



CAT 6A UTP MILLENNIUM™ SYSTEM

The premier **global** Cat 6A UTP structured cabling system features ATLAS-X1 jacks and SST cable. It is ideal for **mission critical applications** where superior 10GBASE-T performance is required. MILLENNIUM Systems are global solutions available everywhere.

RECOMMENDED FOR:

- 10GBASE-T network applications and mission-critical systems
- Data center applications including computer clusters, end-of-row architectures, and energy efficient Ethernet systems
- Optimal Return on Infrastructure Investment for financial, health care, government, transportation, and education environments
- Applications requiring extended distance support beyond the standard for data up to 5 Gbps and PoE up to 100 watts
- High-density cabling and constrained pathway environments
- Any IP-based system utilizing UTP cabling
- Wireless applications supporting IEEE 802.11 Wi-Fi 6, 6E, 7, and in-building 5G deployments
- Advanced audiovisual system installations
- Intelligent Building applications optimizing environmental sustainability
- Global enterprises that want high performing 6A systems everywhere

ATLAS-X1™ SST CAT 6A UTP MILLENNIUM™ SYSTEM



The **ATLAS-X1 SST** MILLENNIUM Cat 6A system delivers the highest level of verified performance and reliability, offers tool-free termination for simplified installations, and is easily scalable for migrations up to 10GBASE-T. The ATLAS-X1 jack and SST cables are ideal for deployment in all types of mission-critical environments, including those with the highest fire rating demands, and exceed Power over Ethernet (PoE) standards up to 100 watts.

ATLAS-X1 is the only category-rated metal-bodied UTP jack that delivers the highest performance and reliability in a scalable, unified form factor and termination method.

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

Use Cases

Mission Critical Applications

Deploy the industry's highest performing connectivity and cable in applications where downtime is not an option, like safety, transportation, finance, and military applications.

Extended Distance Support

Reach all of your devices with warranted support for distances beyond 100 m. Select configurations can support all PoE types and data beyond the standards.

Wi-Fi 6, 6E, and 5G Deployments

With the rise of IoT, bring-your-own-device policies, and data demands that go beyond gigabit speeds, many enterprises see 5G and Wi-Fi technologies as critical for their companies in the years to come.

Sustainable Network Infrastructure

Look for ways to merge Operational Technology (OT) systems onto cabling infrastructure that looks more like an Information Technology (IT) network, with a migration path to utilize the cabling infrastructure to meet future bandwidth requirements.

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.



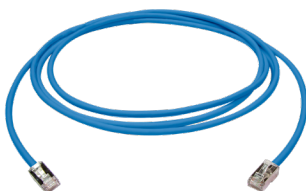
Bulk Packaging for Jacks

Select colors of ATLAS-X1 jacks 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.

Visit leviton.com/sustainability for details of the Leviton CN2030 program.

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

- Exceeds ISO/IEC 11801-1 Class E_A and ANSI/TIA-568.2-E Cat 6A requirements for channel, permanent link, and component requirements to support 10GBASE-T networks
- Industry-leading system performance with excellent alien crosstalk (AXT) suppression
- Error-free performance up to 10 Gigabit Ethernet with full duplex transmission up to 500 MHz
- Backwards compatible with Gigabit Ethernet to provide seamless migration to 10GBASE-T and supports all Cat 6 and Cat 5e system requirements
- IEEE 802.3 PoE Type 1, 2, 3, 4 (100 watts Max)

Guaranteed¹ System Performance Parameters

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

¹ Values represent guaranteed margins to ANSI/TIA-568.2-E standard at 20°C ambient temperature. All parameters comply with ANSI/TIA-568.2-E 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 Length Channels (Greater than 100 meters)

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 install a channel longer than 100 meters, the risk of a reduction in interoperability is increased and performance becomes dependent on the active equipment used.^{1,2}

Extended Application and PoE Distances

The configurations and products in the system topologies on page 7 will support the applications listed in Table 1 or Table 2 when using one of the cable types referenced in Table 1 or Table 2. Note that to use the configurations on Page 7 for extended distances, only the length of the horizontal cable increases (i.e. not the length of any of the patch cords or CP cord). The distances below went through rigorous testing and engineering modeling to ensure full support of the indicated IEEE 802.3 applications.

