DGR System

NDAA COMPLIANT

Leverage Precise Geolocation Technology for 5x Faster Ag Data Delivery

From pre-flight planning to in-the-air image capture to post-processing, the Sentera Direct Georeferencing (DGR) System increases efficiency and reduces total project time by nearly 90% -- helping agronomic leaders capture more data, faster so they can focus on data validation and outcomes.

Compatible with

DJI
Matrice (M300)

S
Sentera Sensors
6X Multispectral
6X Thermal
65R

Why the Sentera DGR System?

Capture more fields, faster
Decrease flight times by 60%

Get real-time maps at the field's edge
Eliminate stitching processes for mosaics

Reduce data requirements
Get accurate data with 9x fewer images

Key Specifications of the DGR System:

Accuracy

- Dual Antenna RTK GPS: 5cm (2 inches)
- Inertial Navigation Camera Orientation: 0.5°
- Laser Rangefinder Distance to Canopy: 1%
- Geolocation Accuracy at 60m (200 feet): <25cm (10 inches)

Camera Sensors

- 6X: 20 MP RGB +5 Band Multispectral
- 6X Thermal: 20 MP RGB +4 Band Multispectral +320 x 256 LWIR
- 65R: Ultra-high-resolution 65 MP RGB

Coverage

- 440 acres per flight at 120m altitude GSD:
  - RGB = 2.0 cm
  - Monochrome = 5.20cm
- 220 acres per flight @ 60m altitude GSD:
  - RGB = 1.0
  - Monochrome = 2.60 cm

How it Works

Get ready for flight.

Instead of defining ground control points, prepare for your flight by quickly connecting the DGR System to the DJI M300 Drone: Add tactical-grade inertial measurements (IMU) and dual RTK GPS functionality) in just a few steps.

Fly and capture data.

Because images require 50% less overlap, capture 9x fewer images for analysis. The result? Faster flights – from 45 minutes to less than 20!
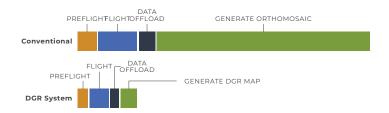
View and analyze key data.

With 5x faster data delivery, focus time on analyzing data and measurements to make faster and more precise critical decisions.

Upload data for post-processing.

The Sentera DGR results in absolute location certainty. With an output of spatially accurate maps right at the field's edge, no need to rely on stitching to create an orthomosaic.

REAL-WORLD FIELD ANALYSIS EXAMPLE

	CONVENTIONAL	DGR UPGRADE
Acres	150	150
Altitude	120 M	120 M
Flight Time	45 min	17.5 min
Image Captures	1,115	129
Data Volume	29.0 GB	3.4 GB
Post-Processing Time	5 hrs	10 min
Total Project Time	6 hrs	43 min

TOTAL PROJECT TIME ILLUSTRATION
(6 HOURS VS. 43 MINUTES)

PREFLIGHT FLIGHT DATA OFFLOAD GENERATE ORTHOMOSAIC

Conventional

PREFLIGHT FLIGHT DATA OFFLOAD GENERATE DGR MAP

DGR System

sentera

1-844-SENTERA   www.sentera.com   sales@sentera.com