



## CAT 6A UTP MILLENNIUM™ SYSTEM

A **high-density** Cat 6A structured cabling system that features EXTREME jacks and RDT cable. It is ideal for **enterprise applications** that require a compact design and 10GBASE-T performance, as well as for system upgrades in existing pathways or when pathway space is limited. MILLENNIUM Systems are global solutions available everywhere.

### RECOMMENDED FOR:

Sustainable enterprise systems that require reduced transportation emissions and material usage

Upgrading Cat 5e and Cat 6 cabling in existing pathways or where pathway capacity is constrained

Network applications for commercial, healthcare, education, government, warehousing, and transportation hubs environment

Applications requiring PoE support up to 100 watts

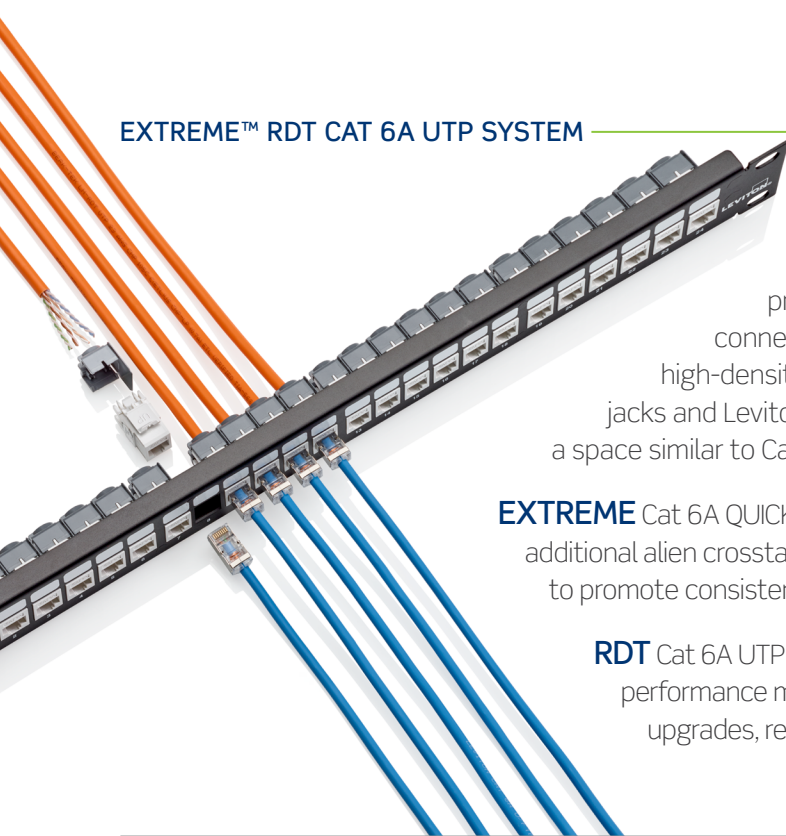
IP-based security and building automation systems utilizing UTP cabling

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

Intelligent building applications optimizing environmental sustainability

Global enterprises that want dependable 6A system performance everywhere

## EXTREME™ RDT CAT 6A UTP SYSTEM



### EXTREME RDT MILLENNIUM Cat 6A systems

provide reliable 10Gbps channel performance with EXTREME connectivity for value-engineered solutions and are well suited for high-density enterprise applications. They include the reliable EXTREME jacks and Leviton RDT cables delivering quick and easy 10Gbps installation in a space similar to Cat 6 systems.

**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.

**RDT** Cat 6A UTP cables feature a reduced outside diameter and deliver AXT performance margins above the Cat 6A standard, making them ideal for cable upgrades, retrofit applications, or areas where space is at a premium.

## Use Cases

### Enterprise Networks

A reliable foundation for business network applications requiring high throughput and support for wireless access points.

### Global Deployments

With availability in all global fire requirements, universal electrical performance, and common installation procedures, this system enables a single specification across all territories globally.

### High Density Applications

A high density system with the ability to provide more connection points for smart building devices and applications without the need to increase pathway size.

### PoE Up to 100 Watts

The growing range of PoE enabled devices can have varying power and bandwidth requirements, so it's important to have the right cabling infrastructure to support these 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.

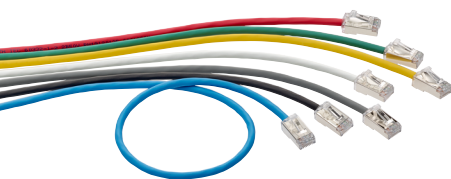


### Sustainably Smart Packaging

Multiple product packaging options that are 100% recyclable with 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](http://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.

