table 1 at the indicated distances in a 2- to 4-connector channel.[1,2]

Table 1

LAN (Ethernet)	Extended Distances
10BASE-T	
100BASE-TX	
1000BASE-T	For performance data, contact your local sales person. Leviton.com/ns/global-locations
2.5GBASE-T	
5GBASE-T	
10GBASE-T	

[1] Extended distance support can be expected with Leviton modular patch panels and QUICKPORT™ jacks only and does not apply to channels constructed with punch-down panels. Actual application performance will vary depending on the switch manufacturer, part number, software, and configuration. Therefore, Leviton makes no guarantee of application performance at extended distances, either expressed or implied.

[2] The use of 28 AWG patch cords in a channel will reduce the extended PoE and Application Distances listed in this data sheet.

Extended PoE Distances
Typical Values

Leviton strongly recommends that all cabling systems be installed in compliance with relevant standards to ensure support for current and future applications designed to run on standards-based architecture. Should the need arise to run PoE longer than 100 meters, the configurations and products in the system topologies on page 7 will support the applications listed in Table 2 at the indicated distances in a 2- to 4-connector channel.[3,4]

Table 2

PoE Type	Extended Distances
IEEE 802.3bt Type 1 (15.4 W)	
IEEE 802.3bt Type 2 (30 W)	For performance data, contact your local sales person. Leviton.com/ns/global-locations
IEEE 802.3bt Type 3 (60 W)	
IEEE 802.3bt Type 4 (90 W)	

[3] Channels that exceed 100 meters become application specific.

[4] The max distance is the minimum value from Table 1 or Table 2 based on the combination of application and PoE type. For example, a person running 10GBASE-T and Type 4 will be limited by the distance for 10G (Table 1, 100m). A person running 100BASE-TX and Type 2 will be limited by Type 2 (Table 2, 130m).

System Application Score

Traditional LAN testing methodologies don't accurately measure the performance of cabling under the strain of increasing bandwidth demand, high power PoE, and environmental noise. To address this challenge, Leviton has developed a new testing methodology called the System Application (SA) Score.

SA Score Process Verified

SA score 7.5

Visit leviton.com/sa-score for details.

Jacks

EXTREME Cat 6A QUICKPORT™ Jacks

- Third-party tested and verified to exceed performance requirements
- Tested and approved for use in air-handling spaces (plenum rating) in accordance with UL Standard 2043
- Patented Retention Force Technology protects against tine damage and maintains contact force between plug and jack, preventing arcing from intermittent disconnects in PoE applications
- Patented CONE OF SILENCE® helps suppress alien crosstalk (AXT)
- Circuit board technology for exceptional high-frequency operation
- Gas-tight insulation displacement contacts provide excellent conductor retention and resistance to surface-contact oxidation for life of the system
- Pair Separation Tower design facilitates separation of conductors and minimizes untwisting
- Patented dual-layer wiring label simplifies punchdown and reduces rework
- 90 or 180 degree bi-directional entry eases cable bend radius in back boxes
- Supports Power over Ethernet (PoE) —see individual product specifications sheets for full capabilities
- QUICKPORT jacks are compatible with all Leviton modular panels, wallplates, and surface-mount boxes.
- Regrind plastic incorporated into manufacturing process to reduce the amount of waste to the landfill
- Engineered and manufactured for real-world ruggedness, longevity, and reliability
- Select colors available in recyclable 12 pack GREENPACK™ bulk packaging, eliminating single-use polybags and reducing plastic waste
- Capable of multiple re-terminations, minimizing waste and maximizing re-use
- Designed for durability and longevity, reducing the need for replacement over the life of the network

Description	Part No.	Typical Region
EXTREME Cat 6A UTP QUICKPORT Jack	6110G-R*6	Global
EXTREME Cat 6A UTP QUICKPORT Jack, GREENPACK 12-Pack	6110G-C^6	

* Color: White (W), Lt. Almond (T), Ivory (I), Yellow (Y), Orange (O), Crimson (C), Dark Red (R), Purple (P), Blue (L), Green (V), Gray (G), Black (E), Brown (B)

^ Color: White (W), Black (E), Blue (L)

Note: Not all colors and pack modes are available in all regions. Contact your Leviton representative for details.