Table 1

PLENUM (REEL & REEL BOX)	IEEE 802.3 PoE			
	Type 1 (15.4 W)	Type 2 (30 W)	Type 3 (60 W)	Type 4 (100 W)
10BASE-T	For performance data, contact your local sales person. Leviton.com/ns/global-locations			
100BASE-TX				
1000BASE-T				
2.5GBASE-T				
5GBASE-T				
10GBASE-T				

Table 2

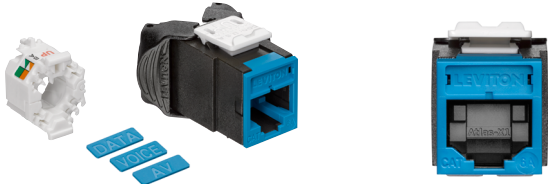
PLENUM (TEKPAK ONLY), RISER, OUTDOOR, CPR	IEEE 802.3 PoE				
	Data Only	Type 1 (15.4 W)	Type 2 (30 W)	Type 3 (60 W)	Type 4 (100 W)
10BASE-T	For performance data, contact your local sales person. Leviton.com/ns/global-locations				
100BASE-TX					
1000BASE-T					
2.5GBASE-T					
5GBASE-T					
10GBASE-T					

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.



Visit leviton.com/sa-score for details.



Jacks

ATLAS-X1 Cat 6A Component-Rated QUICKPORT™ Jacks

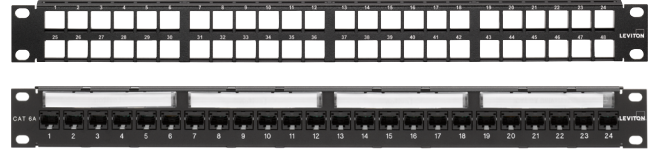
- Third-party tested and verified to exceed performance requirements
- Tested and approved for use in air-handling spaces (plenum rating) in accordance with UL Standard 2043
- Patented Retention Force Technology protects against tine damage and maintains contact force between plug and jack, preventing arcing from intermittent disconnects in PoE applications
- PoE optimized tine geometry prevents arcing damage where plug and jack make contact, extending the life of the jack and ensuring maximum performance (see specification sheets for full PoE capabilities)
- Solid metal body dissipates 53% more heat than plastic, minimizing damage from excess heat in PoE applications
- Available with internal shutter to protect from dust and debris
- Unique, tool-free design requires no specialized termination or re-termination tool
- Short jack design supports a wider range of applications (e.g. shallow boxes, enclosures, bend radius, etc.)
- Interchangeable icons in 13 colors (VOICE, DATA, AV, and blank) make it easy to identify and track data, voice, or other functions (select jacks include color matching icons)
- QUICKPORT jacks are compatible with all Leviton modular panels, wallplates, and surface-mount boxes
- 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
ATLAS-X1 Cat 6A UTP QUICKPORT Jack	6AUJK-R*6	Global
ATLAS-X1 Cat 6A UTP QUICKPORT Jack, GREENPACK 12-Pack	6AUJK-C*6	
ATLAS-X1 Cat 6A UTP QUICKPORT Jack with Shutter	6AUJK-S*6	
ATLAS-X1 Bulk Icons, pack of 72	ICONS-IC*	

* = 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 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 port 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 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 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 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

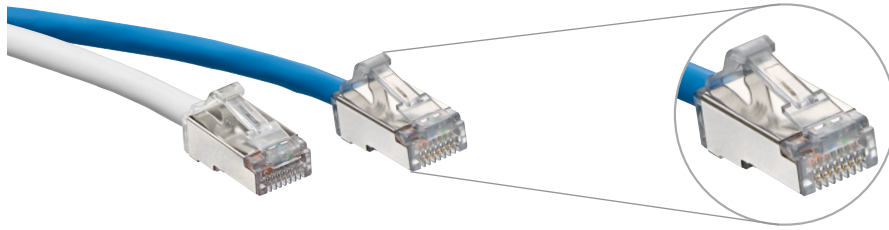
SST Cat 6A UTP Cable

- 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, 802.11ax, 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
- Recyclable boxes