- Meets ISO/IEC 11801-1 Class E<sub>A</sub> and ANSI/TIA-568.2-D Cat 6A requirements for channel and permanent link requirements to support IEEE 10GBASE-T networks
- Cost effective Cat 6A system with AXT margins
- 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)

### Guaranteed\* System Performance

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

\* Values represent guaranteed margins to ANSI/TIA-568.2-D standard at 20 °C (68 °F) ambient temperature. All parameters comply with ANSI/TIA-568.2-D Cat 6A and ISO/IEC 11801-1 Class E<sub>A</sub> requirements across the entire frequency range. All values represent worst-case margins for 17 to 100 meters (56 to 328 feet) channel configurations (or 17 to 93 meter (56 to 305 feet) 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 and third-party test report. Contact your Leviton technical representative for more information on alternative components and channel configurations. Details at [Leviton.com/NS/Warranty](http://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 topologies on page 7 will support the applications listed in Table 1 at the indicated distances in a 2- to 4-connector channel.<sup>1,4</sup>

### 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 (328 feet), the configurations and products in the topologies on page 7 will support the applications listed in Table 1 at the indicated distances in a 2- to 4-connector channel.<sup>2,3,4</sup>

Table 1

	IEEE 802.3 PoE			
	Type 1 (15.4 W)	Type 2 (30 W)	Type 3 (60 W)	Type 4 (90 W)
10BASE-T	For performance data, contact your local sales person. <a href="http://Leviton.com/ns/global-locations">Leviton.com/ns/global-locations</a>			
100BASE-TX				
1000BASE-T				
2.5GBASE-T				
5GBASE-T				
10GBASE-T				

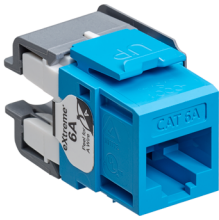
<sup>1</sup> Extended distances listed in table 1 are backed by Leviton's 25-year Applications Assurance Warranty when tested to Leviton specified test limits.  
<sup>2</sup> Extended distance performance requires Leviton modular patch panels and QUICKPORT™ jacks only and does not apply to channels constructed with punch-down panels. Actual application performance will vary depending on the device manufacturer, part number, software, model, revision, and/or configuration.  
<sup>3</sup> The use of 28 AWG patch cords in a channel over 100 meter is not allowed.  
<sup>4</sup> Channels that exceed 100 meters become application specific.  
<sup>5</sup> Any moves, adds, or changes to the channel will void the warranty.

### 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](http://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
- Re grind 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	<a href="#">6110G-R*6</a>	Global
EXTREME Cat 6A UTP QUICKPORT Jack, GREENPACK 12-Pack	<a href="#">6110G-C^6</a>	

\* 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
- Select panel configurations available in white finish
- Available in a front loading UTP QUICKPORT configuration that supports jack installation from front or rear
- 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
- High-density panels are designed to minimize carbon footprint per port
- Designed and manufactured in an ISO14001 facility

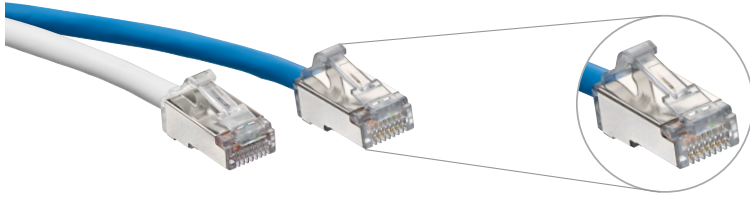
### Cat 6A 110-Style Patch Panels

- 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

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

\* Cable management bar sold separately

# EXTREME™ RDT CAT 6A UTP SYSTEM



GREENPACK bulk packs are available in Sustainably Smart packaging

## Patch Cords

### CAT 6A Small-Diameter High-Flex Patch Cords

- Available in white, yellow, gray, black, red, green, and blue
- Dual rated CM/LSZH rated jacket
- Accommodate use in high-density switches, routers, and other electronics
- Bend radius is a narrow 0.74 inches, versus 1.0 inch for typical Cat 6A patch cords
- Reduce 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 for physical port security, and color clips for additional network identification
- Supports Power over Ethernet (PoE) — see individual product specifications sheets for full PoE capabilities
- Living Building Challenge Red List Free product
- Optional GREENPACK™ Sustainably Smart Packaging eliminates single use plastics in packaging and reduces jobsite time removing cords from individual bags