Patch Panels

QUICKPORT Modular Patch Panels

- Accepts all QUICKPORT-style connectors
- 49255-H24 and 49255-H48 include cable management bars and write-on blocks
- Select panels available with magnifying lens label holders to ensure visibility of port labels
- Available in an angled design that allows for cords to easily route directly into vertical managers
- Select panel configurations available in white finish
- Available in a front loading UTP QUICKPORT configuration that supports jack installation from front or rear
- High-density panels are designed to minimize carbon footprint per port
- Designed and manufactured in an ISO14001 facility

Cat 6A 110-Style Patch Panels

- Third-party tested and verified to exceed performance requirements
- In-line IDC field is consistent with existing 110-style panel designs
- Conductor-retention feature holds individual conductors in place during termination
- Pair Separation Towers facilitate separation of Cat 6A conductors
- Separated blocks provide room to work with larger Cat 6A cables and help to identify first-pair position
- Terminates up to 50% faster than Cat 6A panels requiring additional termination manager
- Reversible card shows T568 A and B wiring schemes separately
- IDC stuffer caps provide termination strain relief
- Magnifying lens label holders ensure visibility of port labels
- Flat 110-Style panel includes Cable Management Bar

| Description	Part No.	Typical Region
Modular Patch Panels		
1RU 24-Port Flat QUICKPORT Patch Panel, black	49255-H24	Global
1RU 48-Port Flat QUICKPORT Patch Panel, black	49255-Q48	Global
2RU 48-Port Flat QUICKPORT Patch Panel, black	49255-H48	United States, Canada, LATAM
110-Style Patch Panels		
1RU 24-Port Cat 6A Flat 110-Style UTP Patch Panel, black	6A586-U24	United States, Canada, LATAM
2RU 48-Port Cat 6A Flat 110-Style UTP Patch Panel, black	6A586-U48	

Cable

SST Cat 6A UTP Cable

- High Performance Cat 6A UTP cable with noise-reducing isolation wrap technology
- Exceeds Cat 6A performance requirements
- Isolation wrap construction provides optimal heat management for Hi-PoE deployment
- Excellent choice for high-power, high-bandwidth applications like 802.11ac wireless, HD video, and IP security
- Recommended for high-density applications and installations
- Reduced size allows for a smaller bend radius in tight spaces and improved cable management
- Small diameter enables better airflow, reducing energy required for cooling in congested pathways
- Compact design reduces cable carbon footprint
- CPR and LSZH cables are made using 100% renewable energy in our PAS2060 carbon neutral manufacturing facility in the UK
- Reusable cable reels

Description	Part No.	Packaging	Typical Region
Plenum (CMP)			
SST Cat 6A UTP Cable, CMP, white	11140401	1000 ft (305 m) Reel	United States, Canada
SST Cat 6A UTP Cable, CMP, blue	11101842	1000 ft (305 m) Reel	
SST Cat 6A UTP Cable, CMP, gray	11140402	1000 ft (305 m) Reel	
SST Cat 6A UTP Cable, CMP, white	11140628	1000 ft (305 m) Reel in Box	
SST Cat 6A UTP Cable, CMP, blue	11140627	1000 ft (305 m) Reel in Box	
SST Cat 6A UTP Cable, CMP, gray	11140629	1000 ft (305 m) Reel in Box	
Cat 6A, UTP, 23 AWG, CMP, blue	IUTAP-110-MLS	1000 ft (305 m) Reel	Canada
Cat 6A, UTP, 23 AWG, CMP, white	IUTAP-112-MWS	1000 ft (305 m) Reel	
Cat 6A, UTP, 23 AWG, CMP, yellow	IUTAP-113-MYS	1000 ft (305 m) Reel	
RISER (CMR)			
SST Cat 6A UTP Cable, CMR, white	11140409	1000 ft (305 m) Reel	United States, Canada
SST Cat 6A UTP Cable, CMR, blue	11104157	1000 ft (305 m) Reel	
SST Cat 6A UTP Cable, CMR, gray	11140410	1000 ft (305 m) Reel	
SST Cat 6A UTP Cable, CMR, white	11140640	1000 ft (305 m) Reel in Box	
SST Cat 6A UTP Cable, CMR, blue	11140639	1000 ft (305 m) Reel in Box	
SST Cat 6A UTP Cable, CMR, gray	11140641	1000 ft (305 m) Reel in Box	
CPR EuroClass (B2ca, Cca, Dca, Eca)			
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	SST-Eca-500VT	1640 ft (500 m) Reel	Europe
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	SST-Eca-305VT	1000 ft (305 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	SST-Eca-500WH	1640 ft (500 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	SST-Eca-305WH	1000 ft (305 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, blue	SST-Dca-500BU	1640 ft (500 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, blue	SST-Dca-305BU	1000 ft (305 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, white	SST-Dca-500WH	1640 ft (500 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, white	SST-Dca-305WH	1000 ft (305 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Cca, green	SST-Cca-500GN	1640 ft (500 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Cca, green	SST-Cca-305GN	1000 ft (305 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass B2ca, orange	SST-B2ca-500OR	1640 ft (500 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass B2ca, orange	SST-B2ca-305OR	1000 ft (305 m) Reel	
Low Smoke Halogen Free (LSHF/LSZH)			
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	SST-Eca-500VT	1640 ft (500 m) Reel	Europe, Middle East, LATAM, APAC
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	SST-Eca-305VT	1000 ft (305 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	SST-Eca-500WH	1640 ft (500 m) Reel	
SST Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	SST-Eca-305WH	1000 ft (305 m) Reel	

