28AWG REDUCED DIAMETER C6A/10G CHANNEL **MINI-PATCH CORDS**

The RDC610 series of modular patch cords offer the reduced diameter of four pairs of 28AWG conductors, providing CAT6A channel performance for high density applications, when looking to reduce congestion or improve airflow through cabling pathways. Common applications include high-density cabling areas such as data centers, end-of-row (EoR) and top-of-rack (ToR) installations or areas such as telecom rooms and equipment rooms.

BENEFITS

- **Each cord is 100% factory tested:** Ensures every cord shipped support Category 6a channel specifications.
- **Reduced cable diameter:** Tighter bend radiuses & occupy less cable management space supporting more airflow
- **Premium plug designed for reduced OD 28AWG patch cable:** Protects performance through the plug termination
- **Snagless plug design:** Protects plugs when routing through cable managers or pathways.
- **Premium 28AWG conductor cordage:** Reliable performance and durable cord life.
- **Backwards compatible to Category 6, and 5e:** Supports lower category installations and components.
- **Improved cable flexibility:** Supports simple routing and cable management

DESCRIPTION	PART NUMBER
Reduced Diameter Cords	**COLOR**
RDC CORD, 28AWG C6A/10G 1FT	RDC61001-XX
RDC CORD, 28AWG C6A/10G 2FT	RDC61002-XX
RDC CORD, 28AWG C6A/10G 3FT	RDC61003-XX
RDC CORD, 28AWG C6A/10G 4FT	RDC61004-XX
RDC CORD, 28AWG C6A/10G 5FT	RDC61005-XX
RDC CORD, 28AWG C6A/10G 6FT	RDC61006-XX
RDC CORD, 28AWG C6A/10G 7FT	RDC61007-XX
RDC CORD, 28AWG C6A/10G 8FT	RDC61008-XX
RDC CORD, 28AWG C6A/10G 9FT	RDC61009-XX
RDC CORD, 28AWG C6A/10G 10FT	RDC61010-XX
RDC CORD, 28AWG C6A/10G 15FT	RDC61015-XX
RDC CORD, 28AWG C6A/10G 20FT	RDC61020-XX
RDC CORD, 28AWG C6A/10G 25FT	RDC61025-XX

COLOR KEY

06 - Blue
09 - White
05 - Green
02 - Red
00 - Black
04 - Yellow
08 - Gray

Note: Replace the "XX" in part number with prefered color code above.

TECHNICAL INFORMATION

- 4 pair 28AWG stranded UTP, CMR rated
- Termination, 8Position modular plug
- Cat6A channel Performance Rated
- Min Bend Radius: .77"
- Applications: IEEE 802.3 10GBaseT (10Gig Ethernet), 1000BaseT (Gigabit Ethernet), 1000BaseTX

CONSTRUCTION SPECIFICATION INFORMATION

- Cable, 28AWG tinned copper stranded conductors, HDPE insulation, Aluminum polyester foil barrier, PVC jacket
- Cable Diameter (US): 0.191 in (Metric): 4.85 mm
- Eight position plug assembly designed for smaller 28AWG conductors, Polycarbonate plug housing and conductor centering sled, with 50 Micro inch selective gold plating over nickel phosphor bronze contacts, meet ANSI/TIA/EIA-1096-A and IEC 60603-7

