Non-GPON Fiber Deployment in Niger State: Baseline vs 2025

1. Introduction

Fiber-optic infrastructure plays a critical role in enabling broadband connectivity, digital services, and economic development. In Niger State, fiber deployment has historically focused on backbone and institutional connectivity, with gradual expansion over time. This report presents a comparative assessment of Non-GPON fiber deployment in Niger State, comparing the baseline situation with the status in 2025.

The report aims to highlight progress achieved, identify remaining infrastructure gaps, and provide insights to support future digital infrastructure planning and investment within the state.

2. Purpose of the Report

The purpose of this report is to:

- Assess the status of Non-GPON fiber infrastructure at baseline and in 2025
- Measure growth and expansion in fiber deployment across Niger State
- Support evidence-based policy formulation and infrastructure planning
- Provide a reference for public-private partnerships and investment decisions

3. Scope and Definition

3.1 Definition of Non-GPON Fiber

For the purpose of this report, Non-GPON fiber refers to fiber-optic infrastructure deployed using technologies other than Gigabit Passive Optical Network (GPON). This includes, but is not limited to:

- Point-to-Point (P2P) fiber networks
- Active Ethernet fiber networks
- Metro and long-haul backbone fiber
- Mobile network backhaul fiber
- Enterprise-dedicated and institutional fiber networks

This report does not cover GPON-based last-mile residential fiber-to-the-home (FTTH) deployments.

3.2 Geographic Scope

The scope of this report covers Niger State, including major urban centers such as Minna, Bida, Suleja, Kontagora, and surrounding local government areas.

4. Baseline Status of Non-GPON Fiber Deployment

At the baseline period, Non-GPON fiber deployment in Niger State was limited in scale and geographic coverage. Existing infrastructure was primarily concentrated in select urban areas and along major transport corridors.

Key Characteristics of the Baseline Period:

- Fiber infrastructure was largely restricted to Minna and a few strategic locations
- Deployment focused mainly on backbone connectivity and government or institutional use
- Limited inter-city fiber links within the state
- Minimal penetration into rural and semi-urban areas
- Dependence on microwave links for mobile backhaul in many locations

Overall, the baseline scenario reflected a fragmented fiber landscape with significant gaps in coverage and limited redundancy.

5. Non-GPON Fiber Deployment Status in 2025

By 2025, Niger State has recorded measurable improvements in Non-GPON fiber deployment driven by increased demand for broadband services, mobile network expansion, and digital transformation initiatives.

Key Developments by 2025:

- Expansion of fiber routes connecting major towns and administrative centers
- Improved fiber availability for mobile network backhaul
- Increased enterprise and institutional connectivity
- Gradual extension of fiber infrastructure beyond the state capital
- Better integration with regional and national fiber backbones

Despite this progress, deployment remains uneven, with rural areas still underserved.

6. Comparative Analysis: Baseline vs 2025

The table below summarizes the comparison between the baseline period and the 2025 status of Non-GPON fiber deployment in Niger State.

Indicator	Baseline	2025
Geographic coverage	Limited to few urban centers	Expanded to multiple towns and corridors
Fiber route length	Low and fragmented	Significantly increased
Inter-city connectivity	Minimal	Improved inter-city links
Primary usage	Backbone and institutional	Backbone, enterprise, mobile backhaul
Rural penetration	Very limited	Improved but still limited
Network resilience	Low redundancy	Moderate improvement

7. Key Observations

- There has been clear growth in Non-GPON fiber infrastructure between the baseline period and 2025
- Fiber deployment has expanded beyond Minna into additional urban and semi-urban areas
- Mobile network performance has benefited from improved fiber backhaul availability
- Rural and last-mile connectivity gaps remain significant
- Further coordination is required to avoid infrastructure duplication and improve coverage efficiency

8. Implications for Niger State

The expansion of Non-GPON fiber infrastructure strengthens Niger State's digital backbone and supports:

- Improved broadband and mobile network quality
- Enhanced e-government service delivery
- Growth of digital businesses and financial services
- Increased attractiveness for private sector investment

However, achieving inclusive digital development will require targeted interventions to extend fiber infrastructure to underserved and rural communities.

9. Recommendations

To sustain and accelerate progress, the following actions are recommended:

1. Encourage public-private partnerships for fiber infrastructure expansion
2. Promote infrastructure sharing among operators
3. Prioritize fiber deployment along strategic economic and transport corridors
4. Support complementary last-mile access technologies in rural areas
5. Establish a centralized fiber infrastructure database for planning and monitoring

10. Conclusion

The comparison between the baseline and 2025 demonstrates notable progress in Non-GPON fiber deployment in Niger State. While significant improvements have been achieved in backbone and enterprise connectivity, further investment and coordinated planning are required to ensure wider geographic coverage and inclusive access. Strengthening Non-GPON fiber infrastructure remains essential to the state's long-term digital and economic development goals.