



High-Flex Patch Cords Improve

DENSITY | **BEND RADIUS** | **NETWORK MANAGEABILITY**

Flexible, small-diameter 28 AWG copper patch cords can offer big advantages in commercial networks.

As data center managers work to maintain and increase network performance, they are also faced with the need to reduce space requirements and energy costs. Similarly, enterprise IT directors need to balance their increased bandwidth requirements with day-to-day needs like reducing clutter, accommodating tighter spaces, and maintaining network consistency across multiple locations. Flexible 28 AWG patch cords can address these needs. However, they do come with some design considerations, and these need to be understood by consultants, design professionals, and building owners in order to maintain the best network performance.

Small-diameter 28 AWG patch cords have been on the market for years, commonly used for data center interconnects in both end-of-row (EoR) and top-of-rack (ToR) installations. They have also been used to alleviate congestion and improve airflow in high-density areas such as telecom rooms and equipment rooms in hospitals, hotels, government, data centers, and other large facilities. And since these cords support PoE, they can also be used to power WAPs, IP cameras, VoIP devices, and AV equipment in addition to carrying data to these end devices.

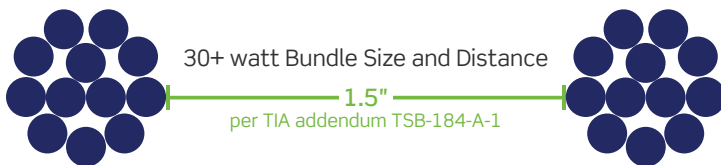
28 AWG patch cords are recognized as a category-rated solution through ANSI/TIA-568.2-D. Previously, TIA required category-rated patch cords have a 22- to 24-gauge construction, as smaller 28 AWG cords exhibit higher insertion loss, requiring the overall length of a channel be reduced to less than the industry standard 100 meters for category-rated cabling. However, due to the growing appeal of 28 AWG cords, they were recognized as a category-rated solution in June 2018. The addition of 28 AWG by TIA only applies to patch cords; horizontal cable still must be 22 to 24 AWG.



Considerations With 28 AWG Cords

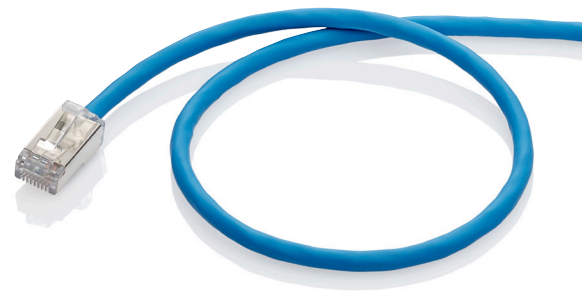
Under the TIA standards, using 28 AWG patch cords reduces the overall channel length from 100 meters to 96 meters, with a maximum of 6 meters of patch cords and a 90-meter permanent link. If greater lengths are required for the patch cords (up to 10 meters max), you must reduce the length of the permanent link to shorter than 90 meters.

Also, when using 28 AWG cords for remote powering, there are additional bundling requirements to ensure adequate heat dissipation as outlined in the TIA addendum TSB-184-A-1 (February 2019). The addendum provides limits on cables per bundle based on current per pair and ambient temperature, and limits bundles to 12 cables when delivering 30 watts and higher, with bundles spaced 1.5 inches apart. There are no bundle size limitations when 28 AWG cords are not being used to distribute power.



Leviton Cat 6A High-Flex Patch Cords

Leviton introduced high-flex small-diameter Cat 5e and Cat 6 patch cords back in 2010, and since then they have been adopted for use in enterprise and data center applications. Our **new Cat 6A High-Flex Patch Cords** are an effective solution for areas with limited capacity for cable management, limited cabinet space, or minimal clearance for cable bend radius. The cords allow better airflow to active equipment in panels and racks by reducing the size of cable bundles.



- **LESS SPACE REQUIRED FOR BEND RADIUS**

The low-profile plug and boot reduces the amount of space required in applications with limited depth such as wireless access points (WAPs), back boxes, and furniture plates.

- **BETTER AIRFLOW TO IMPROVE PERFORMANCE AND REDUCE COOLING COSTS**

The small outside diameter of 0.185" (4.7mm) reduces cable bulk in cable managers, pathways, racks and cabinets. This increases airflow which helps reduce cooling costs.

- **AVAILABILITY AROUND THE WORLD FOR CONSISTENT NETWORKS IN MULTIPLE REGIONS**

Leviton Cat 6A High-Flex Patch cords are dual-rated for Low Smoke Zero Halogen and CM applications, making them a single solution in all regions around the world.

- **VERSATILE FOR DIFFERENT INSTALLATION TYPES**

The metal wrap in the patch cord plug makes it appropriate for both shielded and UTP channels.

- **FAST AVAILABILITY OF A WIDE RANGE OF LENGTHS AND COLORS**

New Leviton Cat 6A High-Flex Patch Cords are available in 7 colors, with stocked lengths from 1-20 feet for immediate shipment, and quick-turn make to order (MTO) lengths up to 50 feet.

For more information, please visit Leviton.com/6AHighFlex