

Powering Port-Wide

Wireless Connectivity for
Nigerian Ports Authority's
Multi-Port Operations



CONNECTING YOUR WORLD

Introduction

The Nigerian Ports Authority (NPA), governing Nigeria's key economic gateways including Lagos, Tin Can Island, Calabar, Delta, Harcourt, and Onne ports, required a unified wireless network solution to replace disparate communications and surveillance systems. As an experienced wireless network solution provider, Wavesight was selected to design, supply, and deploy a ruggedised Metropolitan Area Network (MAN) spanning multiple ports. This advanced wireless infrastructure supports high-resolution video, data, radar, and voice transmission critical to securing busy maritime corridors and maintaining efficient cargo handling operations.

Challenge

- Covering vast, environmentally challenging port areas where physical cable installation was impractical.
- Connecting remote ship entry and exit points inaccessible with wired infrastructure.
- Meeting strict maritime standards for equipment reliability, environmental resistance, and low maintenance.
- Ensuring network scalability to support future surveillance and operational technology integration.

The Solution

- Wavesight, leveraging its expertise as a leading wireless network solution provider, deployed ruggedised microwave radios following rigorous two-year field validations.
- Over 100 high-capacity wireless links were established, utilizing masts positioned to minimize disruption across six major Nigerian ports.
- The wireless MAN delivers secure, low-latency transmission of video, voice, data, and radar essential for real-time port monitoring.
- Professional services included comprehensive RF surveys, network design, installation, commissioning, and system integrator training to guarantee a smooth deployment and operational readiness.

Results & Benefits

- The centralized command and control center now efficiently monitors ship movements, pilotage, SOS calls, and cargo handling across all port locations.
- The elimination of costly leased-line and fiber installations significantly reduces both capital expenditure and ongoing operational costs.
- Ruggedised equipment engineered for coastal conditions assures consistent, low-maintenance network performance.
- The scalable, flexible network architecture lays the foundation for future technology upgrades such as IoT integration and advanced security analytics.

Conclusion

This landmark project showcases Wavesight's capabilities as a premier wireless network solution provider delivering resilient, secure, and cost-effective communications infrastructure tailored for complex coastal environments. The deployment empowered the Nigerian Ports Authority to unify port security and operational communications, positioning them for continued growth and digital transformation.