Also available in a range of non-standard colors.
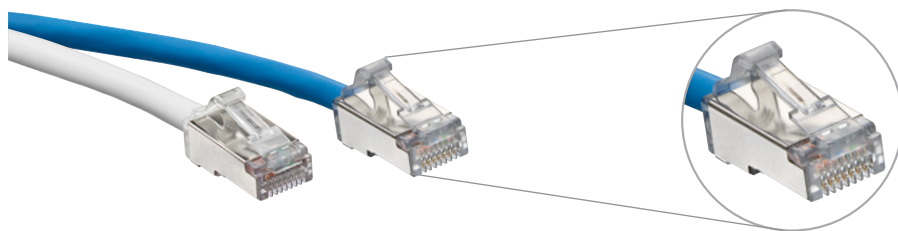
GREENPACK bulk packs are available in Sustainably Smart packaging

Patch Cords

Cat 6A Small-Diameter High-Flex Patch Cords

- Dual rated CM/LSZH jacket
- Accommodates use in high-density switches, routers, and other electronics
- Bend radius is a narrow 0.74 inches (18.79 mm), versus 1.0 inch (25.40 mm) for typical Cat 6A patch cords
- Reduces patch cord density in a 24-port patch panel by 25 percent when compared to typical Cat 6A patch cords
- Universal patch cord can be used in both UTP or shielded installations
- Compatible with Leviton's Secure RJ system providing physical port security and color clips for network identification
- Supports Power over Ethernet (PoE) — see individual product specifications sheets for full capabilities
- GREENPACK™ Bulk Pack to reduce packaging and eliminate single use plastics
- Supplied in packs of 12 or 24, plastic free, 100% recyclable, bulk packs
- Optimized end-to-end design utilizing up to 72% less plastic material than standard boot designs
- Small outer diameter of 4.7 mm minimizes materials used in construction and associated carbon footprint
- Third-party verified carbon footprint Lifecycle Analysis data available
- Living Building Challenge Red List Free

Cat 6A Standard Patch Cords

- Universal patch cord can be used in both UTP and shielded channels
- CMR or LSZH materials as standard
- Compatible with Leviton's Secure RJ system providing physical port security and color clips for network identification
- Designed to have a repeatable, controlled, and consistent assembly ensuring optimum performance. Performance assessed through rigorous quality control in compliance with the demands of industry standards
- Short boot promotes shorter installed bend radius, ideal for limited depth applications
- Supports Power over Ethernet (PoE) — see individual product specifications sheets for full capabilities

VXC™ Coupler

- A Cat 6A problem solver for in-ceiling devices like WAPs
- Connects two pieces of Cat 6A cabling with no proprietary tools

Description								Typical Region
High-Flex Dual-Rated CM/LSZH		White	Blue	Gray	Yellow	Red	Green	Black	
Cat 6A Small-Diameter High-Flex Patch Cord		H6A10-xxW	H6A10-xxL	H6A10-xxS	H6A10-xxY	H6A10-xxR	H6A10-xxG	H6A10-xxE	Global
Cat 6A Small-Diameter High-Flex Patch Cord, GREENPACK ≤ 10FT (3M) 24 cords per GREENPACK; > 10FT (3M) 12 cords per GREENPACK		H6AP0-xxL (Blue will be stocked. All other colors will be non-stocked options)							
Standard CMR		White	Blue	Gray	Yellow	Red	Green	Black	
Cat 6A Standard Patch Cord CMR Rated		6AS10-yyW	6AS10-yyL	6AS10-yyS	6AS10-yyY	6AS10-yyR	6AS10-yyG	6AS10-yyE	United States, Canada, LATAM

