

Mi-SWIS

Smart Weight Integrity System

The Smart Weight Integrity System (Mi-SWIS) is a cutting-edge solution that ensures accurate and tamper-proof weight measurements in commercial and industrial environments. Utilising advanced RADAR sensor technology and an integrated fraud detection module, Mi-SWIS identifies hidden human presence in vehicles during weighbridge operations. This prevents weight manipulation and reinforces integrity across the weighing process. By enhancing accuracy, security, and transparency, Mi-SWIS supports fair business practices and ensures compliance with regulatory standards, safeguarding operational efficiency and supply chain credibility.



Technology Overview

The Smart Weight Integrity System (Mi-SWIS) is an advanced solution developed to combat weight manipulation in the palm oil industry. It detects hidden human presence in trucks using RADAR technology, preventing inflated load readings and illegal Crude Palm Oil (CPO) diversion. Integrated with the Unmanned Weighbridge System (UWBS) and Mi-SWIS Fraud Detection Module, Mi-SWIS ensures tamper-proof, automated weighing. It enhances transparency, reduces manual oversight, and safeguards supply chain integrity to empowering plantations and mills to improve efficiency, protect assets, and promote sustainable logistics practices.

Technology Benefits

- **Improved Accuracy and Security:** Mi-SWIS ensures precise, tamper-proof weight measurements by eliminating human interference, reducing revenue losses and enhancing data reliability for plantations and mills.
- **Fraud Mitigation:** By detecting hidden human presence in trucks, Mi-SWIS prevents weight manipulation and curbs illegal palm oil diversion, strengthening supply chain transparency and integrity.
- **Operational Efficiency:** Automating the weighing process and reducing manual labour, Mi-SWIS streamlines operations and delivers long-term cost savings for industry stakeholders.
- **Sustainability and Trust:** Promoting transparency and ethical practices, Mi-SWIS supports regulatory compliance and fosters greater trust among partners, consumers, and the broader palm oil community.

Key Features

- **Advanced RADAR Sensor Technology:** Detects human presence accurately, regardless of lighting or weather, preventing weight manipulation.
- **Seamless Integration with UWBS:** Enhances UWBS with real-time RADAR data processing and easy PoE installation for automated weighing.
- **Hardware Controller System:** Efficiently manages sensor activation and provides instant feedback with LED lights and warning beacons.

Applications

- Palm Oil Plantations & Mills
- Agricultural Commodity Trading Hubs
- Logistics and Transport Hubs