### CAT 6A Standard Patch Cords

- Universal patch cord can be used in both UTP and shielded channels
- CMR or LSZH materials as standard
- Nominal OD of 6.0 mm
- Compatible with Leviton's Secure RJ system for physical port security, and color clips for additional 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
- Supports Power over Ethernet (PoE) — see individual product specifications sheets for full PoE capabilities

### VXC Coupler

- UTP or shielded installations
- Cat 6A component rated
- Compatible with 22-26 AWG cables solid and stranded
- Termination does not require any proprietary tools
- Durable zinc alloy body



Description								Typical Region	
<b>High-Flex Dual-Rated CM/LSZH</b>		<b>White</b>	<b>Blue</b>	<b>Gray</b>	<b>Yellow</b>	<b>Red</b>	<b>Green</b>	<b>Black</b>	
Cat 6A Small-Diameter High-Flex Patch Cord		<a href="#">H6A10-xxW</a>	<a href="#">H6A10-xxL</a>	<a href="#">H6A10-xxS</a>	<a href="#">H6A10-xxY</a>	<a href="#">H6A10-xxR</a>	<a href="#">H6A10-xxG</a>	<a href="#">H6A10-xxE</a>	Global
Cat 6A Small-Diameter High-Flex Patch Cord, GREENPACK ≤ 10FT (3M) 24 cords per GREENPACK; > 10FT (3M) 12 cords per GREENPACK		<a href="#">H6AP0-xxL</a> (Blue stocked. All other colors will be non-stocked options)							
<b>Standard CMR</b>		<b>White</b>	<b>Blue</b>	<b>Gray</b>	<b>Yellow</b>	<b>Red</b>	<b>Green</b>	<b>Black</b>	
Cat 6A Standard Patch Cord CMR Rated		<a href="#">6AS10-yyW</a>	<a href="#">6AS10-yyL</a>	<a href="#">6AS10-yyS</a>	<a href="#">6AS10-yyY</a>	<a href="#">6AS10-yyR</a>	<a href="#">6AS10-yyG</a>	<a href="#">6AS10-yyE</a>	United States, Canada, LATAM
<b>Standard LSZH</b>	<b>White</b>	<b>Blue</b>	<b>Gray</b>	<b>Yellow</b>	<b>Red</b>	<b>Green</b>	<b>Black</b>		
Cat 6A Standard Patch Cord LSZH Rated	<a href="#">AC6PCFyyy-3CCHB</a>	<a href="#">AC6PCFyyy-4CCHB</a>	<a href="#">AC6PCFyyy-8CCHB</a>	<a href="#">AC6PCFyyy-6CCHB</a>	<a href="#">AC6PCFyyy-1CCHB</a>	<a href="#">AC6PCFyyy-5CCHB</a>	<a href="#">AC6PCFyyy-2CCHB</a>	Europe, Middle East, APAC	
<b>CP Cords</b>	<b>Eca (Violet)</b>		<b>Dca (Blue)</b>		<b>Cca (Green)</b>		<b>B2ca (Orange)</b>		
Cat 6A CP Cord LSZH Rated	<a href="#">CP-AC6#EcaxxxV*^-A</a>		<a href="#">CP-AC6#DcaxxxB*^-A</a>		<a href="#">CP-AC6#CcaxxxG*^-A</a>		<a href="#">CP-AC6#B2caxxxO*^-A</a>		Europe, Middle East, APAC
<b>Coupler</b>									
VXC Coupler	<a href="#">SBCPI-00S</a>							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