Standard LSZH	White	Blue	Gray	Yellow	Red	Green	Black	
Cat 6A Standard Patch Cord LSZH Rated	AC6PCFyyy-3CCHB	AC6PCFyyy-4CCHB	AC6PCFyyy-8CCHB	AC6PCFyyy-6CCHB	AC6PCFyyy-1CCHB	AC6PCFyyy-5CHB	AC6PCFyyy-2CCHB	Europe, Middle East, APAC
CP Cords	Eca (Violet)		Dca (Blue)		Cca (Green)		B2ca (Orange)	
Cat 6A CP Cord LSZH Rated	CP-AC6‡EcaxxxV*^-A		CP-AC6‡DcaxxxB*^-A		CP-AC6‡CcaxxxG*^-A		CP-AC6‡B2caxxxO*^-A	Europe, Middle East, APAC
Coupler								
VXC Coupler	SBCPI-00S							Global

xx = Length in feet: 1 - 50 (0.3-6.1 meters)
yy = Length in feet: 1 - 72 (0.3 - 21 meters)
‡ = Cable type: Z=Zone Cable, S = S/FTP, U=UTP, F= F/UTP, D = F/FTP
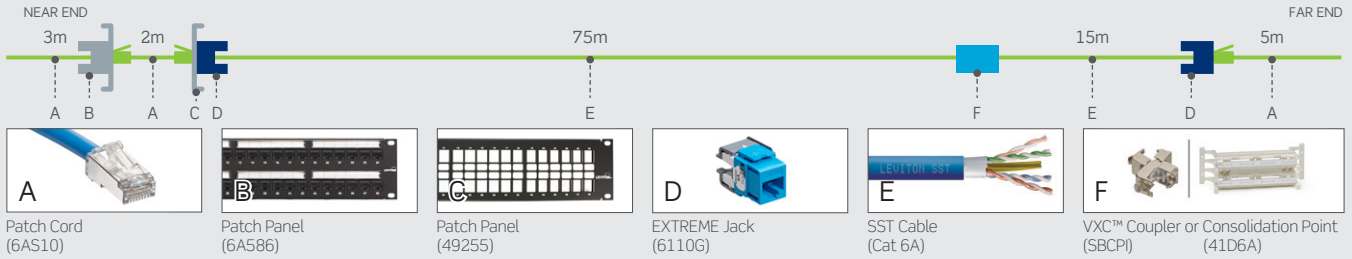* = Jack type: S = Shielded, T= Shielded with Shutter, U = UTP, V = UTP with Shutter

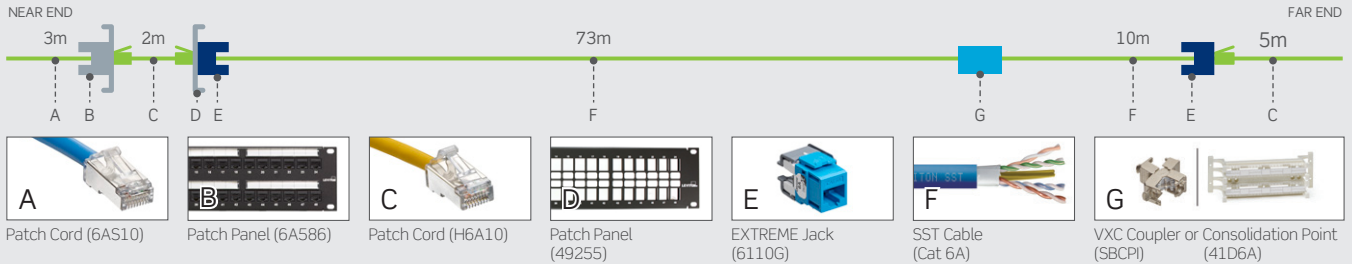xxx = Length in meters: 2 - 50
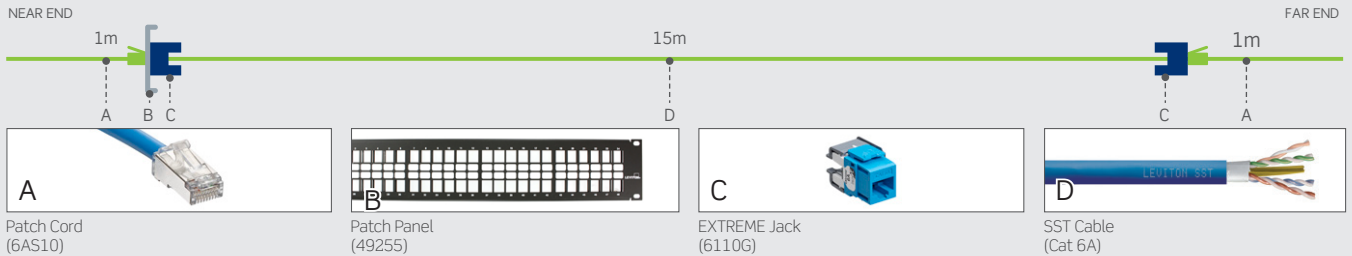yyy = Length in meters: 0.5 - 20
^ = Labeling: S = Standard, C = Custom

