

Outdoor fiber optic cable in Sierra Leone



Overview

Metro Cables Ultra One delivers one of the most advanced and resilient connectivity infrastructures in Sierra Leone. Our network spans the national landsca.

Key Takeaways

Outdoor fiber optic cable deployment in Sierra Leone involves both aerial and terrestrial installations managed by operators like Metro Cable, Sierratel, and Leonecom, with careful planning to protect infrastructure and the environment.

Key Operators and Projects

Metro Cable S

L Ltd is a leading open-access provider delivering Fiber-to-the-Home (FTTH) services in Freetown and surrounding areas. They focus on high-speed connectivity for homes, businesses, and communities, and have implemented security and monitoring measures to protect their outdoor fiber networks from vandalism and accidental damage (Metro Cable SL Ltd). Sierratel, in partnership with Huawei Technologies, has installed approximately 72 kilometers of aerial fiber optic cable through Freetown and rural districts, including sensitive areas like the Western Peninsula National Park.

The project involved land-use and visual surveys to minimize environmental and cultural impacts, forming part of a larger Environmental and Social Impact Assessment (ESIA) study. Community engagement showed strong support, with over 95% of respondents favoring improved connectivity (Planning Green Futures). Leonecom operates the national fiber optic backbone, providing capacity transportation and connectivity services across Sierra Leone.



Their terrestrial fiber network connects operators to end users nationwide, enabling scalable bandwidth solutions and integration with ICT infrastructure in underserved areas (Leonecom).

Technical and Environmental Considerations

Outdoor fiber optic cable laying in Sierra Leone requires careful planning to avoid service disruptions. Past incidents, such as cable cuts during drainage works in Regent and unauthorized mechanical damage near the U. S.

Embassy in Freetown, have caused significant communication outages, highlighting the need for robust protection and coordination with local authorities (Africa-Press; Spy Newspaper SL). Projects often involve both aerial and underground installations, with aerial cables used in urban and rural areas for faster deployment, while underground routes are preferred in sensitive or high-traffic zones. Environmental surveys are critical when routes pass through protected areas or near historic buildings to ensure compliance with regulations and minimize ecological impact (Planning Green Futures).

Best Practices for Outdoor Fiber Deployment

Route Planning: Conduct detailed surveys to identify obstacles, sensitive areas, and optimal paths. Community Engagement: Inform and involve local communities to reduce resistance and ensure safety. Infrastructure Protection: Implement monitoring systems, physical barriers, and coordination with local authorities to prevent accidental or intentional damage.

Redundancy: Design networks with redundant paths to maintain service continuity during repairs or disruptions. Environmental Compliance: Follow ESIA recommendations to protect natural and cultural heritage along the cable route.

Conclusion

Outdoor fiber optic cable laying in Sierra Leone is a complex process involving multiple operators, careful planning, and environmental and community considerations. Companies like Metro Cable, Sierratel, and Leonecom are actively expanding the network while addressing challenges such as vandalism, accidental damage, and ecological protection. Proper planning, monitoring, and community engagement are essential to ensure reliable, high-speed connectivity across the country.

Article Content

Metro Cables

Ultra One delivers one of the most advanced and resilient connectivity infrastructures in Sierra Leone. Our network spans the national landscape and connects to global hubs, providing:

Sierra Leone Fibre Optic Cables Market (2025-2031) | Value & Forecast

6Wresearch actively monitors the Sierra Leone Fibre Optic Cables Market and publishes its comprehensive annual report, highlighting emerging trends, growth drivers, revenue analysis, and

Planning Green Futures

Sierratel has commissioned Huawei Technologies Co Ltd to install 72 kilometres of aerial fibre optic cable through the centre of Freetown and rural districts including a section through the Western

Sierra Leone Fiber Optic Cables Market (2025-2031) | Industry

Market Opportunity Assessment By Application Market Opportunity Assessment By Type Sierra Leone Fiber Optic Cables Top Companies Market Share Sierra Leone Fiber Optic Cables Competitive

(National Fibre Backbone Network)

Approx. 1,630 km underground fiber optic network borders with two neighbouring countries (Guinea & Liberia) and covers over 85% of districts, with a footprint in many chiefdoms, towns, and villages.

Western Area Fibernet and IP Communications Infrastructure

FREETOWN, Oct 10 (Reuters) - Sierra Leone secured its first fibre optic connection to the outside world on Monday with the arrival of the Africa Coast to Europe (ACE) submarine cable in the capital Freetown.

The Sierra Leone National Broadband Strategy_v5 21

The deployment of submarine fiber cable in Sierra Leone in 2009 led to an increase in Internet penetration which now stands at 46% utilization, as shown in Table 4, with broadband data supplied

Fiber Optic Network Operations & Management

We have certified professionals with extensive experience in large scale fiber projects. Proactive strategies to reduce downtime and boost performance efficiency.

About US - Ultra One

Recognizing the global shift toward open, software-driven networks, Ultra One has invested heavily in 5G Open-RAN, making us the first in Sierra Leone to deploy an open-access 5G infrastructure that

US\$ 30Mn fiber optic set to roll out in Sierra Leone

This fiber network project would lead to easy connectivity of schools, councils, hospitals, communities etcetera.” Sierra Leone Cable Limited (SALCAB) who are supervised by the Ministry of

Western Area Fibernet and IP Communications Infrastructure

Sierra Leone Cable Limited (SALCAB) is a wholly government owned Optical Fiber infrastructure company incorporated as a limited liability company in 2012, operating as a regulated wholesale

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Best B2B Platform to buy Bulk Fiber Optic Modules in Sierra Leone trusted wholesalers. Customize MOQ of Fiber Optic Modules manufacturer from Sierra Leone, deal with top Fiber Optic Modules

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Leonecom Leonecom is a neutral fiber optic operator working as a private partner with the Government of Sierra Leone to manage the country's fiber optic backbone and auxiliary infrastructure. Leonecom

About US - Ultra One

Ultra One was born from the vision of two pioneering forces—ZoodLabs and Metro Cable—coming together to redefine connectivity in Sierra Leone. Each brought a distinct strength: ZoodLabs led

Metro Cable Africa to Turn Freetown into a Smart City

Metro Cable Africa, a leading fiber optic cable company, has recently arrived in Sierra Leone with the aim of expanding internet access across the country. With over 70 percent of Sierra

Sierra Leone: construction of phase 2 of the national fiber optic ...

Huawei Technologies has launched the construction of phase 2 of Sierra Leone's fiber optic network. The site which is still at the level of civil engineering will last 2 years.

(National Fibre Backbone Network)

Leonecom is a technology company working a private partner with the government of Leone to oversee the national fiber optic backbone and ancillary infrastructure.

Metro Cable Expands Fiber Connectivity to East Freetown

Freetown, SIERRA LEONE - In a press conference held at their Wilkinson Road office on Wednesday, Metro Cable announced the extension of their fibre optic service (FTTX) to the Eastern

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