

Price of energy-efficient bundled pigtails for data centers in the ASEAN ten countries

Article Overview

Energy-efficient optical fiber pigtails for data centers in ASEAN typically range from USD 2.50 to 9.00 per unit, depending on connector type, fiber grade, and bundle configuration.

Pricing Overview

In the Asia-Pacific region, standard single-mode pigtails with SC/UPC connectors and 1.5-meter tails trade at USD 0.50-1.50 per unit, while premium variants--including LC/APC connectors, bend-insensitive fibers (G.657.A2), and factory-polished end-face inspection--command USD 2.50-5.00 each . For multimode pigtails used in data-center racks with MPO or duplex LC connectors, prices are typically 40-80% higher than single-mode units due to tighter insertion-loss tolerances and more complex ferrule alignment . Bundled solutions for high-density racks, optimized for energy efficiency, can push the effective per-unit cost to USD 5-9, depending on length, connector type, and certification for low insertion loss .

Energy-Efficient Features

Energy-efficient pigtails reduce power consumption in data centers by minimizing signal loss and enabling longer transmission distances with lower optical power, which reduces the load on transceivers and cooling systems . Features that enhance energy efficiency include:

- o Bend-insensitive fibers (G.657.A2) to reduce signal degradation in dense racks
- o Factory-polished connectors with end-face certification to minimize insertion loss
- o Pre-terminated bundles to reduce field termination time and operational energy use

ASEAN Market Context

The ASEAN data center market is rapidly expanding, with energy use per rack projected to rise from 8 kW in 2021 to 50 kW by 2027 . While there are no uniform regional standards for data center energy efficiency, adopting international best practices and green power sources (solar, wind) is recommended to reduce operational costs . Import dependence for high-grade pigtails is significant in several Southeast Asian countries, which may affect pricing and lead times .

Summary

For energy-efficient bundled pigtails in ASEAN data centers:

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- o Standard single-mode: USD 0.50-1.50 per unit
- o Premium single-mode (LC/APC, bend-insensitive, certified): USD 2.50-5.00 per unit
- o Multimode bundles for high-speed data centers: USD 5-9 per unit
- o Prices vary by connector type, fiber grade, bundle length, and certification
- o Energy-efficient features reduce operational power consumption and support sustainable data center operations. These estimates provide a practical range for procurement planning in the ASEAN region, considering both cost and energy efficiency requirements.

As the world becomes increasingly digitalised, data centres and data transmission networks are emerging as an important source of

7. High Density and Space Efficiency: Space is a premium in data centers, and efficient cable management is essential to maximize

Explore 2026 data centre costs across Asia Pacific, including key markets, power availability, AI, and investment trends.

The AEO8 highlights the need for enhanced energy efficiency, greater electrification, and

CommScope engineers and manufactures a complete line of high quality fiber pigtails for data centers

Nearly 100 GW of new data centers will be added between 2026 and 2030,

Chapter 3 summarises the critical review of data centre energy estimates from a range of available sources, including government

How much energy do data centers consume? High energy consumption continues to be an issue for data centers

ASEAN's data centre industry needs a wider range of corporate renewables procurement options and stronger policy support to

Energy demand from AI What is a data centre? Artificial intelligence (AI) model training and deployment occur mainly in data centres.

Southeast Asia Energy Outlook 2024 - Analysis and key findings. A report by the International Energy Agency.



Price of energy-efficient bundled pigtails for data centers in the ASEAN ten countries

Southeast Asian countries are already moving in this direction. Singapore's 2024 Green data center Roadmap sets

This guide provides an overview of best practices for energy-efficient data center design which spans the categories of information

By leveraging these energy-efficient fiber solutions, data centers can significantly reduce their carbon footprint, lower

Based on extensive 2020 survey data by region, Europe has the most energy efficient data centers, and the Middle

Multimode pigtails with MPO or duplex LC connectors for data-center patching are typically priced 40-80% higher than

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