MERLIN LABS ANALYSIS

You all know me as a commodities analyst (and I guess a macro analyst now as well), but that does not mean that I have not been spending a lot of time glancing at the ever growing AI trend and wondering what interesting ways there could be available to play it. One could of course make the argument that certain commodities already have a link to AI via data centers for example, given that (to the surprise of exactly zero people) data centers are actually made from real materials and not just 1s and 0s, but some direct exposure surely wouldn't hurt right? That is when this company landed in my inbox as a few very sharp analysts provided their views on it and that is when I went to work and found an AI autonomy play that by my modeling has a 35-bagger bull case attached to it (and that is just my model, other models I have seen discuss triple digit bagger potential). That company is Merlin Labs (or Merlin Inc, depending on how you want to name it, but Labs sounds cooler doesn't it? Anyway, their ticket is MRLN on the Nasdaq and I have taken a position in the company at a $6 price point. I have sized this accordingly, as even though the bull case is frankly incredible, that potential comes at a cost and that cost can be steep depending on your position sizing. These AI plays are always complex and there are plenty of risks involved, as I will cover later as well, but I wouldn't be spending weeks of due diligence if I didn't see great potential either, so let's dive right in.

As you can see from the chart, this is a volatile little post-SPAC AI company (little being a $600+ million market cap, what has the world come to...) and it soon started to go on a massive run. Me being Dutch and therefore stingy (as well as being occupied by a pile of macro related paperwork doing its best Mt. Everest impression on my desk), didn't want to chase and so my due diligence continued. That leads us all to the question, what is Merlin Labs? Well, beyond the incredible name, they are building something really interesting. Strip away all the promotional language and Merlin Labs is a company that builds an AI-powered flight control system called the Merlin Pilot. The system is designed to fly fixed-wing aircraft from takeoff to touchdown with reduced crew or eventually no crew at all (and important difference that I will cover in more detail later as well). It is aircraft-agnostic, meaning it is not designed for one specific airframe but rather as a software platform that can be retrofitted into existing planes across both military and civil aviation.

Here is what makes it interesting at the engineering level and please keep in mind that I am not an engineer when reading through this, as it's just my best understanding of the tech. The Merlin Pilot integrates hardware and software to manage the full flight envelope. It uses an array of external sensors and cameras to build a real-time picture of the aircraft's environment. It manipulates control surfaces by sending commands to actuators. And here is the part that genuinely differentiates it from everything else in the market. It uses natural language processing to listen to and respond to air traffic control over the radio, interpreting ATC instructions against published procedures, parsing different accents and voice types, and communicating back to controllers the way a human pilot would. Matt George told Popular Science that "the system present-day is designed to be talked to just like a human pilot and will respond just like a human pilot, albeit with a slightly funny voice." That NLP-to-ATC capability matters a lot and I will come back to why in the moat section. If the flight profile is disrupted, Merlin Pilot can autonomously generate an alternative route or assist with an emergency landing. The system is being certified under DO-178C Level A (I hope I got that right), which to my understanding is the most stringent safety classification for aviation software. At that level, the certification authority demands full traceability from every software requirement down to the code that implements it and back up to the test that verifies it. Nothing ships without that chain being complete. The process is measured in years as you can imagine.

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The company was founded by Matt George in late 2018 and went public just a few months again in March, via a business combination with Inflection Point Acquisition Corp IV, a SPAC sponsored by Michael Blitzer of Kingstown Capital. It now trades on NASDAQ under MRLN with roughly 109 million shares outstanding following a second PIPE that closed last month. The Merlin Pilot has logged hundreds of autonomous flights across a range of airframes that spans the full spectrum of fixed-wing aviation, from sub-500-pound experimentals like the Rutan Long-EZ up to four-engine military transports like the C-130J. In between, the system has flown on the KC-135 Stratotanker, the Cessna 208B Caravan, the Beechcraft King Air, and the de Havilland Twin Otter. It is flight-tested engineering across genuinely different aircraft architectures. For those of you who are aircraft enthusiasts, that may sound exciting to hear. Me personally? I had to look up some video footage to get an idea of what the company was actually dealing with. From small experimental airframes to large military transports. Aircraft-agnostic architecture is demonstrated across a genuinely diverse fleet and that is pretty important. With this being an industry of growing interest as AI takes over more and more aspects of more and more sectors, is Merlin the only company in the sector looking for that holy grail of AI autonomy flight systems (please tell me some of you understood that King Arthur reference)? Of course not, especially during a time where everyone and their goldfish are busy with AI.

