

MAIVIN Camera Module

Visual AI Perception for Precision Agriculture



Reduce input costs, Improve yield and Save time



Features	Benefits
<ul style="list-style-type: none">Centimeter level visual perception	<ul style="list-style-type: none">Plant level phenotyping data collectionReduce inputs by up to 90% with Variable Rate ApplicationEarly detection & treatment of disease or blights
<ul style="list-style-type: none">GPS Augmentation	<ul style="list-style-type: none">Reduce headland and increase crop yield by 3-5% with tighter end-turns and better row-implement alignment
<ul style="list-style-type: none">Software defined smart sensor	<ul style="list-style-type: none">Single sensor platform able to address a range of tasksReduces inventory, installation and repair time/costs
<ul style="list-style-type: none">Industry Standard interfaces API's, data formats, interfaces	<ul style="list-style-type: none">Simplified integration for standard perception featuresAccelerated data collection for custom AI trainingEnterprise data integration with standard formats & API's
<ul style="list-style-type: none">Fully integrated, compact design with industrial grade electronics, all-weather sealed enclosure	<ul style="list-style-type: none">Quick installation anywhere on equipmentHigh reliability without additional coolingNo specialized cabling, connectors or tools
<ul style="list-style-type: none">Scalability	<ul style="list-style-type: none">Standard product for evaluation and developmentLicensable IP for customization and volume production



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Precision Ag Perception Applications

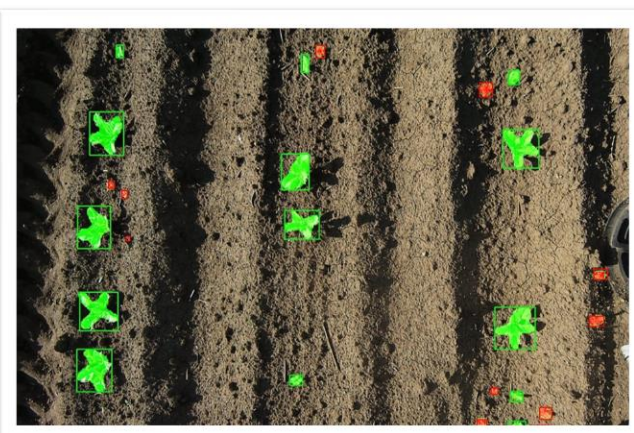
Visual Positioning



Crop monitoring



Scouting and VRT



Maivin 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



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