

ecter c

senseFly Solar 360

Solar farm inspection, automated









Parc du Grand Troyes / 3 Rond-point Winston Churchill CS70055 / 10302 Sainte-Savine Cedex Tél. : 03 25 71 31 54 / geospatial@d3e.fr

🧩 geospatial.d3e.fr

DISTRIBUTEUR AGRÉÉ

<u>"senseFly's eBee has given me</u> the best R.O.I. of any tool I own."

Prof. Tosa Ninkov Ph.D., Owner, GeoGIS Consultants, Serbia

Solar inspection goes aerial

Today, most solar farm inspections are carried out at ground level. Staff typically spend days using handheld sensors to check each and every module's performance. This process might happen once, or maybe twice, a year. At some sites, virtually never.

Teams might then take several weeks to analyse an inspection's thermal data, before manually creating the reports other colleagues need to optimize a farm's performance. But there is an easier way. senseFly Solar 360 with Raptor Maps is a uniquely efficient solution. This end-to-end aerial inspection system enables companies that own, manage or maintain solar assets – or the drone service providers they employ – to automatically assess the performance of farms at a sub-module level. Without requiring piloting skills or the manual review of aerial data.

Accurate, actionable data is available to teams in a matter of days, not weeks. And inspections can be performed more frequently than ever before.



- Inspect solar farm installations of up to 150 MW in a single day^{*} compared to 500 kw per day on foot using handheld sensors – an efficiency boost of up to 300X
- Document 65 ha (161 ac) of sub-module level anomalies in a single 42 m (138 ft) flight – double the coverage of multi-rotor systems
- Achieve **5X** faster drone inspections thanks to RaptorMaps' first-of-its-kind software solution



- Capture radiometric thermal and visual RGB imagery no piloting experience required
- Raptor Maps generates a detailed & actionable inspection report identifying, classifying, and localising anomalies automatically
- The eBee X is an inherently safe, end-to-end integrated solution



- Raptor Maps users report average annual savings of US \$2,000/MW
- Break even on your senseFly Solar 360 investment after just one flight!
- Use the eBee X's RGB camera data to generate a geo-accurate digital terrain model, useful for optimising a farm's design
- Perform more frequent PV solar farm inspections, allowing problems at the string, module and cell level to be detected early

Actionable data in days, not weeks

With senseFly Solar 360, the collection and analysis of farm performance data is automatic.

The eBee X drones flies, captures imagery and lands itself (covering much larger areas

in one highly efficient flight than quadcopter drones can achieve). **Raptor Maps** then identifies and classifies PV anomalies automatically, using AI, to generate a detailed, actionable inspection report.

"A major challenge of aerial thermography is how to process and generate reports once a site has been inspected... Raptor Maps enables us to quickly and effectively perform the drone inspection, can support our wide range of sites under management, and provides clear and actionable reports for our field team on what items need to be fixed versus monitored."

> Reegan Moen, Business Development Manager, SOLV, Inc., a Swinerton company, U.S.A.



PLAN

- Define the farm (or farms) to inspect
- Set the ground resolution required



CAPTURE

- Capture high-res thermal and radiometric RGB imagery
- Document 65 ha (161 ac) of sub-module level anomalies in a single 42 m (138 ft) flight
- After being hand launched, the eBee X flies, takes photos, and lands itself



GENERATE

- Upload the drone's thermal and RGB images to Raptor Maps
- Raptor Maps uses AI to analyse each aerial image identifying, classifying, and localising anomalies automatically
- Raptor Maps automatically generates a detailed actionable inspection report



ACT

- Put Raptor Maps' data to work scheduling maintenance or detailed ground assessments as required, and providing asset owners with required documentation and status updates
- Share **Raptor Maps** reports and outputs quickly and easily in enterprise-compatible formats

End-to-end intelligence

senseFly's Solar 360 with **Raptor Maps** is a highly automated aerial inspection system, which produces accurate PV performance insights you and your team can rely on. This solution is supplied with the customer's choice of Data Pack. These Data Packs are available in **50 MW**, **100 MW** and **200 MW** variants, depending on the output capacity a customer expects to assess over the course of a year.

eMotion Drone flight & data management. Reimagined.

) Simplicity meets power

Beginner-friendly, yet packed with advanced features to optimise results

6 Flexible

Choice of flight modes, assistance features & mission planning blocks to suit every application

\bigcirc

Full 3D environment For safer flights, consistent performance & improved data quality

🕺 Connected

eMotion connects to your drone, desktop & cloud software, survey-grade base stations, weather updates, airspace data & more

Included in Solar 360:



eBee X drone

- Flies up to 70 minutes carrying the senseFly Duet T camera
- Hand-launched, then flies, captures images and lands automatically
- Document 65 ha (161 ac) of sub-module level anomalies in a single 42 m (138 ft) flight — double the coverage of multi-rotor systems



senseFly Duet T camera

- Captures thermal and radiometric RGB imagery
- Exclusive to eBee X



APTOR

eMotion software

- Simple mission-block flight planning
- 2D/3D interface options
- Connect to cloud services, weather updates, airspace data etc.
- Instant integration with senseFly GeoBase (& compatible with leading base stations)

Raptor Maps software

- Requires 5X fewer images than competing software, minimising the flight time required
- Analyses every aerial image using AI
- Identifies, classifies and localises anomalies into a digital twin
- Automatically generates an actionable inspection report and enterprise-compatible outputs



Education & support

- Full access to Knowledge Base, regular customer webinars, video tutorials & more
- · Lifetime hardware & eMotion support
- Expert local senseFly representatives



Parc du Grand Troyes / 3 Rond-point Winston Churchill CS70055 / 10302 Sainte-Savine Cedex Tél. : 03 25 71 31 54 / geospatial@d3e.fr

诺 geospatial.d3e.fr DISTRIBUTEUR AGRÉÉ

At **senseFly**, we believe in using technology to make work safer and more efficient. Our proven drone solutions simplify the collection and analysis of geospatial data, allowing professionals in surveying, agriculture, engineering and humanitarian aid to make better decisions, faster. **senseFly** was founded in 2009 and quickly became the leader in mapping drones. The company is a commercial drone subsidiary of **Parrot Group**.

Raptor Maps makes it simple and affordable for solar companies to adopt drone technology as a tool to increase power production and reduce risk and maintenance cost across solar portfolios. Raptor Maps' AI and digital twin software has been deployed across six continents and 25 million solar panels to replace manual testing and convert drone and asset data into high-value analytics. Visit **www.raptormaps.com**