That brings me to other players in the sector, such as Reliable Robotics. Reliable was founded in 2017 by Robert Rose, who previously ran autopilot engineering at both SpaceX and Tesla, which is probably the single most relevant engineering pedigree on the planet for this exact problem. The company just raised $160 million in April 2026, led by Nimble Partners with participation from RTX Ventures (the venture arm of the company formerly known as Raytheon), AE Ventures (a Boeing strategic partner), and Coatue, valuing the company at close to $1 billion. They have over 200 system commitments from commercial and military customers. They completed FAA Detect and Avoid testing in April 2026 and are pressing for full FAA certification by 2028. They were selected for the FAA's Advanced Air Mobility Integration Pilot Program with the City of Albuquerque, which will mark the first commercial operation of regional air cargo by a large uncrewed aircraft in the US. They have a $17.4 million Air Force contract for autonomous Cessna Caravan operations in the Indo-Pacific. They hold the only FAA-accepted autonomous aircraft certification plan for full aircraft automation. And they also have a CRADA with the Air Force on A-GRA, signed before Merlin's.

The critical difference between Reliable and Merlin is their approach to autonomy. Reliable is building a fully uncrewed system with a remote pilot monitoring from a ground station. Merlin is building a system that works alongside human pilots in the cockpit, reducing crew from two to one (or eventually from one to zero). Reliable's approach is arguably more ambitious on the pure autonomy spectrum, but Merlin's approach may be more commercially viable near-term because it does not require the same regulatory leap. Reducing a crew from two to one is a fundamentally easier certification ask than removing the crew entirely, especially on large military transports and commercial cargo aircraft. Also worth noting, Reliable's fleet focus is currently concentrated on smaller aircraft, particularly the Cessna 208 Caravan. Merlin has already demonstrated integration with large military transports including the C-130J and KC-135, which are multi-engine, multi-crew, complex aircraft that present significantly harder integration challenges. The market may ultimately be large enough for both, but if I had to bet on who gets the large military transport contract conversions first, the C-130J PDR completion gives Merlin a meaningful head start in that specific lane. A head start doesn't mean they will be the ones to reach the finish line first, but it's still a head start.

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Let's see, who else do we have in the ring with us? Let's move over to Shield AI, which tries to have a name as good as Merlin Labs and sits at $12.7 billion in private valuation after raising $2 billion in March 2026. Their Hivemind autonomous pilot platform is designed for tactical combat operations in GPS-denied environments and was selected for the Air Force's Collaborative Combat Aircraft prototype program in February 2026. Shield AI's Hivemind flew on Anduril's Fury drone during the A-GRA validation flights and has been tested on F-16s. With projected revenue exceeding $540 million in 2026, Shield AI is a genuinely large and well-funded competitor in the autonomous aviation space, but their focus is overwhelmingly on tactical combat operations (fighter jets, combat drones, swarm coordination) rather than on the cargo/tanker/transport retrofit market that Merlin is targeting. Shield AI builds the tactical brain at what the Air Force calls the mission autonomy layer. Merlin builds the safety-critical flight control layer below it. They are not directly competitive today, and the A-GRA architecture is designed to let them coexist.

Moving on to Anduril, which sits at roughly $30.5 billion in private valuation and was reported in March 2026 to be pursuing a $4 billion round at $60 billion. Their Fury drone program moved from initial design to first autonomous flight in under 19 months, which is extraordinary for hardware but reflects an engineering philosophy that is almost diametrically opposed to how certified flight control software gets developed. Anduril is a vertically integrated company by instinct and preference. The risk for Merlin is if Anduril decides it wants to own the certified safety layer underneath its own airframes, it has the capital and the talent to build one. The counterargument is time, as it often is. Standing up a DO-178C Level A practice and pushing it through to certification is a multi-year, capital-intensive grind that would cost hundreds of millions of dollars, against a competitor that has been doing exactly that work since 2018. The question is whether they will commit to this route, but right now I would still file them under a potential competitor.

