

Optical sensors for targeted canopy spray.

Detect the canopy in real time.
Spray only where there is foliage.



OUR SIGNATURE: **FULL-CANOPY SCANNING WITH SCAN-TO-NOZZLE CONTROL**

THE PARTNER PROPOSITION

SprayLogics develops **optical sensors** that **detect** the tree, trunk and vine canopy, - presence and density, and control the corresponding spray valves **in real time**. The decision is made in the sensor module, without cameras, image processing, prescription maps or databases. Distributed sensing along the vertical boom/tower matches each nozzle zone. **Fast and simple machine integration** without calibration.

OUR DNA

In-house expertise in developing and **manufacturing high-performance optical sensors** for agricultural precision spraying.



WHAT OUR SENSORS DETECT & CONTROL

- Real-time canopy detection
- Presence of trees, vines and foliage
- Presence of trunks (early season)
- Standard ON/OFF targeted spraying
- PWM / variable-rate capability
- Adjustable detection sensitivity
- **Volume** based on canopy density and leaf wall area (LWA)

ANTICIPATING THE FUTURE

We offer a sensing platform, to spray smarter today, and the same sensor is ready for more jobs later, like reading blossom or mapping your canope / vigour, without changing hardware.



Scan — Decide — Spray

Immediate activation of the solenoid valves

WHAT YOU WILL NOTICE

LESS PRODUCT - LOWER COSTS

Treat the canopy, not the gaps.

Product goes on only where foliage is detected — same tank mix, less used per hectare. Less chemical, less water, lower cost.

SIGNIFICANT DRIFT REDUCTION

No canopy = no spray.

Spraying only where foliage is detected and adapting the dose to canopy density reduces off-target losses and spray drift.

THE RIGHT DOSE, ON TARGET

Dose to canopy density.

Each zone gets the rate its canopy needs - from full trees to sparse or missing ones- matching product use to the leaf wall area actually present.

MORE HECTARES PER TANK

Spray more. Fill less.

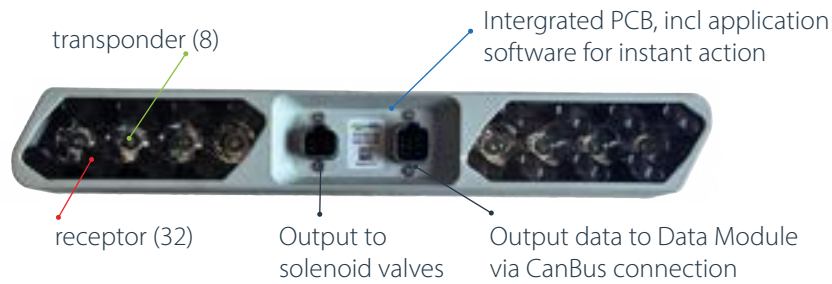
Far less spray volume means fewer refills, more hectares per tank and less downtime. Day-and-night operation widens your spray windows.

CANOPY-VARIABLE RATE SPRAYING

Less product & cost · **Less drift & ground loss** · **Dosed to LWA / TRV**

Independent SprayLogics orchard & vineyard field validation in progress. Actual savings depend on canopy, season and machine settings.

THE SENSOR MODULE



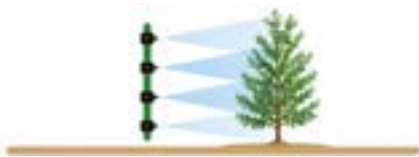
TECHNICAL CHARACTERISTICS

Optics	8 NIR emitters · 32 receptors
Spectral operation	3 wavelengths
Detection zone / module	50 cm
Mounting distance to target	80–120 cm
Valve control	ON/OFF · PWM (4 valves/module)

Dimensions (L×W×H)	410 × 62 × 42 mm
Supply voltage	12 V or 24 V DC
Power consumption	4 W / module (20 A max)
Sensor weight	525 g
Ingress protection	IP67
Temperature (tested)	0–50 °C · storage –40 to +80 °C

4 spray modes

1. **Tree presence - ON/OFF:** No tree, no spray.



3. **Full-height, scan to nozzle.** independent vertical zones no canopy, no spray.



2. **Trunk presence ON/OFF:** detect & spray trunks only (early season)



4. **Variable rate:** adapt spray volume to canopy density (lateral and depth)



12 reasons to integrate SprayLogics

1. SIGNIFICANT DRIFT REDUCTION

Foliage presence opens the valve; bare gaps and missing trees are skipped automatically.

2. LOW LATENCY

Instant on-board ON/OFF response. Only **10 cm minimum** sensor-to-nozzle distance.

3. FULL-HEIGHT, SCAN TO NOZZLE

Reads the tree at every height and sprays each zone at the valve's own resolution.

4. DAY & NIGHT OPERATION

Sunlight independent. Active NIR needs **NO external light source**.

5. EARLY-SEASON TRUNK MODE

Detects and treats bare trunks and structure before leaf-out stage.

6. CANOPY DENSITY & LWA

Doses each zone of the leaf wall area present, laterally and in depth.

7. DIRECT VALVE CONTROL

Actuates individual solenoid valves. Automatically adjust spray timing to match travel speed.

8. PWM READY

Supports **ON/OFF and PWM** / variable-rate. System can force open and close the valves.

9. DATA LOGGING AND MAPPING

Data module provides detailed as applied data and map format.

10. LIGHT & LOW-POWER

Approx. 525 g and 4W per module for easy machine integration.

11. OPEN PLATFORM – PLUG AND PLAY

Simple, robust and ISOBUS-compatible with standard interfaces for easy integration on new and existing sprayers.

12. PLUG AND SPRAY

No pre-scanning, no field map or weed database required. **HARDWARE** ready for future additional applications.