Wavesight

Enhancing Railway Communication in Gujarat

Wavesight Point-to-Point Wireless for Western Railway

CONNECTING YOUR WORLD

Introduction

Ensuring uninterrupted railway communication systems is critical for safety, signaling, and operational efficiency. Western Railway's Vadodara Division required wireless transmission solutions for railways that could guarantee seamless automatic failover in the event of fiber outages. Wavesight's industrial point-to-point wireless system, designed for demanding transportation environments, was deployed to bridge Dabhoi, Chandod, and Kevadiya stations in Gujarat, ensuring resilient railway network connectivity over 45km with a switchover time of less than 50 milliseconds.

The Challenge

- Maintain high-throughput train-to-trackside communication over rural and tourist-heavy rail corridors.
- Offer an alternative to fiber optics for railways prone to outages.
- Implement sub-50ms automatic failover railway communications without manual intervention.

The Wavesight Solution

- Technology: Industrial-grade point-to-point wireless system for railways, integrated with SIDU (Signal
- Distribution Interface Unit) for seamless wireline-to-wireless switching.
- Coverage: Wireless links deployed over 15km (Dabhoi–Chandod) and 30km (Chandod–Kevadiya).
- Performance: Resilient railway network connectivity even in challenging weather and terrain, with advanced interference protection.
- Deployment Partner: Implemented locally by Maheshwari Computers Pvt Ltd.

Results & Benefits

- Zero downtime during wireline failures.
- Seamless automatic failover between fiber and wireless.
- High data throughput ensures reliable railway data communication solutions.
- Scalable architecture for future high-speed rail Wi-Fi solutions and modernization projects.

Conclusion

This deployment shows why Wavesight is a trusted provider of wireless transmission solutions for railways worldwide, delivering dependable, industrial communication infrastructure for mission-critical transport networks.