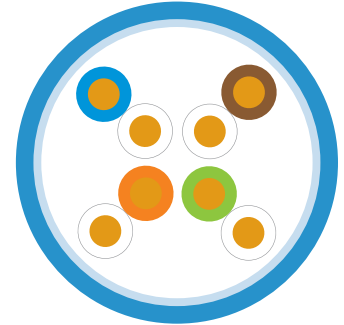
xxx = Length in meters: 2 - 50

yyy = Length in meters: 0.5 - 20

\* = Labeling: S = Standard, C = Custom

## Cable

### RDT Cat 6A UTP Cable



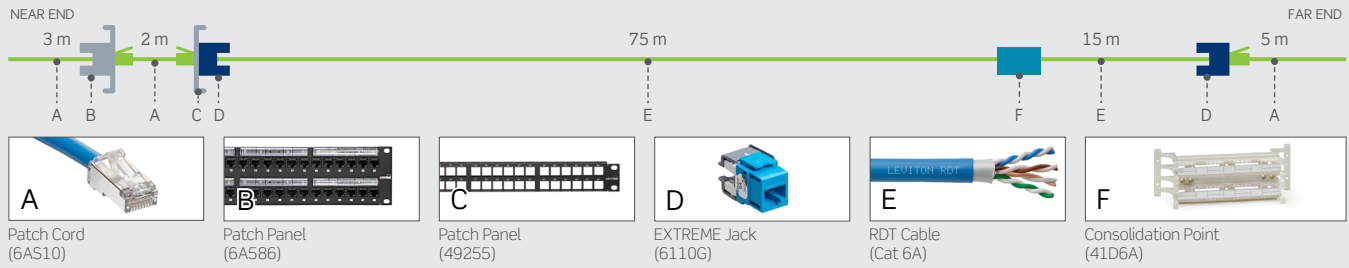
- The industry's smallest family of Cat 6A UTP cables delivering Cat 6A performance in a Cat 6 size cable
- Reduced Diameter Technology Cat 6A UTP cable with noise cancelling isolation wrap
- Exceeds Cat 6A Alien Crosstalk performance requirements
- Isolation wrap provides optimal heat management for high-PoE deployment
- Good choice for wireless access points and other systems requiring 10 Gb/s connection speeds
- Recommended for ultra-high-density applications and installations
- Third-party tested and certified
- Features a fillerless design that makes installations easier and faster
- 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
<b>Plenum (CMP)</b>			
RDT Cat 6A UTP Cable, CMP, white	<a href="#">11141651</a>	1000 ft (305 m) Reel	United States, Canada
RDT Cat 6A UTP Cable, CMP, blue	<a href="#">11141650</a>	1000 ft (305 m) Reel	
RDT Cat 6A UTP Cable, CMP, gray	<a href="#">11141959</a>	1000 ft (305 m) Reel	
RDT Cat 6A UTP Cable, CMP, white	<a href="#">11142628</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A UTP Cable, CMP, blue	<a href="#">11142454</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A UTP Cable, CMP, gray	<a href="#">11142571</a>	1000 ft (305 m) TEKPAK™ Box	
<b>RISER (CMR)</b>			
RDT Cat 6A UTP Cable, CMR, white	<a href="#">11143100</a>	1000 ft (305 m) Reel	United States, Canada
RDT Cat 6A UTP Cable, CMR, blue	<a href="#">11142398</a>	1000 ft (305 m) Reel	
RDT Cat 6A UTP Cable, CMR, gray	<a href="#">11142285</a>	1000 ft (305 m) Reel	
RDT Cat 6A UTP Cable, CMR, white	<a href="#">11142629</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A UTP Cable, CMR, blue	<a href="#">11142455</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A UTP Cable, CMR, gray	<a href="#">11142608</a>	1000 ft (305 m) TEKPAK™ Box	
<b>CPR EuroClass (B2ca, Cca, Dca, Eca)</b>			
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	<a href="#">RDT-Eca-500VT*</a>	1640 ft (500 m) Reel	Europe
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	<a href="#">RDT-Eca-B305VT</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, blue	<a href="#">RDT-Eca-500BU*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, blue	<a href="#">RDT-Eca-B305BU</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	<a href="#">RDT-Eca-500WH*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	<a href="#">RDT-Eca-B305WH</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, blue	<a href="#">RDT-Dca-500BU*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, blue	<a href="#">RDT-Dca-B305BU</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, white	<a href="#">RDT-Dca-500WH*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Dca, white	<a href="#">RDT-Dca-B305WH</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Cca, green	<a href="#">RDT-Cca-500GN*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Cca, green	<a href="#">RDT-Cca-B305GN</a>	1000 ft (305 m) TEKPAK™ Box	
<b>Low Smoke Halogen Free (LSHF/LSZH)</b>			
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	<a href="#">RDT-Eca-500VT*</a>	1640 ft (500 m) Reel	Europe, Middle East, LATAM, APAC
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, violet	<a href="#">RDT-Eca-B305VT</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, blue	<a href="#">RDT-Eca-500BU*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, blue	<a href="#">RDT-Eca-B305BU</a>	1000 ft (305 m) TEKPAK™ Box	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	<a href="#">RDT-Eca-500WH*</a>	1640 ft (500 m) Reel	
RDT Cat 6A U/UTP Cable, LSHF/LSZH EuroClass Eca, white	<a href="#">RDT-Eca-B305WH</a>	1000 ft (305 m) TEKPAK™ Box	

