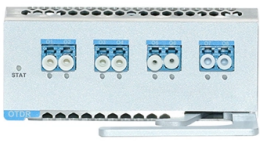
How to apply quota for bundling optical cables



Overview

With virtually no limit on the number of fibers, all of our fiber optic bundles can be configured as spot, line, grid, hex, or custom shape.

Key Takeaways

Applying a quota for bundling optical cables involves defining the maximum number of fibers per bundle, arranging them carefully, and following proper routing and protection practices to ensure performance and safety.Define the Quota and Bundle Size

Start by determining the maximum number of optical fibers allowed per bundle based on your system requirements, cable tray capacity, or custom application needs. This quota ensures that fibers are not overcrowded, which can cause bending stress, signal loss, or mechanical damage. For custom bundles, quotas can range from a few fibers to several hundred, depending on the application and fiber type .

Organize and Arrange Fibers
• Grouping: Divide fibers into manageable groups according to the quota. For example, if a storage device has 20 fibers and the quota is 10 per bundle, create two bundles of 10 fibers each .

• Patterning: Fibers can be arranged in hexagonal, circular, or rectangular patterns for maximum density, or randomly for flexibility .

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• Protection: Use corrugated pipes or flexible tubing to protect fibers, and wrap sharp ends with adhesive tape to prevent damage during routing .
Routing and Securing Bundles
• Route bundles along cable trays, posts, or brackets inside cabinets or equipment rooms .

• Avoid excessive bending or pulling; maintain the minimum bend radius specified for the fiber type.

• Separate bundles to prevent interference or mechanical stress, and evenly distribute them across trays if multiple bundles are routed to the same device .
Labeling and Documentation
• Clearly label each bundle with its fiber count, destination, and type to maintain organization and simplify maintenance .

• Document the bundle arrangement and routing path to ensure compliance with the quota and facilitate future upgrades or troubleshooting.
Custom Bundles for Specialized Applications

For applications requiring precise fiber arrangements, such as spectroscopy or laser systems, you can create custom bundles with specific fiber types, diameters, numerical apertures, and connector types. These bundles can be rigid or flexible, and the number of fibers per bundle can be strictly controlled to meet the quota . By following these steps, you can apply a quota effectively, ensuring optical fibers are bundled safely, routed efficiently, and maintained for optimal performance.

Article Content

Industrial fiber optic bundle manufacturer, fiber optic bundle

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