What the FCC's Latest Action Means for Physical AI Investors

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Key Takeaways

- On July 28, 2026, the FCC updated its Covered List to block new foreign-produced advanced robotic devices from receiving the equipment authorization required to enter the U.S. market.
- China controls more than 94% of global rare-earth supply according to the IEA, making U.S. robotics supply chain localization a challenge measured in industrial cycles, not quarters.
- The WisdomTree Physical AI, Humanoids, and Drones Fund (WDRN) excludes Chinese-domiciled companies and holds names like Tesla, AeroVironment and Harmonic Drive Systems that are directly aligned with U.S. policy tailwinds.

The U.S. government has now extended its national security perimeter to cover AI-enabled robots. For investors in physical AI, the direction of policy has become hard to ignore.

On July 28, 2026, the Federal Communications Commission updated its Covered List to prohibit new foreign-produced advanced robotic devices, defined as mobile robots, including humanoids and quadrupeds, from receiving the equipment authorization required to be imported, marketed, or sold in the United States. Connected power inverters were added under the same action. The White House convened an interagency national security panel that determined these foreign-made products, regardless of nationality of origin, "pose unacceptable risks to the national security of the United States or the safety and security of United States persons."1

For investors tracking the physical AI space, this development deserves more than a passing read.

What Was Announced, and How It Works

The mechanism matters as much as the headline. Most electronic devices require FCC equipment authorization before they can enter the U.S. market. Robots qualify under this requirement because they carry embedded WiFi, Bluetooth, or cellular radios. By placing foreign-produced advanced robotic devices on the Covered List, the FCC has effectively blocked new foreign models from obtaining that authorization.

Importantly, this action applies to new models only. Existing authorized devices already in the field are not retroactively banned, and retailers can continue selling previously approved inventory. It also does not affect federal government purchases.

However, this is not a standalone move. The FCC's Covered List has now been extended in a clear, accelerating sequence:

- Huawei and ZTE telecom equipment in 2021
- Foreign-made drones and critical components in December 2025
- Consumer-grade routers in March 2026
- Robots and power inverters in July 2026

One framing could look something like this: "The administration increasingly treats the full AI hardware stack, which includes compute, power, and now embodied/physical AI, as a single national-security perimeter."2

The action runs through executive-branch authority rather than new legislation, though a bipartisan bill called the GUARD Act was already moving through Congress with effectively the same intended effect. This is not a partisan flash point; it is a durable policy trajectory.

Why the Supply Chain Dimension Is the Real Story

On its face, the rule targets finished devices, humanoids and quadrupeds. But the operative definition of "foreign-produced" creates significant downstream pressure on the component supply chain. Under the Buy American framework the FCC applies, a robot must be U.S.-assembled with roughly 65% domestic content by value to qualify as a domestic end product. A U.S.-assembled humanoid packed with Chinese actuators still fails that test and is denied authorization.

This matters because the U.S. robotics supply chain remains deeply exposed to China at the component level. Rare-earth permanent magnets, essential to motors, servos, and actuators in virtually every robot, are dominated by Chinese production. China controls more than 94% of global rare-earth supply according to the IEA.3 Actuator subcomponents combined with rare-earth-dependent motors can account for more than 50% of a robot's total value. Sitting in July 2026, nearly every robot company in the United States relies on China in some form.4

The implication is that this action, while framed around finished devices, creates structural pressure toward supply chain localization that will take years, possibly decades, to resolve. The U.S. manufacturing gap with China in this domain is not measured in quarters. It is measured in industrial cycles.

How WDRN Is Positioned

The WisdomTree Physical AI, Humanoids, and Drones Fund (WDRN) is designed to capture the global physical AI ecosystem, including autonomous systems, humanoid and collaborative robots, drones, precision motion, and the AI compute and sensing infrastructure that connects them, while deliberately excluding direct exposure to Chinese-domiciled companies. That construction, which reflects a considered view about where durable competitive advantages and policy tailwinds are concentrated, is now directly aligned with the direction of U.S. government action.

The demand-side protection flows to the portfolio. The companies that stand to benefit from restricted Chinese competition, non-China original equipment manufacturers (OEMs) including Tesla5 (Optimus), Boston Dynamics6 (through Hyundai), Figure and Agility, to name some examples. These companies potentially gain a more protected domestic runway to scale. Tesla's domestic manufacturing footprint and its ability to integrate AI, compute, battery technology, and robotics across a single platform give it a particularly differentiated position in an increasingly protected U.S. market.

The defense drone holdings are aligned with the policy's intent. AeroVironment,7 Red Cat Holdings8 (Blue UAS certified) and Unusual Machines9 all operate in the U.S. defense-drone ecosystem, which has been explicitly reinforced by sequential FCC and procurement actions since late 2025. Unusual Machines is building its business model explicitly around NDAA-compliant replacement of Chinese drone components, a company whose commercial thesis is essentially the policy in action.

The precision motion holdings represent a structural supply chain answer. As the U.S. attempts to build vertically integrated robotics capacity, precision reducer and actuator manufacturers become strategically critical inputs. WDRN's exposure to Japanese precision robotics names, including Harmonic Drive Systems10 and Nabtesco,11 which lead in the high-precision strain-wave and cycloidal reducers used in humanoid joints, positions the portfolio in the component segment where non-Chinese alternatives are most technically competitive and hardest to displace.

The China supply chain exposure within WDRN is real but largely shallow. A detailed analysis of portfolio holdings estimates a base-case weighted China component content of approximately 11–12% across the fund, with a majority of holdings having some level of probable exposure, concentrated at commodity inputs such as rare-earth magnets, printed circuit boards (PCBs), and battery materials rather than core intellectual property or final systems assembly. The highest exposures are in battery technologies, motor and motion-control companies with global supply chains, and smaller mobile-robot OEMs.12 Notably, the highest-value intellectual property (IP) and final-system design across the portfolio is predominantly outside China, which limits both the direct regulatory risk and the vulnerability to retaliatory export controls.