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	11142630	1000 ft (305 m) TEKPAK™	
SST Cat 6A UTP Cable, CMP, blue	11142452	1000 ft (305 m) TEKPAK	
SST Cat 6A UTP Cable, CMP, gray	11142631	1000 ft (305 m) TEKPAK	
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	11144798	1000 ft (305 m) TEKPAK	
SST Cat 6A UTP Cable, CMR, blue	11142453	1000 ft (305 m) TEKPAK	
SST Cat 6A UTP Cable, CMR, gray	11144808	1000 ft (305 m) TEKPAK	
OUTDOOR			
SST OUTDOOR Cat 6A UTP Cable, Outdoor, black	11144215	1000 ft (305 m) Reel	United States, Canada
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-B305VT*	1000 ft (305 m) Box	
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-B305WH*	1000 ft (305 m) Box	
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-B305BU*	1000 ft (305 m) Box	
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-B305WH*	1000 ft (305 m) Box	
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-B305GN*	1000 ft (305 m) Box	
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-B305OR*	1000 ft (305 m) Box	
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. * Available in 1000 ft (305 m) Reels



GREENPACK bulk packs are available in Sustainably Smart packaging

Patch Cords

Cat 6A Small-Diameter High-Flex Patch Cords

- Dual rated CM/LSZH jacket for global use
- Accommodates use in high-density switches, routers, and other electronics
- Bend radius is a narrow 0.74 inches (18.796 mm), versus 1.0 inch (25.4 mm) for typical Cat 6A patch cords
- Reduces patch cord density in a 24-port patch panel by 25 percent
- 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 product

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-5CCHB	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

