MAIVIN

AI Visual Perception Module for Precision Agriculture

Au-Zone
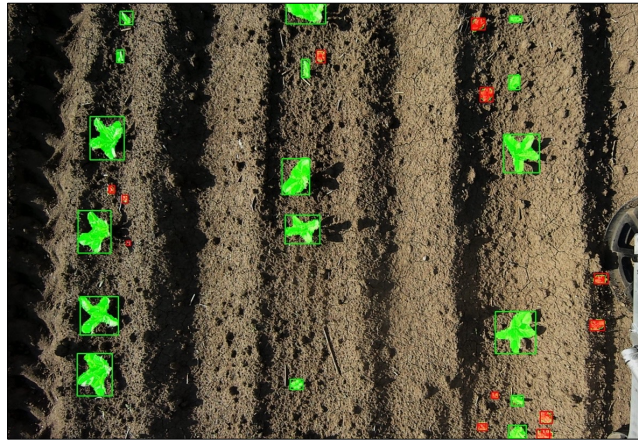Technologies Inc.

Reduce input costs, Improve yield and Save time

Features	Benefits
▪ Centimeter level visual perception	➢ Plant level phenotyping data collection ➢ Reduce inputs by up to 90% with Variable Rate Application ➢ Early detection & treatment of disease or blights
▪ GPS Augmentation	➢ Reduce headland and increase crop yield by 3-5% with tighter end-turns and better row-implement alignment
▪ Software defined smart sensor	➢ Single sensor platform able to address a range of tasks ➢ Reduces inventory, installation and repair time/costs
▪ Industry Standard interfaces GPS, WiFi, LTE, Ethernet & CANBus	➢ Simplified integration for standard perception features ➢ Accelerated data collection for custom AI training ➢ Enterprise data integration with standard formats & API's
▪ Fully integrated, compact design with industrial grade electronics, all-weather sealed enclosure, connectors and cables	➢ Quick installation anywhere on equipment ➢ High reliability without additional cooling ➢ No specialized cabling, connectors or tools ➢ Fast and easy to replace in event of damage
▪ Scalability	➢ Standard product for evaluation and development ➢ Licensable IP for customization and volume production

GPS Augmentation

Plant level data and VRT

Crop condition monitoring

Specifications

Perception Latency	30 fps, < 50ms
Field of View	84° ↔ 52° ↕ 105°↗
Detection Range	1 - 100m (3 - 300ft)
Resolution	4K / 8MP (3840x2160) CMOS Sensor 2 μm x 2 μm pixels for low light sensitivity
AI Processors Integrated Peripherals	i.MX8M Plus (Quad A53 + 2 TOPS NPU), optional 26 TOPS AI Accelerator LTE Modem, GNSS, 9 axis IMU, internal temp & humidity sensors
Environmental	-40°C to +65°C Industrial Temp, passive cooling IP67 rated enclosure
Electrical	RJ45 IP67 waterproof Ethernet with optional POE M12 10 - 27VDC (7W), RS-485/CANbus 2 SMA connectors for external GPS + LTE antennas
Mechanical	110x115x90mm (4 ¼ x 4 ½ x 3 ½ in) | 450g (16 oz) Multiple ¼ - 20 mounting points