Importantly, in July 2026, it is difficult to find companies in physical AI with literally zero percent exposure up and down the value chain to China, particularly China-sourced components, so we are seeking to help people see the most honest picture of the strategy.

The broader policy read-through points in one direction. It’s possible that the next likely policy steps include targeted controls or procurement restrictions on actuators, magnets, batteries, cameras, and autonomous-system components, the same supply chain inputs where WDRN holdings like Unusual Machines, AeroVironment, Allient13 and Regal Rexnord14 are already active. The fund is not simply a passive beneficiary of today's announcement. It is positioned in the segment of the physical AI ecosystem that U.S. policy is actively trying to strengthen.

The Bigger Picture

This is competition and entanglement simultaneously. The U.S. and China are deeply intertwined in the robotics supply chain, and paradoxically, China will remain a critical enabler of U.S. capacity-building in the near term even as policy pushes toward decoupling. That tension will not resolve quickly.

What has changed is the signal clarity. An AI-enabled robot "checks all the dual-purpose boxes from a national security perspective." It is economically multiplicative, militarily relevant, and potentially socially disruptive. The U.S. government has now said that explicitly, through binding regulatory action, and made clear it intends to continue.

For investors thinking about physical AI as a multi-decade structural theme, the question is not whether U.S. policy will continue to favor domestic and allied-nation physical AI ecosystems. The question is who is best positioned to benefit when it does. WDRN was built with that question in mind.

1 For the descriptions of FCC policy, the source, unless otherwise noted, is: Federal Communications Commission. (2026, July 28). *Fact sheet: FCC updates covered list to include foreign-produced advanced robotic devices and power inverters*. Federal Communications Commission.

2 Source: Jonas, A., Tackett, W., Percoco, A. S., & Haigian, D. M. (2026, July 30). *Thoughts on US robot protectionism* [Research update]. Morgan Stanley & Co. LLC.

3 Source: International Energy Agency. (2026, May). *Rare earth elements: Pathways to secure and diversified supply chains* (Revised version). IEA.

4 Source: Jonas, A., Tackett, W., Percoco, A. S., & Haigian, D. M. (2026, July 30). *Thoughts on US robot protectionism* [Research update]. Morgan Stanley & Co. LLC.

5 As of July 29, 2026, Tesla was 4.91% of WDRN. **Holdings subject to change.**

6 As of July 29, 2026, Hyundai was 2.48% of WDRN. **Holdings subject to change.**

7 As of July 29, 2026, AeroVironment was 1.96% of WDRN. **Holdings subject to change.**

8 As of July 29, 2026, Red Cat Holdings was 2.59% of WDRN. **Holdings subject to change.**

9 As of July 29, 2026, Unusual Machines was 2.29% of WDRN. **Holdings subject to change.**

10 As of July 29, 2026, Harmonic Drive Systems was 3.04% of WDRN. **Holdings subject to change.**

11 As of July 29, 2026, Nabtesco was 1.10% of WDRN. **Holdings subject to change.**

12 Sources include individual company websites and documentation, current as of July 2026.

13 As of July 29, 2026, Allient was 2.47% of WDRN. **Holdings subject to change.**

14 As of July 29, 2026, Regal Rexnord was 1.42% of WDRN. **Holdings subject to change.**

Important Risks Related to this Article

There are risks associated with investing, including possible loss of principal. Companies engaged in Physical AI Activities are subject to unique regulatory, operational and technological risks, such as intense competition and potentially rapid product obsolescence. The regulation of such companies in the United States and other countries is diverse and rapidly evolving, which may inhibit or delay adoption. These companies are also heavily dependent on intellectual property rights and may be adversely affected by loss or impairment of those rights. Companies engaged in Physical AI Activities typically invest significant amounts of spending on research and development, and there is no guarantee that the products or services produced by these companies will be successful. Humanoid robotics companies are sensitive to trends in industrial production, capital-expenditure cycles, supply-chain conditions, and adoption rates of automation technologies across varied sectors including business and industrial end-users.

Humanoid robotics companies may have long and capital-intensive development timelines, highly uncertain paths to profitability and large-scale deployment, and limited product lines, markets, financial resources or personnel. Drone companies may be dependent on the U.S. Government and its agencies for a significant portion of their revenues, and the commercial and military adoption of drone technologies remains subject to extensive and evolving governmental oversight, including aviation safety standards, airworthiness certification requirements, export controls, and national security reviews. A fund that has a portfolio that is concentrated in the securities of issuers in a particular industry or group of related industries, may be adversely affected by the performance of those securities, and more susceptible to adverse economic, market, political, or regulatory occurrences affecting that industry or group of related industries.

Investments in non-U.S. securities involve political, regulatory, and economic risks that may not be present in U.S. securities. For example, foreign securities may be subject to risk of loss due to foreign currency fluctuations, political or economic instability, or geographic events that adversely impact issuers of foreign securities. Investments in securities and instruments traded in developing or emerging markets, or that provide exposure to such securities or markets, can involve additional risks relating to political, economic, or regulatory conditions not associated with investments in U.S. securities and instruments or investments in more developed international markets.

The Fund invests in the securities included in, or representative of, its Index regardless of their investment merit and the Fund does not attempt to outperform its Index. The composition of the Index is governed by an Index Committee and the Index may not perform as intended. Please read the Fund’s prospectus for specific details regarding the Fund’s risk profile.