

# Currently the highest fiber optic communication rate



## Overview

An international joint research team led by the Photonic Network Laboratory of the National Institute of Information and Communications Technology (NICT, President: TOKUDA Hideyuki, Ph. ), demonstrated a record-breaking aggregate optical transmission bandwidth of 37. By broadening fiber's communication bandwidth, the team has produced data rates four times as fast as existing commercial systems—and 33 percent better than the previous. Researchers have sent data at a record rate of 402 terabits per second using commercially available optical fiber. 6 THz to enable a new data-rate. Why it matters: A technological leap in fiber optics has shattered previous limitations, achieving what experts once considered impossible: transmitting data at 1. The record 402 Tb/s transmission rate through commercially available fibre has been achieved by expanding communication bandwidth, utilizing multiple. Data transmission of 1.



## Article Content

Fiber Optic Cable Speeds: Everything You Need to Know

Discover how fiber optic cable speeds can revolutionize your internet experience. Explore the future of connectivity and get ready to zoom into the fast

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Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Submarine communications cable

7 - Petroleum jelly 8 - Optical fibers Submarine cables are laid using special cable layer ships, such as the modern René Descartes , operated by Orange Marine.

Researchers Shatter Fiber-Optic Data Transfer Speed

Credit: Pixabay. Scientists at Aston University in the U.K. reached a new milestone in fiber-optic data transfer, achieving speeds of 402 terabits per

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How Fast Can Fiber Optics Move Our Data?

In 2024, researchers achieved an extraordinary milestone - a record-breaking data transmission rate of 402 terabits per second (Tbps) using

World record set for fiber optic speed transfer at 22.9

That's more than 1,000 times the data rate available through currently deployed optical fiber communication systems, the researchers explained.

World Record Optical Fiber Transmission Capacity Doubles to 22.9 ...

Researchers from the National Institute of Information and Communications Technology (NICT, President: TOKUDA Hideyuki, Ph.D.), in collaboration with the Eindhoven University of

Corning | Materials Science Technology and Innovation

Corning Incorporated is a global-leading innovator in materials science, with 170 years of life-changing inventions and category-defining products.

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We invent a new type of optical fiber, Non-Zero Dispersion Fiber (NZDF), that becomes widely deployed in intercontinental and long-haul terrestrial networks.

World record: New type of fiber optic cable achieves

Data transmission of 1.02 petabits per second over a distance of 1,808 kilometers: this is the new world record recently set by an international research

Fiber-Optic Cable Bandwidth: Complete Guide

Explore how fiber optic cable bandwidth can transform your network's speed and efficiency, offering superior performance over traditional cables.

World record transmission capacity and frequency bandwidth

An international joint research group led by the Photonic Network Laboratory of the National Institute of Information and Communications Technology (NICT) has successfully conducted

"World record" for data transmission speed | ScienceDaily

Researchers have sent data at a record rate of 402 terabits per second using commercially available optical fiber. This beats their previous record, announced in March 2024, of 301 terabits or ...

Fiber Optic Data Rates Reach New Record Speed

By broadening fiber's communication bandwidth, the team has produced data rates four times as fast as existing commercial systems—and 33

World record-shattering 402 TB data sent in a second

Researchers set a new record with 37.6 THz bandwidth and 402 Tb/s data rate in standard optical fiber, enhancing future telecom capacity.

World Record Achieved in Transmission Capacity and

Achieved using a newly developed standard 19-core optical fiber, equivalent to 19 standard fibers, low loss across multiple wavelength bands, and

SEL-311L Line Current Differential Protection and Automation System

Direct Fiber or Multiplexed Communications— Provide reliability and security with one or two differential communications channels. Select from ITU-T G.703 or EIA-422 electronic interfaces, IEEE C37.94,

Best Fiber Internet Providers for 2026

Fiber internet is easily the fastest and most reliable connection type. Compare fiber internet providers and check availability of plans in your area.

Scientists achieve record-breaking 402 Tbps data

Scientists break data transmission rate world record for a second time this year — boosting fiber-optic speeds by 25% to a staggering 402 Tbps.

## 14 Fiber Optics Statistics, Facts and History in 2026

If you're curious about where the fiber optics industry stands in 2023, take a look at our list of 17 fiber optics statistics and facts.

### Record fibre transmission rate

The record 402 Tb/s transmission rate through commercially available fibre has been achieved by expanding communication bandwidth, utilizing multiple optical

### World Record 402 Tb/s Transmission in a Standard

An international joint research team led by the Photonic Network Laboratory of the National Institute of Information and Communications

Ultra-fast fiber sets global speed record: 1.02 petabits

Why it matters: A technological leap in fiber optics has shattered previous limitations, achieving what experts once considered impossible:

## Contact Us

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