



## Physical AI and the Future of Flight

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Now that Merlin is a public company (NASDAQ: MRLN), we intend to start using regular commentary on our blog to help shareholders and other stakeholders understand not only what we are building, but the longer-term economic opportunity and technical context for why it matters.

The autonomous aviation market is large, consequential, and still being defined. The companies operating in it are not all doing the same thing - and the differences matter significantly for how our category gets valued. This emergent context includes one of the most significant technology frameworks shaping AI investment right now: so-called "Physical AI," a term popularized over the past eighteen months by Jensen Huang, NVIDIA's CEO.

In a series of keynote addresses, Huang essentially defined this term as AI that operates beyond the screen, in the physical world - not in text, video, simulations and VR. It means autonomous systems that understand physics, weather, aerodynamics, mechanical limitations as they truly are, in the field.

We believe Merlin Pilot fits that definition. It is designed to perceive its environment through sensors, and we are actively flight testing and integrating its capabilities to prove that it understands the physics of flight in real conditions, reasons through missions and contingencies, and acts autonomously on real aircraft, not just simulations.

As I noted in the CEO Letter in our listing prospectus, Merlin is developing the operating system of record for autonomous flight. We believe that the first mover to certify a universal operating system will sit at the center of the entire autonomous aerospace sector. So we are developing a software platform, built for aviation certification from day one, designed to fly any aircraft from takeoff to touchdown without a pilot. One system, any aircraft - so that the same "brain" that flies a C-130J Hercules for U.S. Special Operations Command could fly a cargo turboprop, a tanker, or a commercial freighter.

Each new aircraft type requires adaptation - not reinvention. That portability is the difference between a product and a platform. It is what underpins what we expect to become compounding economics for our business: with every aircraft we add leveraging everything we have already built, and every flight we complete expanding our training data, making the system progressively smarter and harder to replicate. From a development point of view, each aircraft expansion and certification is intended to essentially become a software update that improves platform and end-user utility.

The key point here: we are not only building a platform designed to fly existing aircraft, improving fleet productivity and expanding mission capabilities. We also believe that we are building a unique kind of AI dataset.

Merlin Pilot perceives the environment through sensors, understands the physics of flight, can reason through missions and contingencies, and can act autonomously on real aircraft. We believe that the addressable market for a platform like ours - across commercial, defense, and cargo aviation - is \$276B. We are at the beginning of it, with initial certifications, contracts, and flight data already in place. Over the coming weeks, we intend to continue to write about what makes this

problem technically hard, what makes our position defensible, and what the data flywheel looks like as this platform scales. The details matter. And they tell a story I believe is different from anything else being built in aviation right now.

*This post contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact should be considered forward-looking statements[, including without limitation statements regarding addressable markets and the future performance of Merlin Pilot. These forward-looking statements are based largely on our current expectations and projections about future events and trends. These forward-looking statements are neither promises nor guarantees, but involve known and unknown risks and uncertainties that could cause actual results to differ materially from any future results, performance or achievements expressed or implied by the forward-looking statements, including without limitation the risks, uncertainties, and assumptions described under "Risk Factors" in Merlin Labs' S-4/A filed with the SEC on February 9, 2026. Except as required by applicable law, we undertake no obligation to update any of these forward-looking statements for any reason after the date of this post.*