

# *Hytera XPT DMR System Provides Reliable Coverage Across Indonesian Palm Oil Plantations*



## Introduction

Indonesian palm oil producer PT Poliplant wanted to implement a reliable radio communications system across its extensive plantations to improve efficiency and to ensure a swift response to any worker accident or incident such as a fire. Hytera supplied its XPT DMR solution, SmartOne dispatch system and HP78X portable terminals. The solution provides the required wide area coverage, along with location tracking to aid worker safety.

## The Background

PT Poliplant is a producer of palm oil based in West Kalimantan, Indonesia. The company is a subsidiary of Cargill Corporation, the US multinational provider of food, ingredients, agricultural solutions and industrial products. The company manages approximately 50,000 hectares of smallholder-owned and company-owned land in West Kalimantan and South Sumatra, along with a number of mills producing high quality crude palm oil and palm kernel.

### Project Name

PT Poliplant Plantation XPT DMR Project

### Client Name

PT Poliplant / Cargill Poliplant Group  
Hytera Partner: Indonesia Kopokarla

### Project Start/End Dates

18 September 2023 to 30 November 2023

### Project Location

South Sumatra and West Kalimantan,  
Indonesia

### Industry

Agricultural Industry

### Products/Solutions

XPT IP DMR Multi-site System  
HP78X DMR Portable Radio  
SmartOne Dispatch System

The provision of reliable communications across the company's extensive palm oil plantations was considered to be a vital necessity to better coordinate planting, harvesting and processing operations and to ensure a quick response to any accidents to workers or other types of incidents.

With this in mind, PT Poliplant appointed PT Aplikasi Lintasarta (part of the Kopkarla Group, a Jakarta-based telecommunications company) as the main contractor to manage and supervise the implementation of a new communication system in the palm oil plantations.



## The Challenge

The client wanted the proposed system to connect each plantation area in one communication network system, both in terms of network infrastructure and overall system architecture, thereby increasing reliability and minimizing the potential for communication disruptions. In addition, PT Poliplant wanted to have the flexibility to add new talk groups and customize each of them whenever required.

Given that the plantations extend over a very large area, the challenge was to come up with a comprehensive RF coverage design that would guarantee smooth communications between the various users and across the various different talk groups. Not only will this improve operational efficiency and boost productivity across the palm oil plantations, but it will also ensure supervisors can quickly coordinate a response if an accident occurs.

Kopkarla was tasked with providing and managing the radio equipment and other communication systems according to PT Poliplant's requirements. It was very important that Kopkarla and PT Poliplant worked closely together in order to deliver a reliably functioning communication system able to meet the company's operational needs.

To make this happen, there had to be a close collaboration between Kopkarla and all the stakeholders such as plantation heads, farmers and security forces to ensure compliance with regulations and work safety guidance during the palm oil harvesting process in each plantation.





## The Solution

The chosen solution was a Hytera DMR XPT (Extended Pseudo Trunking) multi-site trunking system, which connects multiple XPT single site trunking systems over an IP network. DMR XPT multi-site trunking systems can share XPT single site trunking channel resources. This provided an efficient and economic way to expand the communication range of the XPT system to deliver RF coverage across all the plantations.

XPT systems help radio users to communicate more efficiently, as free channels are automatically determined for call requests and assigned dynamically without the need to manually select the channel. This greatly reduces the possibility of a call being rejected by the XPT system in times of heavy traffic. Kopkarla also supplied a Hytera SmartOne dispatch system and HP78X DMR portable two-way radios.

As the appointed contractor, Kopkarla is also responsible for installation, routine maintenance, and reports on communication network channel usage for each repeater. It also supervises management of the radio monitoring system throughout the plantations.

## Products

- XPT IP DMR Multi-site System
- HP78X DMR Portable Radio
- SmartOne Dispatch System



## The Benefits

### Wide Area Communications

The Hytera XPT IP multisite system provides a simple and economic way to deliver wide area coverage across all the plantation areas, by linking up XPT single sites over an IP network to enable seamless and reliable voice and data transmissions.

### SmartOne Dispatch Supports Worker Safety

The Hytera SmartOne dispatch solution allows all the radios to be centralized and monitored in one intuitive dashboard. Apart from facilitating audio communication and sending messages/data communication, SmartOne dispatch also supports location tracking of each radio. This feature is critical in handling work accident incidents, ensuring that a fast and efficient response can be sent to the exact location.

### XNMS (Extended Network Management System)

Hytera XNMS software is used to remotely monitor and manage repeaters registered in the XPT system. Users can diagnose and troubleshoot repeaters without needing to be at the repeater's physical location. The software also generates statistics and queries of services that have been performed in the system over a period of time, providing insight into network performance and conditions.

### Tough, Durable Radio Terminals with High Quality Audio

The HP78X terminals offer loud, clear audio and feature a large 2.4-inch colour screen with an intuitive UI for easier, more efficient operation. The HP78X is tough and durable, as it has an IP68 rating, is resistant to water jets, and to drops of 2 metres onto concrete. This makes it an ideal device for coping with tropical conditions.

The extensive PT Poliplant palm oil plantations demonstrate how Hytera's XPT solution can be used to provide wide area communications for the agriculture industry in a simple and economic way.

## Customer Testimonial

With the HP78X radio and XPT system, farmers can report emergency incidents, such as accidents or fires, quickly. This helps improve response to critical situations and keep workers safe.



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