
# Connectivity on the Move: Major Roads Network Report

## Roads Coverage & Signal Quality Trends | Advanced Analytics Services| **December 2025**

# Agenda

1. Executive Overview: The Highway Experience
2. National Connectivity Status
3. Operator Performance on the Go
4. Technology on the Road
5. Road Type Trends
6. Actionable Recommendations

# 1. Executive Overview: The Highway Experience

*“Your Network on the Road”*

**Infrastructure**
Network coverage mirrors road density. Southern and Central corridors (Lagos-Abuja-Port Harcourt) enjoy robust signal, while the Northern borders face significant sparse coverage

**The Dead Zones**
While total blackouts are rare, they are concentrated. Primary Roads account for the largest "Zero Service" gaps (326 km), compared to just 51 km on Trunk roads.

**Operator Lead**
In a shift from national averages, **T2** leads the technical compliance on roads, outperforming larger legacy carriers in keeping signals strictly within technical standards along highways

# 2. National Connectivity Status

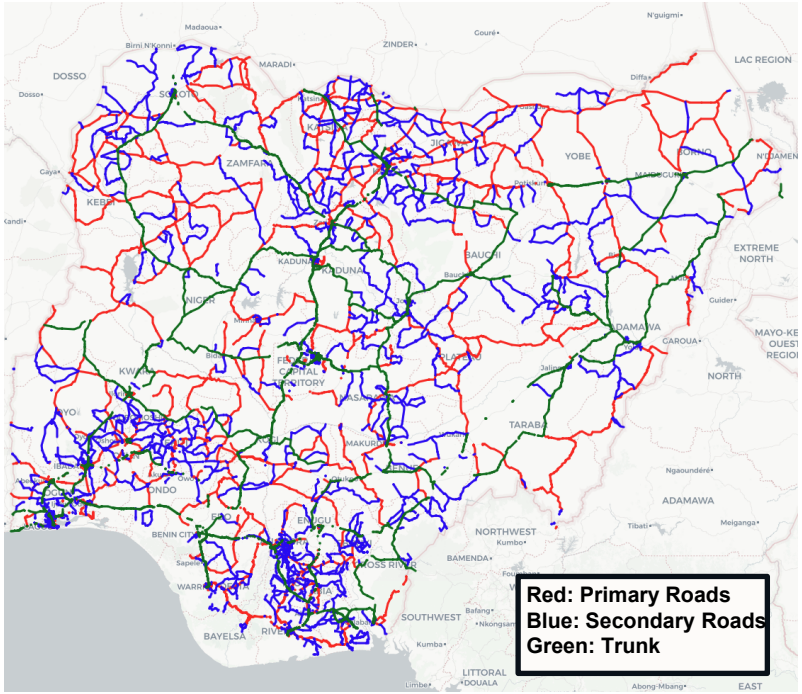
Total Road Network Analyzed: ~292,000 km of Primary, Secondary, and Trunk roads.

The "Zero Service" Reality:

- Primary Roads: 0.27% (326 km) have no service from any operator.
- Secondary/Trunk: Much lower gaps (<0.06%), indicating that main arteries are generally covered, but feeder roads face dead zones.

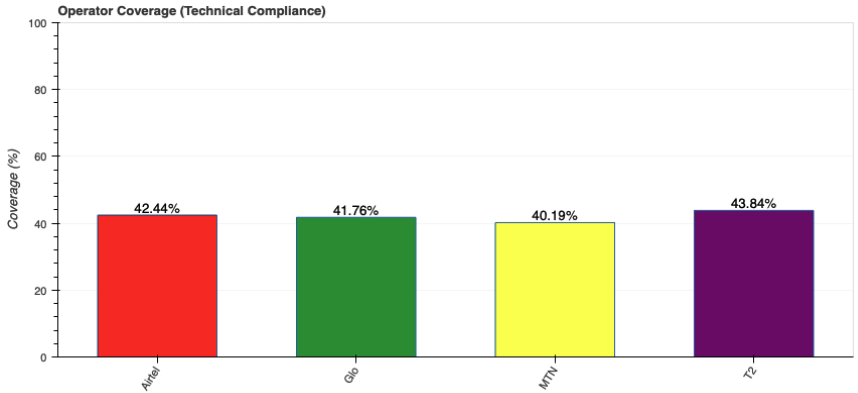
Takeaway: Major highways are safe for connectivity, but deeper primary routes still carry a risk of total disconnection.

What is included in this analysis?



# 3. Operator Performance on the Go

| KM Covered by Carrier and Road Type | | | | | |
|---|---|---|---|---|---|
| | MTN | Airtel | Glo | T2 | Total |
| Primary | 14955.08 | 14066.00 | 9336.83 | 1231.84 | 39589.74 |
| Secondary | 17702.95 | 16115.13 | 10608.64 | 1530.40 | 45957.13 |
| Trunk | 10265.99 | 10041.26 | 7569.53 | 1292.06 | 29168.84 |
| Total | 42924.02 | 40222.39 | 27515.01 | 4054.30 | 114715.72 |




1. Compliant (Covered / In-Service)
A road segment is considered "Compliant" or "Covered" only when it meets both the signal strength and signal quality thresholds simultaneously.

Signal Strength: RSRP (4G/5G) or RSCP (3G) must be greater than -95 dBm.
Signal Quality: RSRQ (4G/5G) or Ec/No (3G) must be greater than -15 dB.

