

# United States Senate

WASHINGTON, DC 20510

June 2, 2023

The Honorable Laura D. Taylor-Kale, Ph.D.  
Assistant Secretary of Defense  
for Industrial Base Policy  
3050 Defense Pentagon  
Washington, DC 20301

Dear Assistant Secretary Taylor-Kale:

I write to express my deep concern regarding Chinese Light Detection and Ranging (LIDAR) technology. LIDAR is critical to developing computer vision that serves as the “eyes” of new technology with automated military applications. It is a key component in applications automating and surveilling America’s critical infrastructure, including everything from drones to autonomous vehicles to perimeter security to port container terminals. As a result, China has identified LIDAR technology as an important component to its “Belt and Road” strategy to dominate key technologies that will enable innovation and determine the way wars will be fought for the next 100 years.

LIDAR enables the collection of an enormous amount of information on U.S. geography, human patterns and behaviors. As a result, relying on Chinese LIDAR for these everyday applications introduces significant national security risks into the U.S. economy. Even more concerning, it is my understanding that Chinese LIDAR companies are working with the Chinese Government and the People’s Liberation Army (PLA) to improve this technology and leverage it for Chinese military applications. Simultaneously, these companies have been flooding the U.S. market with low-cost, heavily subsidized Chinese LIDAR, potentially enabling the Chinese to collect a trove of valuable information.

Based on public information, my understanding is that Chinese LIDAR companies continue to work with the PLA on the development of offensive unmanned systems that put U.S. national security at risk. The PLA has been testing the use of LIDAR sensors to automate military vehicles since at least 2014,<sup>1</sup> and more recent images depict LIDAR sensors on combat vehicles.<sup>2</sup> China’s efforts to develop a technologically advanced military are well-documented. Through “Military-Civil Fusion,” China has eliminated barriers between the commercial sectors and defense sectors. In addition to their own research and development, they have also acquired emerging technology through intellectual property theft in order to modernize their military. In fact, Huawei and Da Jiang Innovation (DJI), two of the companies currently on the Department’s

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<sup>1</sup> Jeffrey Lin & P.W. Singer, *Chinese Autonomous Tanks: Driving Themselves to a Battlefield Near You?*, POPULAR SCIENCE (Oct. 7, 2014), <https://www.popsci.com/blog-network/eastern-arsenal/chinese-autonomous-tanks-driving-themselves-battlefield-near-you/>.

<sup>2</sup> Sino Defense Forum, *Unmanned Combat Ground Vehicle* (Apr. 27, 2010), <https://www.sinodefenceforum.com/t/unmanned-combat-ground-vehicle.5009/page-43>.

1260h Military-Civil fusion list, have recently established their own LIDAR companies.<sup>3</sup> Moreover, the Chinese Government is using LIDAR sensors to conduct police surveillance in the Xinjiang Uyghur Autonomous Region where evidence suggests China is engaged in ongoing genocide of the Uyghur people.<sup>4</sup>

I am concerned that Chinese LIDAR may be a component of Department of Defense equipment or, at a minimum, that government contractors performing defense contracts are using Chinese LIDAR. As an example, the Defense Innovation Unit recently announced a \$50 million contract with Kodiak Robotics, a U.S. self-driving trucking company, to help automate future Army ground vehicles by adapting its commercial self-driving software.<sup>5</sup> However, in Kodiak's promotional materials for its latest generation autonomous truck, it is clear that they are using Chinese LIDAR from the company Hesai.<sup>6</sup> The interface of Chinese LIDAR with Kodiak's software raises serious concerns about the integrity of the software solutions that Kodiak may provide to the Army.

I am confident you share my deep concern with the continued proliferation of Chinese technology in the United States and the national security risks associated with it. Therefore, I request that you provide answers to the following questions no later than June 30, 2023:

1. What is your assessment of the threats posed by the proliferation of Chinese LIDAR in the United States?
2. Have all Department of Defense entities been made aware of these risks and advised to refrain from using Chinese LIDAR in any DOD operation, procurement and contracting action?
3. Have you evaluated whether Chinese LIDAR may be a component of Department of Defense equipment or a component of a contract being performed by a DOD contractor?
4. Have you investigated the relationship between Chinese LIDAR companies and the PLA and determined whether these companies should be placed on the Section 1260h list maintained by your office?

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<sup>3</sup> Huawei, *tech giants Huawei, DJI jump on to the lidar as they eye huge potential in self-driving cars* (Feb. 5, 2021), [https://consumer.huawei.com/ph/community/details/tech-giants-Huawei-DJI-jump-on-to-the-lidar-as-they-eye-huge-potential-in-self-driving-cars/topicId\\_127662/](https://consumer.huawei.com/ph/community/details/tech-giants-Huawei-DJI-jump-on-to-the-lidar-as-they-eye-huge-potential-in-self-driving-cars/topicId_127662/).

<sup>4</sup> Gulchehra Hoja, *Driverless police surveillance cars hit streets of Xinjiang's Karamay*, RADIO FREE ASIA (July 14, 2022), <https://www.rfa.org/english/news/uyghur/driverless-cars-07142022172350.html>.

<sup>5</sup> Kodiak Robotics, *U.S. Department of Defense Awards \$50 Million Contract to Kodiak Robotics for Autonomous U.S. Army Ground Reconnaissance Vehicles*, PR NEWswire (Dec. 6, 2022), <https://www.prnewswire.com/news-releases/us-department-of-defense-awards-50-million-contract-to-kodiak-robotics-for-autonomous-us-army-ground-reconnaissance-vehicles-301695349.html>.

<sup>6</sup> @KodiakRobotics, TWITTER (Apr. 6, 2023, 12:46 PM), <https://twitter.com/KodiakRobotics/status/1644018629971955714?s=20>.

Thank you and I look forward to your response.

Sincerely,

A handwritten signature in blue ink that reads "Ted Budd". The signature is fluid and cursive, with the first and last names clearly distinguishable.

Ted Budd  
United States Senator