LEVITON

System Topologies

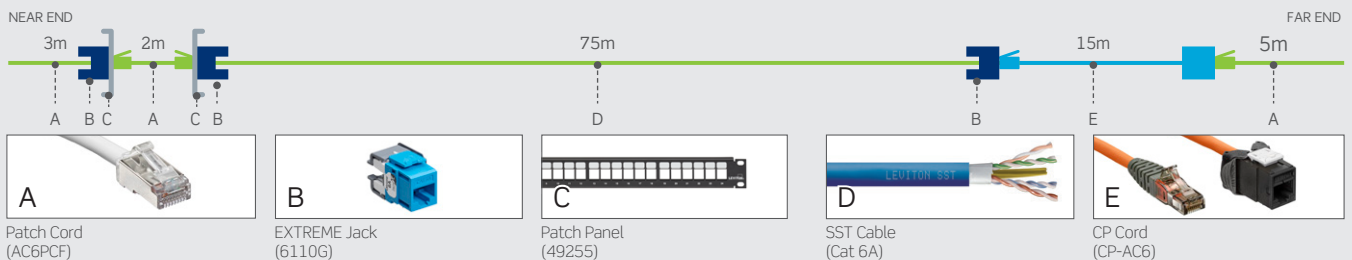## Typical 4-Connector Channel Topology – Standard Patch Cords

NEAR END — 3m — 2m — 75m — 15m — 5m — FAR END

A B A C D — E — F — E D A

A
Patch Cord (6AS10)

B
Patch Panel (6A586)

C
Patch Panel (49255)

D
EXTREME Jack (6110G)

E
SST Cable (Cat 6A)

F
VXC™ Coupler or Consolidation Point (41D6A)

Typical 4-Connector Channel Topology – High Flex Patch Cords

NEAR END — 3m — 2m — 73m — 10m — 5m — FAR END

A B C D E — F — G — F E C

A
Patch Cord (6AS10)

B
Patch Panel (6A586)

C
Patch Cord (H6A10)

D
Patch Panel (49255)

E
EXTREME Jack (6110G)

F
SST Cable (Cat 6A)

G
VXC Coupler or Consolidation Point (SBCPI) (41D6A)

Typical 2-Connector Channel Topology

NEAR END — 1m — 15m — 1m — FAR END

A B C — D — C A

A
Patch Cord (6AS10)

B
Patch Panel (49255)

C
EXTREME Jack (6110G)

D
SST Cable (Cat 6A)

Typical European 4-Connector Channel Topology – CP Cord

NEAR END — 3m — 2m — 75m — 15m — 5m — FAR END

A B C A C B — D — B E A

A
Patch Cord (AC6PCF)

B
EXTREME Jack (6110G)

C
Patch Panel (49255)

D
SST Cable (Cat 6A)

E
CP Cord (CP-AC6)

Typical European 4-Connector Channel Topology – VXC Coupler

NEAR END — 3m — 2m — 75m — 15m — 5m — FAR END

A B C A C B — D — E D A

A
Patch Cord (AC6PCF)

B
EXTREME Jack (6110G)

C
Patch Panel (49255)

D
SST Cable (Cat 6A)

E
VXC Coupler (SBCPI)

LEVITON