And last but not least, legacy primes (Honeywell, GE Aerospace, Northrop Grumman, Collins Aerospace) are the fourth competitive category. So, is Merlin trying to be David against the Goliaths of the industry? Not in this instance it appears and this is where the story gets very interesting, because three of the four have already chosen to partner with Merlin rather than build the autonomous layer in-house. David, meet Goliath, I think you two will get along really nicely. This is also where the story gets very interesting, because three of the four have already chosen to partner with Merlin rather than build the autonomous layer in-house. GE Aerospace announced in September 2025 that Merlin would work alongside its Flight Management System, the software backbone installed across more than 14,000 commercial aircraft worldwide, beginning with the replacement of aging cockpit components. Honeywell formalized a partnership in October 2024 to bring Merlin's autonomy capabilities into its aerospace technology portfolio. A company like Honeywell cannot credibly market crew-reduction technology without alienating the airlines and military operators who buy its avionics, but it can integrate with an outside platform that does exactly that, preserving its position in the cockpit ecosystem while someone else absorbs the political and commercial risk of the automation argument. Northrop Grumman signed an agreement in June 2025 to run Merlin through its Beacon flight operating system testbed for mission-autonomy validation. These are incumbents who looked at the transition to autonomous flight, recognized that building the product internally would mean telling their own customers that their pilots are replaceable, and decided they would rather partner with someone else who can carry that message. Could that be Merlin? They already have a foot in the door, so let's see if they can deliver.

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Alright that just about covers the competitive landscape, now let's focus on the moat (Get it? Because Merlin's association with the tales of King Arthur? Alright I will stop with the 9th century literature references now). First, the NLP-to-ATC integration. Aviation today runs on voice communication between pilots and air traffic controllers. That system is not going to change any time soon. It is deeply embedded in global infrastructure, regulatory practice, and operational culture. Any autonomous system that wants to operate in real-world airspace needs to talk to ATC, understand ATC and respond to ATC the way a human pilot does and not like an entity from the terminator. Merlin, as far as I can tell and again this is no my expertise, is the only one that has built this capability into their core architecture. The system parses different accents, handles frequency congestion, filters for its own call sign, and responds in real-time. It is foundational to how the system operates. Reliable Robotics, by contrast, uses a ground-based remote pilot to handle ATC communication, which works for their fully uncrewed model but requires continuous ground infrastructure and introduces a communication link that can fail. Merlin's NLP approach eliminates that dependency entirely. Airbus has experimented with NLP through its UpNext DragonFly demonstrator, and DLR (the German Aerospace Center) has conducted research in the same area, but neither has a system in production or approaching certification. Merlin has a multi-year head start and, more importantly, a growing proprietary dataset of ATC interactions across different airports, accents, weather conditions, and operational scenarios. Every flight the system makes adds data that makes the NLP more robust. The shovels to dig the moat so to speak.

Second, aircraft-agnostic architecture with demonstrated multi-platform integration. Merlin has flown its system on seven different aircraft types across three countries. Every new aircraft integration generates engineering knowledge about how different flight control systems, avionics stacks, and sensor suites interact with the Merlin Pilot. That cross-platform experience compounds over time and makes each subsequent integration faster, cheaper, and more reliable. George said on the Q1 earnings call that "every aircraft we equip will generate data that makes the system smarter" and that "the more we fly, the more valuable the software becomes, and the harder it becomes for anyone else to replicate what we have built." That is a classic platform network effect, though it is still in its very early stages of course.

Third, the certification pedigree. DO-178C Level A certification is hard and genuinely expensive, like a diamond on paper, it is also genuinely durable once achieved. Once Merlin has a Supplemental Type Certificate on one aircraft type, the regulatory pathway for subsequent aircraft types becomes faster and cheaper because the core software has already been certified. The first STC is the hard one. Each subsequent one leverages the same certified codebase with aircraft-specific adaptations. This is why Merlin is pursuing NZ CAA certification first, because the bilateral recognition agreements between New Zealand, Australia, Canada, the UK, and the US create a pathway where one certification can accelerate recognition across multiple jurisdictions. Merlin has completed SOI-1 and SOI-2 with the NZ CAA, working in partnership with the FAA, and is aiming to be the first entity to achieve certified fully automated takeoff-to-touchdown flight on a fixed-wing aircraft. Does this add up to a moat? I would say it is a moat in formation. The NLP dataset, the cross-platform engineering knowledge, and the certification basis are all genuine competitive advantages that will compound over time if Merlin executes, but they are not yet entrenched enough to call them a durable moat just yet. The moat hardens materially once the first STC is issued, because at that point Merlin has something no competitor has, a certified AI pilot on a manned aircraft. That certification event, expected in the 2027-2028 timeframe, is the moment the competitive advantage becomes more locked in place.

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Time to discuss demand and given I am a commodities guy, it's my favorite part of the thesis and this is where the thesis gets some more teeth, so let me lay it out with the data. The US airline industry is living through what the industry calls the "Silver Tsunami." Roughly 4,300 senior captains are hitting mandatory retirement age every year through 2042, peaking between 2026 and 2028. The National Air Carrier Association projects a peak shortfall of 24,000 pilots in 2026. This is happening right now. The FAA capped Chicago O'Hare at 2,708 daily flights through October 2026 to prevent a system-wide collapse during peak summer travel. American Airlines recorded 614 delays in a single day in mid-May. More than 500 regional aircraft are currently parked due to staffing shortages. 324 communities have lost scheduled air service entirely.

