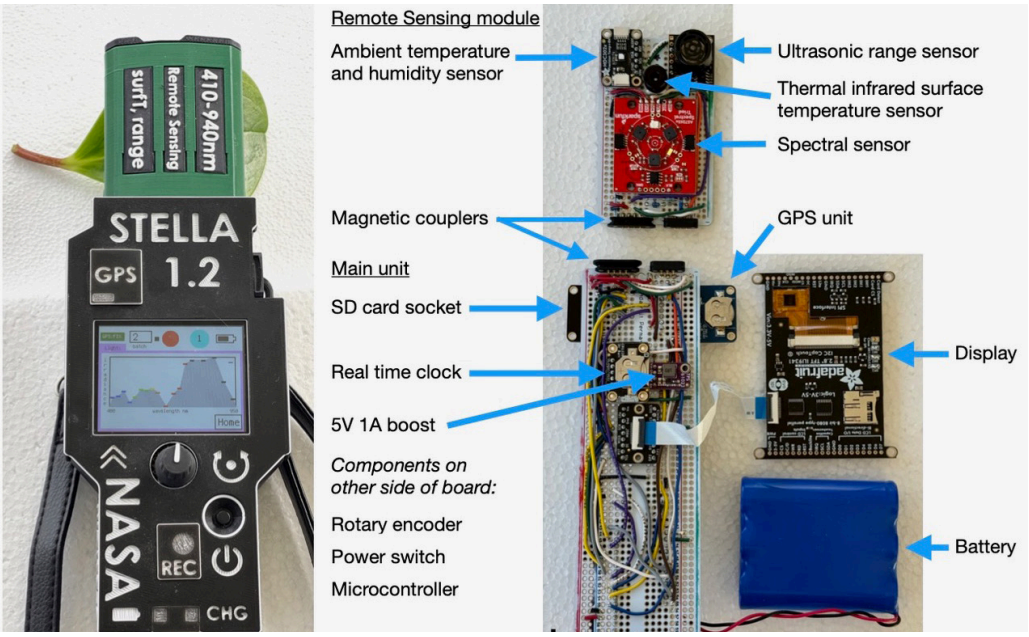
The full instrument.

The STELLA-1.2 is the most capable member of the NASA STELLA family ... a modular, handheld platform from NASA Goddard Space Flight Center with interchangeable sensor modules for surface temperature, air temperature, humidity, distance, GPS, and more. 36 different sensors are currently supported.



🌡️ **Explore Evapotranspiration**	Simultaneously measure surface temperature, air temperature, and NDVI — the same variables that drive satellite ET models — to learn how water, plants, and energy interact
🌿 **Vegetation Transects**	Walk a field recording spectral, thermal, and spatial data in one pass — experience firsthand the inverse relationship between NDVI and surface temperature
🛰️ **Learn Ground-Truthing Concepts**	GPS-tagged measurements let students practice the workflow of comparing ground-level observations to satellite data — building understanding of what validation means, how pixels average a landscape, and why in-situ measurements matter, even though STELLA has not been peer-reviewed or validated for research-grade ground truthing
🚁 **Drone Integration**	Lightweight and low-cost enough that mounting on a UAV is practical — a potential loss is a few hundred dollars, not thousands
🔬 **Field Science Education**	Deploy multiple units across a site to teach spatial sampling design, measurement uncertainty, and data collection protocols used in professional remote sensing campaigns
🎓 **Advanced STEM**	A capstone-level engineering build that teaches soldering, sensor integration, software development, and field science in one project

Free & Open Source Software, build instructions, parts list, 3D print files, color lookup table, and activities.