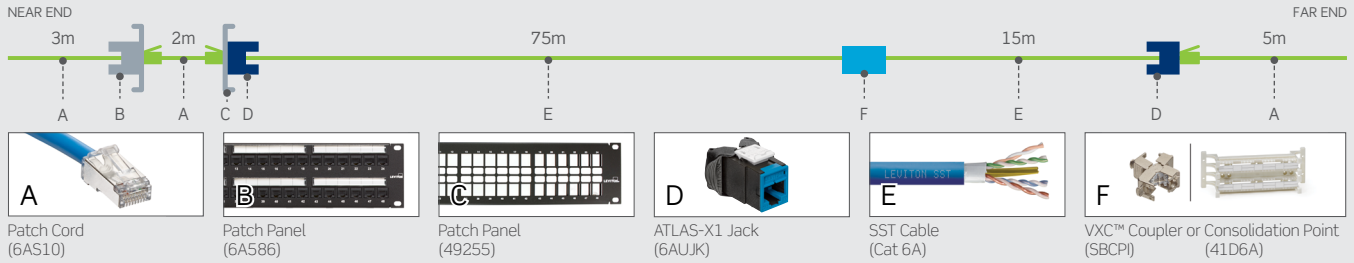
xxx = Length in meters: 2 - 50

yyy = Length in meters: 0.5 - 20

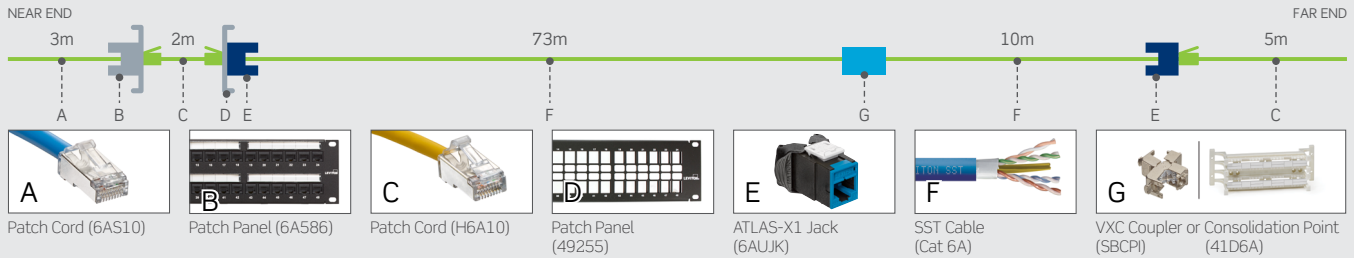
* = Labeling: S = Standard, C = Custom

System Topologies

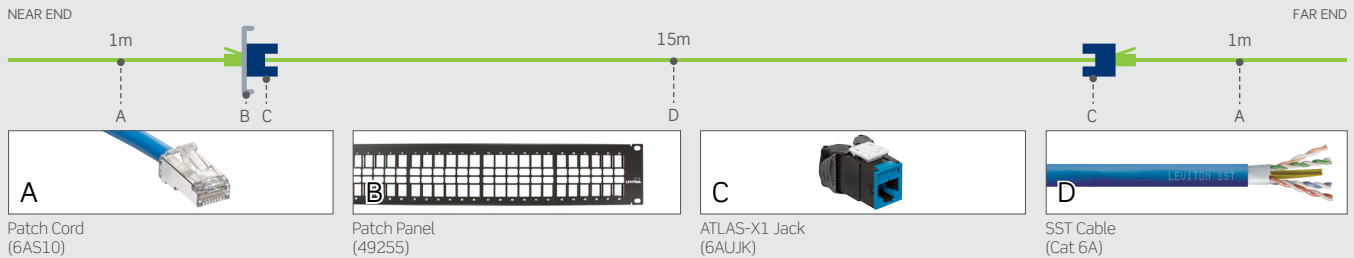
Typical 4-Connector Channel Topology – Standard Patch Cords



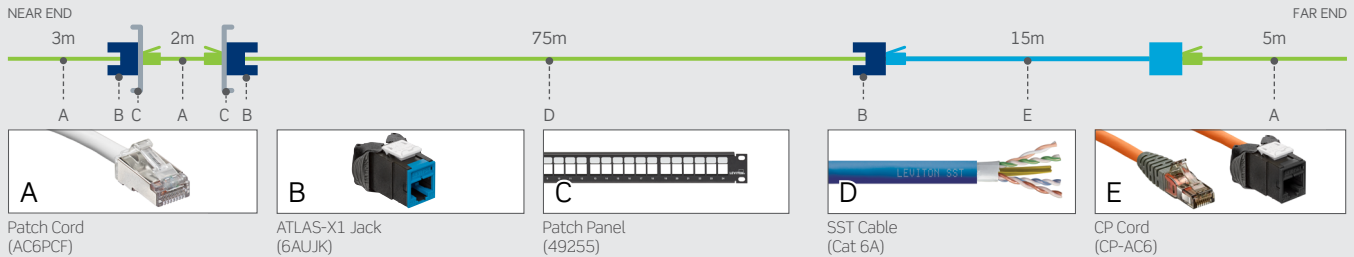
Typical 4-Connector Channel Topology – High Flex Patch Cords



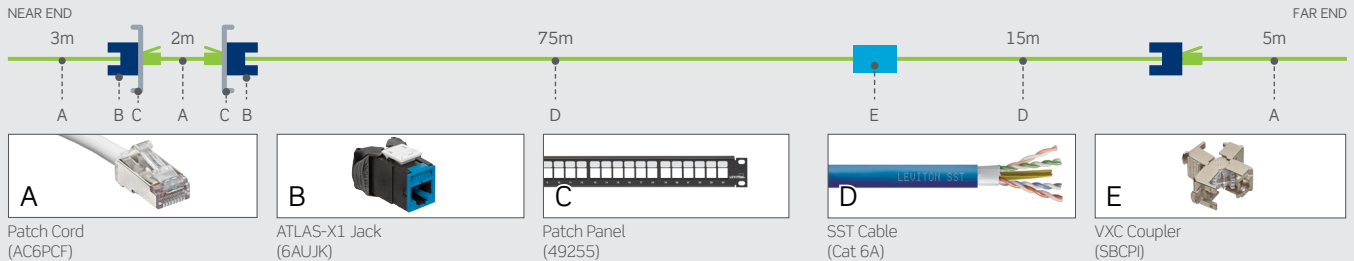
Typical 2-Connector Channel Topology



Typical European 4-Connector Channel Topology – CP Cord



Typical European 4-Connector Channel Topology – VXC Coupler



Note: Channels installed to support extended distance applications must have SST horizontal cable lengths that allow for a maximum of 10 m of patch cords and not exceed the maximum channel lengths shown in table 2 for the Ethernet speed and PoE power level to be supported.

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