The 1,500-hour ATP rule, enacted after the 2009 Colgan Air crash, means it takes five to seven years for a new pilot to qualify for airline employment. That pipeline cannot be shortened without a legislative change that ALPA, the largest pilots' union, vigorously opposes. The FAA Reauthorization Act of 2024 upheld both the age-65 retirement mandate and the 1,500-hour requirement. Congress is not fixing this, even though they should probably have a mandatory retirement age as well, but that's a story for another day. Meanwhile, the economics of hiring pilots have moved sharply against operators. Crew costs overtook fuel as the single largest line item for US airlines in 2024, reaching over 35% of total operating expenses. The major carriers handed pilots 30-50% cumulative pay increases between 2023 and 2025 under contracts negotiated from a position of structural scarcity. A senior widebody captain at Delta or United now takes home north of $450,000 per year. Boeing forecasts global demand for 674,000 new commercial pilots through 2043.

On the military side, the Air Force has been running a structural pilot deficit of around 2,000 aviators against its stated requirement for more than a decade, and has publicly called the situation a "chronic problem." What most people outside the defense world do not realize is that large portions of military flight operations have already been handed to private contractors. The DoD runs Contractor-Owned, Contractor-Operated programs where private companies fly military aircraft under contract. Metrea Strategic Mobility, for example, operates a fleet of KC-135 tankers for the Air Force with its own pilots and its own aircraft. Pilot training programs have been contractor-run since the early 1990s. The important framing here is that Merlin is not trying to replace uniformed military aviators. It is aiming at the contractor pilot seat, a role the Air Force long ago decided it was comfortable outsourcing and should now again be comfortable outsourcing it to capable AI, at least in theory. The FY2026 defense budget carved out over $13 billion for autonomy as a dedicated spending category for the first time, and the Air Force has publicly committed to fielding at least 1,000 CCAs by the end of the decade. These are structural forces driven by demographics, regulation, and budgetary priority, and they are all moving in the same direction to create a pretty robust demand side picture for Merlin.

Has the company actually already signed anything in that case if their tech is so good and there is so much demand? Well, yes, in a certain sense. Merlin's existing contracted base consists of two primary military programs, with a commercial pipeline now beginning to take shape. The $105 million USSOCOM IDIQ contract, signed around mid-2024 under SBIR Phase III sole-source authority, covers design, integration, ground testing, flight test, and a full takeoff-to-touchdown demonstration on the C-130J Super Hercules (Hercules and Merlin, what a combination), with contracted scope to extend to the broader Special Operations Forces fixed-wing fleet. The initial task order was roughly $15.9 million. Merlin completed the Preliminary Design Review in March 2026, clearing the path to Critical Design Review and then flight demonstration.

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On the Q1 earnings call, George confirmed that CDR is the next milestone and that the C-130J integration will be "the first time autonomy flies on an operational Air Force aircraft." I want to be a bit more precise about language here, because I have seen analysts paint this as a home-run slam dunk full on contract that will translate into a bag of cash being dropped off at Merlin's office building. The $105 million is a contract ceiling, not cash collected. The C-130J fleet is roughly 300 aircraft. If Merlin converts even a fraction of that fleet to production, the revenue implications are significant, but production conversion requires follow-on awards that have not been made yet. A good contract to have and a foundation to build upon going forward, but I am not here to just be bullish, I am here to look at and carefully consider every aspect of the company.

Moving on, the $16 million KC-135 program at MacDill AFB targets the 376-aircraft tanker fleet. This is currently in a testing and data collection phase with the 6th Air Refueling Wing and has not yet converted to production. I want to note something here because it matters for how you size this and how you think about the risk. Neither of these contracts is a binding production conversion agreement. Both are development-phase vehicles. The C-130J IDIQ is structured so that the government can issue task orders against a $105 million ceiling, but is under no obligation to issue any specific volume of work beyond what has already been task-ordered (roughly $15.9 million to date). The path from where Merlin sits today to actual fleet conversion runs through several gates that have not yet been passed, including things like the Critical Design Review, system integration, ground testing, flight demonstration, and then, if all of that succeeds, separate production task orders or follow-on contracts to begin converting operational aircraft. The 300 C-130J and 376 KC-135 fleet numbers that circulate on social media are the total fleet sizes for those aircraft types. They are the addressable market, not the contracted market and I was getting pretty tired of some people not making that distinction, even though I may just be too conservative. Well, better to be too conservative and be proven wrong on that front than the other way around. Anyhow, the IDIQ gives Merlin the platform and the relationship to compete for production work, and the SBIR sole-source authority gives them an advantaged procurement path, but there is nothing in the existing contract structure that commits the government to converting a single operational aircraft beyond the demonstration phase. Anyone modeling revenue off "676 aircraft under contract" without understanding that distinction is building on a foundation that does not exist yet. It might, sure, and Merlin is doing a lot of things right, but it's not there yet and that of course also plays a part in the valuation as the market cap would look a lot different if Merlin would already have secured all this.