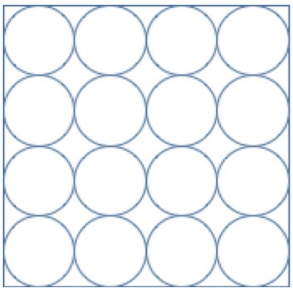
BUY AMERICAN ACT COMPLIANCE

- Buy American Act Status: Trade Agreement Act Compliant

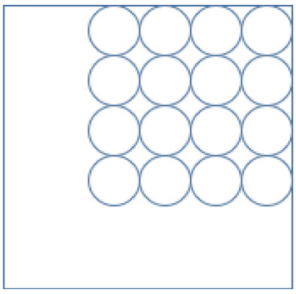
FEATURES

- Ortronics® reduced diameter (RDC610) patch cords provide a smaller cable diameter of .191" while supporting CAT6A channel applications up to and including 10 Gigabit Ethernet.
- RDC610 cords occupy less than 66% of the space required for full size MC6A cords, allowing over 1.5 times as many cords into the same space as MC6A cords.
- Reduced size can help retrofitting existing rack or cabinet installations that are at capacity.
- RDC610 cords help when a large volume of cords need to introduced into high density scenarios while providing more space for future Moves Adds Changes (MAC).
- Smaller cord size allows more viewable space on patch panels assisting accurate port identification.
- RDC610 cords are factory tested to all ANSI/TIA-568-C.2 CAT6A electrical performance requirements.
- Stock lengths, 3',5',7',9',10' and 15', with made to order cord lengths up to 25' for design flexibility.
- Available in 7 colors.
- Support IEEE 802.3af and IEEE 802.3at for PoE applications (reference maximum bundle sizes listed later).
- ROHS compliant

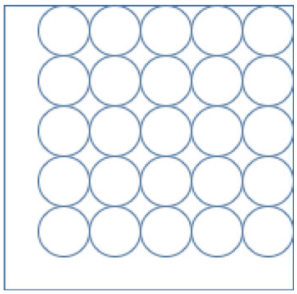
Ortronics® reduced diameter (RDC) patch cord for CAT6A applications provide a smaller cable diameter of .191" while still able to support applications up to and including 10 Gigabit Ethernet. These reduced diameter cords occupy less than 66% of the space required for MC6A cords, easily allowing over 1.5 times as many cords into less space than what is required for MC6A cords.



16 MC6A cords

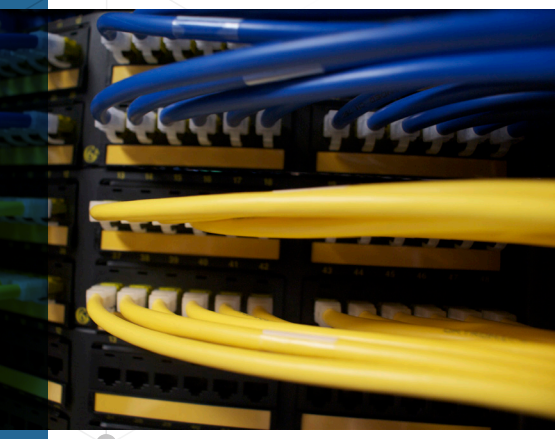


16 RDC610 cords



25 RDC610 cords

Because of the smaller cable O.D. of RDC 28AWG patch cords these cords are very flexible and considered easier to manage. RDC cords also have much smaller bend radius limitation of just over .77" for bend radius. Tight bend radius can help when cable routing is restrictive or in very high density applications. These features can also make these cords easier to handle for MAC routing dressing and management. Smaller cord size has also been associated with better airflow.



28AWG small OD offer advantages when faced with cord density and air low challenges but they do come with limitations which should be recognized and understood before including these cords into an project design or installation.

These cords cannot be called CAT6A component compliant because they use 28AWG cordage which is not within the 22 to 26 AWG conductor size for patch cable specified in ANSI/TIA-568-C.2.

CAT6A channels that include these cords will pass CAT6A field testing. But because of the resulting higher attenuation of 28AWG, a reduction to the 100 meter channel length, identified in the cabling standards, is necessary when these cords are used. This is called de-rating the channel length.

PERFORMANCE GUIDELINES

Below are two sets of guidelines that will allow you to design and install horizontal cabling using 28AWG patch cords and still pass all CAT6A channel field test performance requirements.

Supported channel lengths/configurations that include these cords are:

Guideline 1

96 meter total channel length with a 90 meter permanent link and up to 6 meters of RDC cords.

Guideline 2

93 meter total channel length with up to 10 meters of RDC patch cords included in the channel. (83 meters of horizontal cable for the permanent link plus 10 meters patch)

Both of the above channel length limitations will ensure passing insertion loss which is the only concern raised by these cords in the only the longest of channels.

The above channel guidelines also support POE (IEEE 802.3af) and POE+ (IEEE 802.3at) Guidelines identified in TSB 184 ("Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling" technical service bulletin published by TIA) recommends a maximum temperature increase of 15° for a bundle of cables operating at full PoE or PoE+ power. To address this concern with 28AWG cords, bundle sizes should be limited if cords are expecting to support POE.

A guideline you can use in this area would be:

A maximum of (48) cords in a bound bundle for present applications for POE and POE+.

These guidelines do not apply to unbound cords contained in a pathway, vertical or horizontal when following normal fill guidelines.