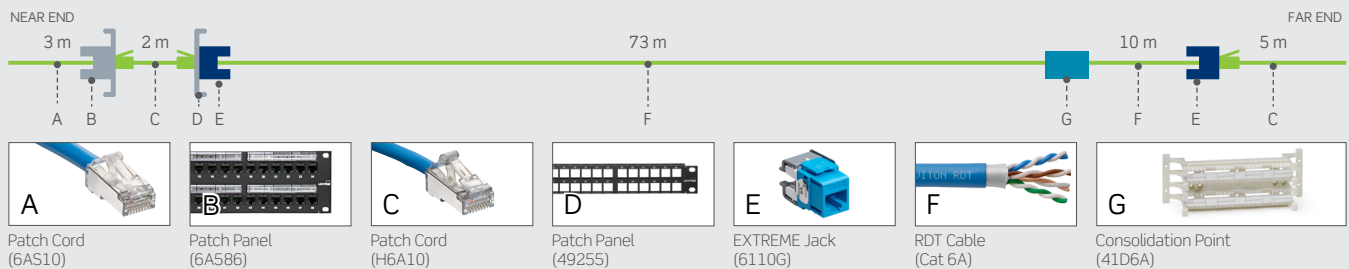
Also available in a range of non-standard colors. \* Also available in 1000ft (305m) reels

## System Topologies

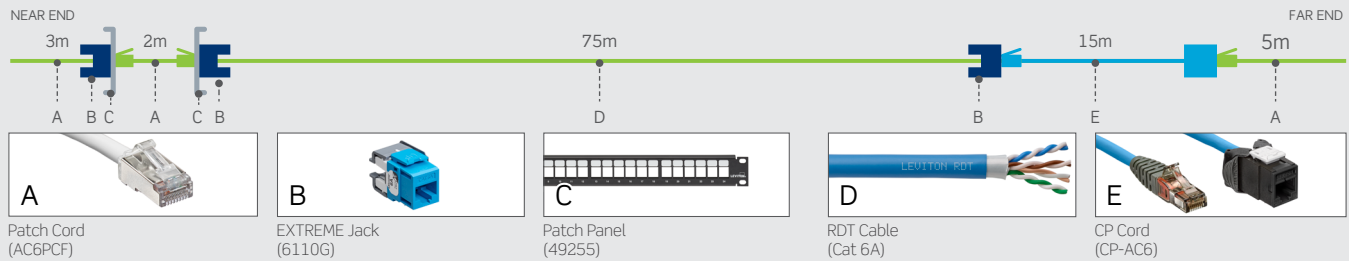
### Typical 4-Connector Channel Topology – Standard Patch Cords



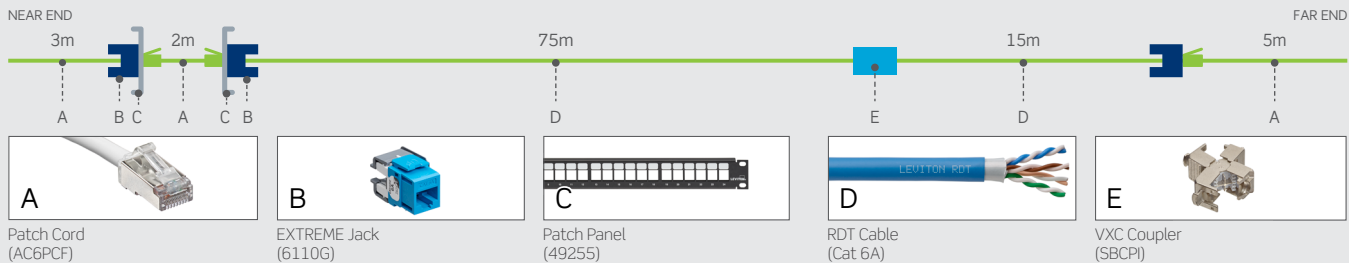
### Typical 4-Connector Channel Topology – High Flex Patch Cords



### Typical European 4-Connector Channel Topology – CP Cord



### Typical European 4-Connector Channel Topology – VXC Coupler



Released August 2024 H24 8780-GL-ENv3

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