The Condor product family, announced alongside Q1 earnings on May 14, extends the Merlin Pilot into large, multi-crew commercial cargo aircraft. Merlin has signed a non-binding MOU with World Star Aviation, a freighter lessor, to explore integration of Condor into the passenger-to-freighter conversion market. George told Aviation Week that the progression "is always going to be military, cargo, passenger," which is the right sequencing from both a regulatory and market perspective. The P2F conversion market is at record volume right now, and integrating autonomy during conversion is substantially cheaper than retrofitting it after the fact. That timing window is real and it is open now. The UAE teaming agreement with Remah International Group, signed mid-April, is the first concrete signal of international expansion beyond the New Zealand certification track. Merlin also secured a position on the MDA's SHIELD contract vehicle in late 2025, the procurement framework underpinning the Golden Dome missile defense initiative with a total ceiling north of $150 billion. That award is entirely separate from and additive to the cargo and tanker programs. No, they are not getting $150 billion in contracts, but yes it is good that they have a seat at the proverbial table.

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Alright, now who is backing this thing? The quality of the capital behind this company is worth spending a bit more time on then I originally planned, obecause it tells you something about who has done the work. Baillie Gifford, the Scottish investment house with a well-documented history of identifying generational technology companies before the market catches on, was already on Merlin's cap table before the SPAC process began. They came back for the PIPE. They came back again when the PIPE was upsized past $200 million. And in April 2026, an "existing fundamental institutional shareholder" (the filing language points strongly toward the same firm, though they were not named) committed another $80 million at $10 per share with warrants at $6.67. That deal closed May 1 and pushed total cash to $183 million. I do not know of many institutional investors who write four separate checks into the same pre-revenue defense technology company at escalating prices. That pattern of repeated participation from a firm whose entire reputation rests on concentrated, long-duration bets in category-defining companies is not something I ignore, but the Baillie Gifford signal, as strong as it is, is not the most important tell in the cap table. The insider alignment is, as usual.

Please correct me if I am wrong on this one, but it appears that every single legacy Merlin shareholder chose to roll the entirety of their private equity into public shares at close. I tried to double check this and it appears nobody took partial liquidity, nobody hedged and nobody sold a side allocation to de-risk personal exposure. In most SPACs, insiders take a slice off the table at combination, which is rational behavior for anyone who has spent years building something and wants to lock in some personal downside protection. George and his team went the other direction it seems, as they bound every share under lock-up agreements that prevent sales, pledges, and hedging for a defined period. This was not a conventional IPO where early backers rotated out through the listing process. It's a public debut where every pre-existing owner made a deliberate choice to tie their financial future entirely to the public stock. That includes George, as sole founder and CEO, as he controls a significant portion of that allocation and that means he is absorbing every dollar of downside on the same terms as any public market participant. There is a difference between talking about conviction and demonstrating it. Watching your net worth fall by tens of millions of dollars with no real exit mechanism while continuing to hire, invest in R&D, and raise capital at the same time has to be some pretty good motivation I would say.

Moving on, Blitzer's Inflection Point vehicle holds roughly 8.80 million locked-up shares. The majority are standard SPAC founder shares acquired at nominal cost, with a smaller tranche from private placement units. Blitzer is not a first-time SPAC sponsor chasing promote economics. He spent years at Gotham Capital learning special situations investing from Joel Greenblatt before building Kingstown Capital into a multi-billion dollar platform. His previous SPAC deals have performed decently well and his economics on Merlin are structured to pay off only if the stock performs over time, which is the right alignment structure for a long-duration holder. The 90.3% redemption rate at the merger vote is the third piece of cap table context that matters. The headline sounds damning. Nine out of ten public shareholders wanted out. But what the redemption mechanically accomplished was the elimination of 22.55 million shares of short-duration SPAC capital, collapsing the public float to roughly 5 million shares or about 5% of total shares outstanding. The ownership base that remained is heavily concentrated among the founding team, the sponsor, PIPE participants, and long-duration institutional capital. That creates a float dynamic where relatively small amounts of institutional buying or selling produce outsized price moves, which is exactly what the April run from $6 to $17 demonstrated.

