

Smart Highway Surveillance

with High-Capacity Wireless Links Across **81km of NHAI National Highway**

CONNECTING YOUR WORLD

Introduction

Wavesight's advanced wireless transmission technology facilitated continuous CCTV surveillance across 81 kilometers of National Highway connecting Swaroop Ganj (Rajasthan) to Palanpur (Gujarat). This deployment supports NHAI's vision for smart highways and digital highway infrastructure, enabling real-time traffic monitoring, incident detection, and enhanced highway safety management in line with India's Advanced Traffic Management System (ATMS) initiatives.

The Challenge

- Establishing reliable surveillance connectivity across 81km of highway spanning two states with diverse terrain.
- Supporting NHAI's smart highway modernization goals and digital enforcement capabilities.
- Enabling real-time highway safety monitoring and incident response as mandated by India's Motor Vehicles Amendment Act 2019.

The Solution

- Arya Omnitalk Wireless Solutions deployed Wavesight's industrial-grade point-to-point wireless radios to create a resilient highway surveillance network.
- The wireless transmission system connected distributed CCTV cameras to centralized monitoring stations, supporting continuous highway security coverage.
- This solution enables smart highway functionality including traffic monitoring, automated incident detection, and digital enforcement capabilities aligned with NHAI's ATMS specifications.

Results & Benefits

- Continuous, high-quality video surveillance coverage across the entire 81km highway corridor enhances highway safety and security.
- Wireless connectivity reduced infrastructure deployment costs and enabled rapid installation compared to fiber alternatives.
- The scalable network supports future smart highway upgrades including AI-based video analytics and digital enforcement systems.

Conclusion

Wavesight's wireless transmission solutions enabled NHAI's smart highway surveillance objectives across this critical inter-state corridor, demonstrating the effectiveness of advanced wireless networking in supporting India's highway modernization and safety initiatives. This deployment showcases Wavesight's capability to deliver reliable connectivity solutions for large-scale highway infrastructure projects.