2. Zero Coverage (Zero-Service)
A road segment is classified as having "Zero Coverage" when the signal is effectively unusable or marginal.

Signal Strength: RSRP (4G/5G) or RSCP (3G) is less than -100 dBm.
Signal Quality: RSRQ (4G/5G) or Ec/No (3G) is less than or equal to -20 dB.

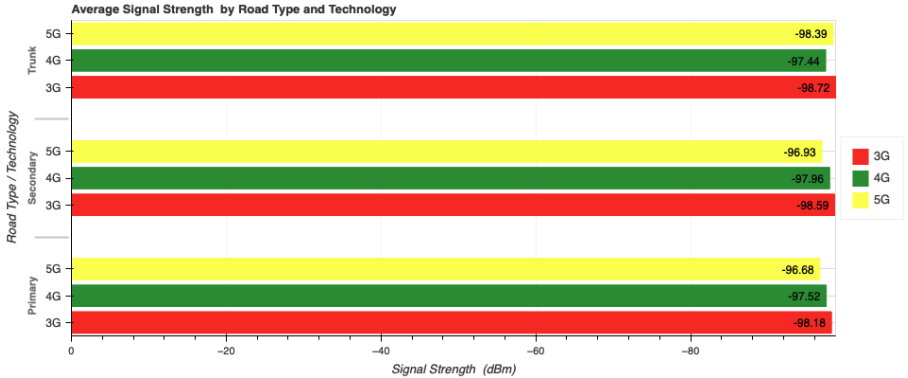
# 4. Technology on the Road

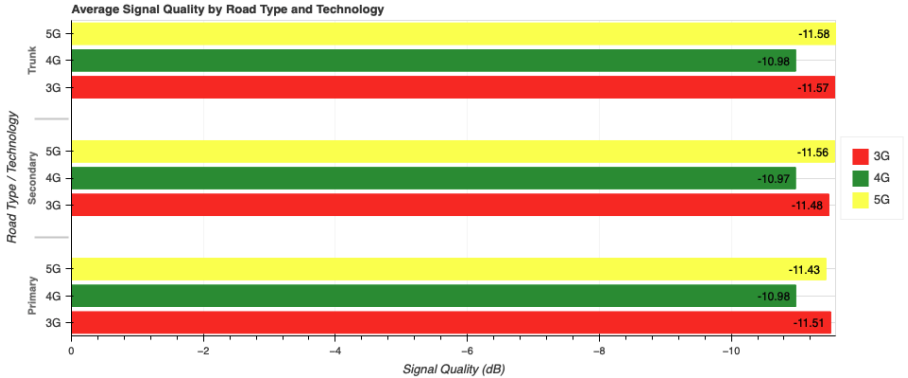
4G is the Highway Standard.

**Signal Strength:** 5G actually delivers the strongest raw signal (-96 to -98 dBm) on roads, but its reach is limited.

**Signal Quality:** 4G (LTE) is the most balanced performer, with >97% quality compliance. It is the reliable workhorse for GPS and streaming on the move.

**Legacy Reliance:** 3G remains critical for "reach," providing a fallback in rural areas where 4G fades, despite lower speeds



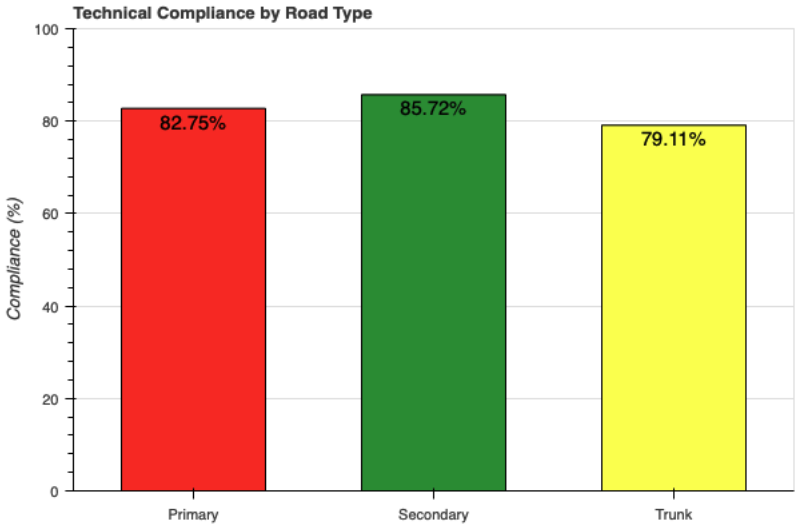
# 5. Road Type Trends

Trunk vs. Primary Routes

**Best Performance:** Secondary Roads have the highest technical compliance (85.7%), likely due to their proximity to populated towns.

**The Challenge:** Trunk Roads (major interstate highways) have the lowest compliance (79.1%).

**Why it Matters:** High speeds on highways + lower compliance = higher risk of dropped calls during interstate travel



# 6. Actionable Recommendations

**For Consumers**

**Download Maps Offline:** With **326 km** of zero service on primary roads, don't rely solely on live streaming for navigation.

**Hardware Matters:** A 4G-enabled phone is essential. 3G is a fallback, but 4G offers **97% better signal quality** to keep you connected at highway speeds.

**For the Industry**

**Fill the Primary Gaps:** Targeted deployment is needed to close the **326 km** "Zero Service" gap on Primary roads.

**Trunk Road Densification:** Operators need to densify sites along **Trunk roads** (currently the lowest compliance at 79%) to support seamless handovers for vehicles moving at speed.

# Thank You