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The board that came together around mid-April includes a former Secretary of the Navy, Amazon's first Chief Accounting Officer, and a former Blue Origin CEO. That is not the kind of governance bench you assemble for a company you expect to not deliver at least some of the goods. Not a guarantee of course, but people make a company, especially if there is no mineral deposit doing the heavy lifting like with mining, but I digress. Citron Research, historically one of the most aggressive short-sellers in public markets, published a public note in October 2025 calling BACQ (the pre-merger ticker) "the most compelling risk/reward stock in the market today" and suggested the stock could "easily rise to $30." Citron compared Merlin's $800 million valuation on real defense contracts against IonQ's $23 billion on largely theoretical quantum computing. When a career short-seller goes long publicly, that is one of the strongest conviction signals in the market, at least in my opinion. Citron's entire reputation is built on distinguishing companies that sell narrative from companies that sell measurable outcomes. They short the narrative companies. They went long on Merlin, which tells me that this company is more than just a fancy Powerpoint presentation, although I will say that those are pretty good to from what I have seen.

Roth Capital analyst Suji Desilva initiated coverage in mid-April with a Buy rating. He called Merlin an "aerospace neoprime" and set a $15 price target (initially $15, raised to $25 on April 16 after reviewing filings, then cut back to $15 after Q1 earnings, so I wouldn't pay too much attention to the price targets itself as those tend to ‘go with the flow’). Roth's revenue estimates are $25.5 million for fiscal 2026 and $55 million for fiscal 2027. Even after the target cut, Roth maintained the Buy and noted that "Merlin is funded with post-business combination close cash to execute its operating plan for the next few years." TD Cowen was co-placement agent on the $80 million PIPE, which typically precedes an initiation of coverage. A second analyst would meaningfully expand the institutional discovery surface.

Alright, time to talk numbers and actually model this out. I am going to build three scenarios using my own assumptions and trying to be conservative where possible. I want to be honest about what the current burn rate implies for dilution, and I want to focus on where this can go rather than where it is today, because a company at this stage of development is not a current-year revenue story even if some revenue comes in. Post-May PIPE, basic shares outstanding are approximately 109 million. Fully diluted including all warrants (11 million original PIPE warrants, 4 million new PIPE warrants at $6.67, plus other convertibles), and if I got that all correct the count approaches 120-125 million. I am going to assume one additional raise of around $50-75 million before 2028, taking the terminal diluted count to roughly 125 million shares. Why? Because I am staying conservative and I could see them needing to raise capital before getting to that cash-flow positive inflection point. New-tech names always take longer than expected to roll out and scale and I don't believe Merlin will be any different. What are we getting in return for that setup? The company's stated pricing model is a $3 million upfront integration charge per aircraft followed by a $2 million annual software license. The customer value proposition is straightforward: a military aircraft with two contracted pilots runs about $7 million per year in all-in crew costs according to management, so dropping to single-pilot operation with Merlin installed pays for the annual license more than three times over. I am applying a discount to those figures for my model, using $2.5 million integration and $1.5 million license, on the logic that early-stage pricing will come in below mature pricing as Merlin needs to prove the system works at scale before commanding full freight. Again, maybe I am being too conservative, but that's what I am running with.

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Alright, time to discuss the three Bs. Starting with the bear case, which ironically includes Merlin successfully completing the C-130J flight demonstration (which is not yet guaranteed and requires passing CDR, integration, and ground testing first, so I guess the real bear case is them not delivering anything at all, but bear with me for a moment), wins production follow-on awards, and converts 150 aircraft of the 300-unit fleet over five years. Both CDR and flight demo slip six months from current timelines. KC-135 stalls at the testing phase and does not progress to production. Civil certification takes until 2029-2030. Condor commercial pipeline does not materialize meaningfully. One more dilutive raise at a discount. It is worth being explicit that even this bear case requires Merlin to clear hurdles it has not yet cleared. The demonstration has to work. USSOCOM has to be satisfied enough to issue production task orders. The SBIR sole-source pathway has to remain available. If the demonstration fails outright or the government decides not to proceed to production, the bear case does not hold and the downside is materially worse than what I model here (the polar bear case I would call it). I consider that a low-probability outcome given the PDR completion, the institutional backing, and the structural demand, but it is not a zero-probability outcome. Mature annual revenue by 2031 comes in at roughly $225 million recurring plus integration fees. Call it $275 million total. At 7x EV/Revenue (defense contractor with limited recurring base), that's a terminal EV of $1.9 billion. Add $100 million net cash for a nice round number and on 125 million shares that is roughly $16 per share, or about the recent peak.

