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**Title:**

**Body:**

Today, it is common to see several domestic, commercial, and industrial applications utilizing fiber optic networks for their daily functioning. Although fiber optic networks are integral to commercial and domestic uses, the industrial segment has benefited from fiber optic technology. It has tremendously helped in automation across various rigid industry segments. The industries depend on various wired and wireless fiber optic networks to boost their productivity and ROI. The telecommunication industry was one of the earliest adopters of this technology. However, realizing the benefits of fiber optic technology, this technology is now utilized in various industrial applications. Almost every industry is benefited by integrating fiber optic networks. However, some of the industrial applications of fiber optic cables and related devices truly stand out. This post lists out different industries that utilize fiber optic technology and discusses its typical benefits for the said industry.

**9 Industries That Have Benefited From Fiber Optic Technology**

Although several industries integrate fiber optic cables into the networks to reap the benefits of fiber optic technology, the following mentioned industries are benefited from it the most.

1. **Computer Networking:** Traditionally, computer networking was highly dependent on copper cables. The transmission of data from one computer to another in one topology takes place via the cables/buses. Ever since the introduction of fiber optic cables, copper cables are being replaced by fiber optic cables. This has helped curbed delays in signal transmission, data loss, etc. Integration of fiber optic cables enhances the speed of data transmission between the computers. By using fiber optic technology, the computers can be networked over a wireless network by using virtual LAN (VLAN).
2. **Communication Industry:** The communication industry demands long-distance, secured, and efficient data transmission. The data can be in the form of analog, or digital signals, but the fiber optic cables transmit it in the form of optical pulses. Fiber optic cables enable the transmission of data like audio signals, video signals, etc over a long distance. The communication industry uses fiber optic cables to transmit data via sea-ways, underground, or wireless media.
3. **Security and Surveillance Industry:** Security and surveillance networks utilize fiber cables that are connected to PoE cameras, IP surveillance cameras, and so on. These cables help reduce delays and enable quick and efficient remote monitoring. In addition to this, the security of these cables cannot be easily jeopardized. They cannot be easily tampered with, which has helped improve the efficiency of surveillance activities.
4. **Automobile Industry:** The automobile industry uses fiber optic networks for personalized direction control, automated driving, smart parking features, etc. Fiber optic integrated dashboards and automated parking features have transformed the driving experiences. Owing to the increasing dependency, fiber optics in automobile industry has been one of the key areas of interest for automobile manufacturers and researchers for a while now.
5. **Manufacturing Industry:** The manufacturing industry relies on fiber optic cables and networks for factory automation. Factory automation is done over [***fiber optic internet***](https://www.versitron.com/blog/know-the-business-benefits-of-fiber-internet-connectivity) or wired network which allows the operator to remotely control, configure and monitor the activities in the factory. These activities may include automation of assembly, packaging, material handling, and inventory management, etc. This has enhanced the efficiency of manufacturing industries and reduced the chances of accidents, human hazards, etc.
6. **Medical Industry:** Medical industry utilizes fiber optics for surgery, internal body inspection, and dentistry. Fiber optic medical devices are widely used for internal inspection such as endoscopy and support laser surgeries for internal organs. The medical actions related to dentistry have benefited from fiber integrated devices.
7. **Lighting Industry:** Lighting fixtures utilize fiber optics as it transmits light pulses. By using fiber optic for lighting fixtures, the durability and flexibility of lighting fixtures have improved over the years.
8. **Military and Defense Industry:** Military and defense require rugged and durable communication systems. Since fiber optic is immune to electromagnetic signals, radio frequencies, third-party intrusion, and noise. Thus, fiber optic cables make an ideal transmission media for confidential communication in defense and military operations.
9. **Aircraft and Aerospace Industry:** The aircraft and aerospace industry requires the loss-free transmission of data to operate automated systems. This benefit is offered by fiber optic cables. Also, fiber optic cables are immune to pressure and temperature fluctuations, which makes these cables ideal for this industry.

Although the scope of application for fiber optic technology does not limit here, these industries utilize it the most. However, to reap such benefits, high-quality fiber optic cables and related devices such as fiber modems, [***media converters***](https://www.versitron.com/category/fiber-optic-media-converters), fiber optic connectors, etc should be acquired from a trusted supplier like VERSITRON. The company offers high-quality, MSA-compliant fiber optic devices and solutions.