

Gigabit Ethernet Test Equipment - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Gigabit Ethernet Test Equipment Market is expected to register a CAGR of 6.45% during the forecast period.

Key Highlights

- Gigabit Ethernet (GbE) test equipment allows enterprises, data centers, and service providers to obtain high network performance by solving and testing network connectivity problems. This Ethernet is for wide area network (WAN) and local area network (LAN) connectivity. It is used to simplify complex network management and bring down the operational expenses associated with the infrastructure.
- The increasing need for ethernet manufacturing industries and the adoption of cloud services and Big Data fuel the growth of the market. Single-pair Ethernet (SPE) is one of the most recent Ethernet adaptations, driven by the development of industrial IoT (IIoT) and Industry 4.0, as well as many automotive applications.
- With the increasing demand for mobile internet, the need for higher bandwidth is rising, owing to which telecom operators are investing rigorously in R&D. The emergence of advanced technologies, such as cloud computing, Internet of Things (IoT), and 5G, requires a robust network connection, owing to which, the use of test equipment also rises.
- One of the major challenges is a lack of technical skills. Many test methodologies need a deep understanding of signal integrity design best practices. Furthermore, many measurements need thorough calibration processes and test fixture de-embedding, which some engineers may be unfamiliar with if transitioning from lower communication speeds to nx10G serial technology.
- With the outbreak of COVID-19, the demand for cloud-based solutions has seen significant growth owing to remote working models being adopted by enterprises; however, various industries such as retail, manufacturing, BFSI, and others have seen a significant slump in their revenues during 2020. With the growing remote working model, companies are increasing investments in cloud-based analytics and assurance, edge computing, and AI-powered networking technologies, which are expected to boost the studied market.

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Gigabit Ethernet Test Equipment Market Trends

Telecommunication Segment is Expected to Hold a Significant Market Share

- The upgrades in the mobile backhaul for the imminent launch of 5G technology drive the need for robust GigE test equipment. Hence, rapid investments in the 5G technology are expected to boost market growth over the projected period. A few top communication and electronic companies have commenced their investments in 5G technology.
- The companies are also acquiring 4G and 5G bands which propel the growth of the gigabit ethernet test equipment market. For instance, In 2022, Telkom acquired 20MHz of 800MHz and 22MHz of 3500MHz for 2.1 billion. Telkom made a payment of MYR 1.1 billion. Telkom will use the newly acquired spectrum to support its strategy of building a data-led network. Telkom believes that 4G and 5G will co-exist for some time and is expanding its network based on current data traffic and readiness for 5G deployment. 93% of Telkom's data traffic is on a 4G network, and 68% of Telkom Mobile sites use fiber backhaul, giving Telkom the edge for 5G deployment
- The governments in various countries are also approving developments in the telecom sector; for instance, in May 2021, the Algerian government approved the five-year renewal of the telecoms network operating licenses of Mobilis and Djezzy. As per Agence Ecofin, the renewal of the licenses to build and operate public electronic communications networks (including cellular) was implemented via two draft decrees presented to the government on 11 May 2021, after the two companies met the requisite conditions.
- Companies are also forming partnerships to provide better services while controlling operating costs. For instance, during the start of 2021, Ooredoo Algeria deployed Nokia's cloud-native Core software to strengthen its network performance and reliability cost-effectively and strategically position itself to launch new services to meet customer needs. This deployment will further improve the digital ecosystem of the country.

Asia Pacific is Expected to Witness the Fastest Growth Rate

- The Asia Pacific is expected to witness a significant growth rate over the forecast period due to the increasing deployment of wireless networks. Additionally, the increasing population, rising number of smartphone users, mounting adoption of cloud services, and emergence of Big Data are expected to fuel the market expansion in the region.
- There has been growing adoption of technologies, such as cloud, IoT, and Big Data. For instance, the government's strong support and the private sector's substantial investments are behind the growth of China's cloud computing industry. The South Korean government-employed cloud computing technologies to enhance its e-government services by banking on the country's super-fast internet connectivity and stable LTE availability.
- Notably, the companies in China have ample opportunities, owing to the rapid growth in future investments in 5G technology. For instance, according to an American multinational investment bank and financial services company, Jefferies Group, the three Chinese mobile players, such as China Telecom, China Unicom, and China Mobile, are expected to invest about USD 180 billion in 2023 in 5G technologies.
- The upgrades in the mobile backhaul for the imminent launch of 5G technology drive the need for robust Gigabit Ethernet Test Equipment. Thus, the rapid investment in 5G technology is expected to boost the market's growth over the projected period.
- According to Ericsson, Asia Pacific is expected to be the second-fastest-growing region, with 10% of all subscriptions being 5G in 2022. Few top communication and electronic companies have started investing in 5G technology. For instance, before the pandemic, Samsung announced investing KRW 25 trillion in various domains, such as automotive, biopharmaceuticals, and technology, including 5G.

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Gigabit Ethernet Test Equipment Industry Overview

The Gigabit Ethernet Test Equipment Market is moderately competitive and consists of several major players. The market has gained a competitive edge over the past decade. However, with advancements in ethernet test equipment, many companies are increasing their market presence by securing new partnerships, thereby tapping into the new markets.

- August 2022 - Keysight partnered with Nokia to Demonstrate the First 800 Gigabit Ethernet Readiness and Interoperability Public Test. The readiness testing was carried out in June 2022 at Nokia's private SReXperts customer event in Madrid, using Keysight's AresONE 800GE Layer 1-3 800GE line rate test platform and the Nokia 7750 Service Routing platform. Nokia's FP5 network processor silicon and 800GE pluggable optics were tested and certified using the AresONE.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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