As for the base case, that would include Merlin converting 250 C-130Js and 200 KC-135s (450 aircraft) over five years. CDR on schedule, flight demonstration in 2027, production conversion beginning 2028. KC-135 program converts to production in 2027. NZ/FAA certification achieved by 2028. Condor picks up 50-100 commercial cargo aircraft through the P2F conversion channel. Mature annual revenue by 2031 would sit roughly around $750-800 million total including integration fees and licensing. At 12x EV/Revenue (software-like margins on defense-anchored recurring base, discounted from pure SaaS because margins are not yet demonstrated), it would have a terminal EV of $9.6 billion. On 125 million shares again, that is roughly $77 per share. Now we are talking.

Now for the bulls and what is driving the clickbait title on this piece. Merlin converts 400 C-130Js, 300 KC-135s, picks up 300 commercial cargo aircraft through Condor/P2F, and begins international expansion through UAE and Five Eyes allied programs. Certification unlocks additional Part 25 aircraft types. GE FMS integration opens access to a portion of the 14,000+ commercial fleet. Mature annual revenue by 2032 comes in at roughly $1.5-1.8 billion total. At 15x EV/Revenue (genuine platform company with defense plus commercial recurring revenue and demonstrated data flywheel), it clocks in with a terminal EV of roughly $27 billion. With the standard share count assumption, that's roughly $216 per share, or about 35x from today.

After seeing the Q1 data (which I expected to be light given the development-phase contract structure) and the subsequent Roth target cut, I am weighting these 35% bear, 45% base, 20% bull. Yes, I am weighing the bear case higher than the bull case. Did I mention I wanted to be more conservative when it comes to an early stage AI autonomy company? More importantly though, the bear case itself is 2.7x from here. The only path (and it's still a path to carefully consider of course) to losing money from $6-7 is if Merlin fails to execute on the C-130J entirely, burns through its cash, and gets diluted to zero. Given the institutional backing, the $183 million cash position, the PDR completion, and the automated takeoff milestones already achieved, I do not consider that probable. Possible, absolutely, it's always possible. Probable, no, at least not at the moment.

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Well then, 10 pages already? My apologies, I can imagine it is getting pretty long of tooth, but we are almost there I promise. There is plenty to be bullish about when it comes to this company, but I wouldn't be doing my job if I didn't discuss the bear side of the equation as well (more so than what I discussed on the previous page) an there are a few things I want to take note of. Firstly, the burn rate is real. Q1 adjusted EBITDA loss was $23.3 million, up 124% from Q1 2025. Operating expenses hit $28.8 million for the quarter. Net cash used in operations was $23.6 million. That annualizes to roughly $93 million. Can something like this be annualized? Of course not, but it's the closest data point I have to a burn-rate and so that is what I am running with for now. Against $183 million of cash, the runway is approximately two years before the company needs to either demonstrate meaningful revenue or raise again. Management said on the call that they are "spending ahead of platform leverage expected to be generated," which is founder-speak for investing ahead of revenue. It is probably the right call at this stage of development, but it means the margin for execution error is thinner than the bulls acknowledge. Revenue is minimal and has been minimal as you can imagine. Q1 revenue was $1 million and trailing 12-month revenue is $7.5 million. The 2026 revenue guide of $32 million from management requires a dramatic back-half acceleration that may or may not materialize depending on IDIQ task order timing. Roth is modeling $25.5 million, which is already a 20% haircut. On current-year multiples, this stock is not cheap by any traditional metric, but the entire thesis is a forward-curve bet and if you are investing in it for this year's revenue then you may want to find a different company to analyze.

The NZ certification path is not a guaranteed shortcut either. New Zealand CAA certification is a faster track than the US FAA alone, and bilateral agreements do exist, but bilateral recognition of airworthiness approvals is not the same as automatic conversion of an NZ STC to a US STC. The FAA maintains independent authority and can require additional work. The NZ route accelerates the timeline but does not guarantee it, and SOI-3 to STC issuance is where the real regulatory difficulty begins and they will have to jump that hurdle.

