



Enhancing Productivity and Safety at ONGC Sites

Deploying **ATEX** Wireless Solutions



CONNECTING YOUR WORLD

Enhancing Productivity and Safety at ONGC Sites: Deploying ATEX Wireless Solutions by Wavesight

Introduction

Oil and Natural Gas Corporation (ONGC), India's energy flagship Maharatna, drives over 70% of India's domestic oil and gas production. To address complex operational challenges—spanning harsh onshore and hazardous offshore sites across the country—ONGC partnered with Wavesight to deliver robust, ATEX-certified wireless connectivity. This initiative now supports mission-critical applications: real-time CCTV surveillance, OT/SCADA integration, and secure networking for remote and hazardous field operations.

About the Client

- ONGC is India's largest government-owned oil & gas company, employing over 26,000 professionals with operations in 26 sedimentary basins.
- It contributes about 71% of India's crude oil and 84% of its domestic natural gas production, forming the backbone of the country's energy security.
- ONGC's subsidiaries include HPCL and MRPL, with extensive upstream, midstream, and downstream interests.
- Recognized globally—ONGC ranks in the Forbes Global 2000 and Fortune's leading energy companies.

The Challenge

- Remote oilfields and offshore rigs present harsh environments—hazardous due to explosive gases, dust, and weather extremes.
- Wired connectivity is impractical or unsafe in explosive-prone zones, especially for wide-area surveillance, perimeter security, and remote asset monitoring.
- ONGC needed rugged, ATEX/IECEX-certified wireless connectivity to link CCTV cameras, SCADA terminals, and field devices—ensuring real-time operations, staff safety, and process visibility across sprawling, hazardous sites.

Solution Overview

- Wavesight supplied and deployed over 200 Firefly, Scorpion, and Scorpion ATEX-certified wireless radios at ONGC locations in Assam (Nazira), Ankleshwar, Tapti, Hazira, Nava Seva, Karaikal, and Rajahmundry.
- ATEX Zone 1 & 2 Certified Radios: Specially engineered for use where explosive atmospheres may occur, ensuring compliance with global oil & gas safety rules.
- Wireless architecture:
 - Point-to-point and point-to-multipoint wireless links for CCTV camera clusters, delivering live video feeds to local and central control rooms.
 - Wireless bridging for SCADA/PLC systems in field sites, tied to central OT servers.
 - High-capacity, interference-resistant, and low-latency radio solutions (300–500 Mbps).
- Worked closely with local integration partners for deployment in varying terrains and refinery/rural/offshore conditions.

Results & Benefits

- Secured hazardous sites with seamless, real-time wireless video and data, eliminating risks from exposed cabling and supporting explosive atmosphere compliance.
- Boosted operational visibility—live CCTV, process data, and alerting now stream to control rooms, enabling faster incident response and predictive maintenance.
- Improved worker safety through enhanced perimeter surveillance, automated incident detection, and always-on communications.
- Reduced downtime and OPEX—wireless eliminates cable faults, costly maintenance, and exposure to environmental risks.
- Future-ready network—infrastructure designed for scale, supporting additional IoT field sensors, automated drilling, and digital field worker solutions.

Why Wavesight?

- Expertise in critical wireless networking for hazardous industrial and energy environments.
- Global-class ATEX/IECEX certified radio portfolios designed for explosive-prone sites.
- Proven deployments with major oil & gas, utility, and infrastructure clients.
- Flexible, high-throughput architectures for CCTV, SCADA, and automation systems.
- Trusted local partner ecosystem for fast, compliant project delivery and support.