



Appendix C

GPS vs GNSS on the DJI Mavic 4 Pro

Many pilots use the terms interchangeably, but they're not the same thing.

Ter	Meaning	What It Includes
GPS	Global Positioning System	The U.S. satellite navigation system only
GNSS	Global Navigation Satellite System	All major satellite navigation systems combined

Signal Strength Indicator

In DJI Fly you'll usually see a GPS icon:



Red – No reliable GPS lock.



Yellow – Acquiring satellites; wait before take-off.



Green – GPS ready; Home Point recorded.

What I Look For Before Take-off

For normal flying:

- **Minimum:** 12 satellites
- **Preferred:** 15–20 satellites
- **Excellent:** 20+ satellites

Factors That Reduce GPS Quality

- Flying close to buildings ("urban canyons")
- Dense forests
- Mountains or steep valleys
- Heavy cloud cover (minor effect)
- Metal structures nearby during startup
- Indoor or covered locations

Mavic 4 Pro Advantage

The Mavic 4 Pro doesn't rely solely on GPS. It combines:

- GPS / GNSS satellites
- Vision positioning sensors
- Forward-facing LiDAR
- IMU (Inertial Measurement Unit)

This means it can maintain stable flight even when satellite reception temporarily drops, though GPS is still essential for accurate positioning and Return-to-Home.

Quick Rule

Wait for:

- ✓ "Home Point Updated" voice prompt
- ✓ Green GPS indicator
- ✓ At least 12–15 satellites

Ideal: 18–25 satellites before launching for long-range or critical flights.