SBIR eligibility risk also remains present . The USSOCOM contract was awarded through the Small Business Innovation Research program, which carries size requirements that Merlin could outgrow as its valuation and headcount increase. Existing awards are protected, but the sole-source procurement advantage that landed the C-130J program may not be available for future contract competitions if Merlin exceeds the SBA thresholds. There is an irony in the structure where success on the current contracts could close the door on the mechanism that made them possible, but still a bear case that I want to discuss.

Reliable Robotics is a serious competitor, as I noted earlier. $160 million just raised at nearly $1 billion valuation. Over 200 system commitments. FAA certification plans accepted with means of compliance approved. Selected for the FAA's eIPP. $17.4 million Air Force contract already operational. CEO Robert Rose has SpaceX and Tesla autopilot pedigree. If the Air Force decides it wants one certified autonomy substrate and there is going to be a single winner, Reliable is as likely to get picked as Merlin on the pure certification track. Something to think about, they are not the only fish in this pond, even if they do have the best name. Oh and finally, the track record for companies that came public through SPACs is bad enough that a significant number of institutional funds have standing policies against owning them regardless of the underlying business. That categorical bias is a real weight on the stock and may take longer to burn off than the fundamentals justify. The float is nothing to write home about and the stock went from $5.88 to $17.00 and back to $6 in the space of six weeks. Position sizing has to reflect all this, not just the upside potential.

MERLIN LABS ANALYSIS

And we are almost at the end, finally. What are the catalysts I am watching out for? C-130J Critical Design Review is the single most important near-term milestone. George confirmed on the earnings call that CDR is next after PDR, and it needs to happen before system integration, ground testing, and flight demonstration can proceed. If CDR completes on schedule in Q3-Q4 2026, the thesis stays on track. If it slips materially, the revenue ramp shifts right and the cash question comes back into focus. Second, Q2 2026 revenue. If it comes in at $5 million or above, it signals task order acceleration and gives the forward estimates some credibility. Q2 results should land in a few month's time, so keep a close eye on that. Third, additional sell-side coverage. TD Cowen is the most likely next initiator given their role as co-placement agent on the PIPE. A second analyst with a constructive view would materially expand institutional awareness. No, sadly I don't count.

Let's see, what else? Ah yes, we also have NZ CAA SOI-3 progression. Merlin has completed SOI-1 and SOI-2. SOI-3 is where the certification rubber meets the runway and would represent a genuine step-change in the credibility of the civil timeline. There is also the KC-135 program expansion beyond the current $16 million testing contract. A production contract or significant program expansion would validate the aircraft-agnostic thesis and provide a second revenue pillar. Finally, any Condor commercial cargo contract converting from the non-binding MOU stage to something binding. The World Star Aviation relationship is preliminary today. If it converts, it opens a commercial revenue stream that is entirely outside the defense budget cycle.

Now for my final trick (get it? Merlin being a wizard? Alright I will see myself out), a conclusion after 11 pages and something resembling a TLDR. At $6 today, the market is pricing Merlin like a busted de-SPAC with a $1 million revenue quarter and a $90 million loss. The near-term financials are ugly on paper, but the market is, in my view, significantly underpricing what this company can become over a three-to-five year horizon. The $105 million IDIQ is real. The PDR is complete. The automated takeoff milestones in April, one in the US and one in New Zealand, are real engineering achievements that I applaud. The SOI-2 completion represents genuine certification progress that no competitor has matched on this specific class of system. The institutional backing from Baillie Gifford and the continued PIPE participation at prices well above where the stock currently trades is a signal that experienced capital allocators know how to read. The three largest aviation incumbents, Honeywell, GE Aerospace, and Northrop Grumman, independently concluded they are not looking to build this themselves and chose to partner with Merlin instead and the structural demand from pilot shortages, defense autonomy budgets, and the cargo conversion market is not going away. If anything, the May 2026 aviation disruptions across the US are making the case for crew reduction more urgent, not less.

Even the bear case is like 3x from here. That is pretty asymmetric, the kind where you risk one to make three in the bear case (you still risk one, as is always the case, don't forget that) and potentially ten or more in the base case. The question is not whether Merlin is interesting, because it is even for someone like me that has no background in this sort of stuff. The question is whether you can stomach the volatility, the risk and the timeline. If you need to be right in the next quarter, this is not the trade. If you can size it to hold through 2 years of noise, potential additional dilution and the inevitable moments where the stock does something terrifying for no fundamental reason, the risk-reward profile from here is very interesting. I am treating this as a position I intend to build into on evidence of CDR completion and the first signs of revenue inflection. The art, as always, is in the sizing and the timing, so make sure to consider that and do your own research as well. I hope it proves to be informative and that you have a good and healthy rest of your day, cheers! ~Mart

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