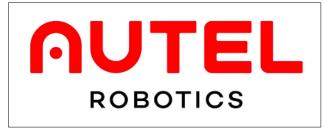
Autel Robotics

 Despite presenting itself as a US company, Autel Robotics is a Chinese drone company based in Shenzhen, China. The company has received "Little Giant" designation, in addition to government funding and preferential tax rates, indicating that the Chinese government is keen on supporting the company and the types of technology it is developing.



- Autel Robotics is still connected to its former parent company, Autel Technology, through the company's shared founder and largest shareholder, Li Hongjing, and through transactions between the two companies; Autel Technology is listed on a Chinese defense and national security fund.
- Autel Robotics advertises that its drones can be used for security purposes, and its Chinese-language website indicates that it anticipates interest from military customers.
- Autel Robotics has sold drones to U.S. federal agencies--including the Department of Agriculture and Department of Commerce--in addition to a large number of U.S. state and local law enforcement agencies. In the U.S. state and local law enforcement market, Autel is second only to DJI.
- Autel's U.S. market share has grown significantly in the wake of national security restrictions targeting DJI, the largest global drone company, which is also based in Shenzhen, China.

Autel Robotics Origins

Autel Robotics (深圳市道通智能航空技术股份有限公司) was established in 2014 as a civil avionics equipment company specializing in UAVs.^{1, 2} Per its website the company is headquartered in Shenzhen, China, and has R&D bases in Seattle, Silicon Valley, and Munich, Germany.³ The company also has locations in Italy and Singapore.⁴ Autel Robotics has one wholly owned subsidiary, Autel Intelligent Software Development Co., Ltd. (深圳市道通智能软件开发有限公司), which was established in October 2016 and engages in the technical development and sales of computer software and hardware and civil avionics equipment and

https://www.qichamao.com/orgcompany/searchitemdtl/3c4bb4b190888e9b99a9e383dd20a43b.html accessed on 8 October 2022

https://web.archive.org/web/20220421113203/https://www.autelrobotics.com/page/about.html accessed on 9 October 2022

https://web.archive.org/web/20220421113203/https://www.autelrobotics.com/page/about.html accessed on 9
October 2022

https://www.autelrobotics.com/page/about.html accessed on 20 November 2022

automatic control equipment.⁵ In 2021 Autel's share of the global market for commercial UAVs grew to 7 percent, as DJI's share dropped to 54 percent in the wake of US restrictions.⁶

Autel Robotics was previously a subsidiary of Autel Intelligent Technology Corp. Ltd. (深圳市 道通科技股份有限公司, Autel Technology), a publicly traded company that is listed on the Shanghai Stock Exchange (stock code: 688208) which engages in the development and sale of automotive parts. In August 2017, Autel Technology divested itself from its UAV business, transferring 100 percent of its shares in Autel Robotics to Shenzhen Tongyuan Hechuang

Investment Co., Ltd. (深圳市通元合创投资有限公司).⁸ Currently Autel Robotics and Autel Technology have several of the same shareholders. Most notably, each company's largest shareholder is Li Hongjing (李红京), the founder of Autel Technology,

Autel Robotics is headquartered in Shenzhen, China Other Autel Robotics Locations: U.S., Germany, Italy, Singapore

who also directly owns 34.2287 percent of Autel Robotics and 38.38 percent of Autel Technology.^{9, 10} Li Hongjing is a Chinese citizen.¹¹

Autel Robotics USA LLC was established in 2017 in Bothell, Washington. ¹² In the United States, Autel Robotics represents itself as a "family owned business" helmed by Maxwell Lee who describes the company as "the brainchild of founder Frank Li" [likely an AKA for Li Hongjing] and Gary DeLuca who was heading Autel Intelligence at the time. They knew there's only so much growth an automotive diagnostic equipment maker can achieve, given the inevitable global transition toward green energy. They decided to bank the future on robotics, and picked drones as their platform of choice." ¹³ In August 2021, it was reported that the thennewly appointed CEO of Autel Robotics USA LLC, Randall Warnas, was resigning after only nine weeks of employment, citing nepotism and the "family of Frank [Li]" who have "unjust authority and no accountability" as the reason for his departure. ¹⁴ DeLuca currently serves as a governor of Autel Robotics USA LLC and formerly worked at Autel Technology. ^{15, 16, 17} The

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https://www.qichamao.com/orgcompany/searchitemdtl/be71fb466065dec42e38d45e2f7dce0a.html accessed on 8 October 2022

https://www.reuters.com/markets/asia/dji-is-more-elusive-us-target-than-huawei-2021-12-17/ accessed on 2 February 2023

https://www.gcc.com/firm/dd1df4a2ce447f4f9a375db1484729ce.html accessed on 9 October 2022

Autel Technology IPO Prospectus for the Science and Technology Innovation Board p. 1-1-53 accessed on 8 October 2022

https://www.qichamao.com/orgcompany/searchitemdtl/3c4bb4b190888e9b99a9e383dd20a43b.html accessed on 10 October 2022

Autel Technology 2021 Annual Report. P.104, accessed 9 October 2022

https://www.forbes.com/profile/hongjing-li/?sh=79baabf1ab0b accessed 8 January 2022

https://ccfs.sos.wa.gov/#/BusinessSearch/BusinessInformation accessed on 18 October 2022

https://dronedj.com/2022/01/15/autel-robotics-interview-maxwell-lee/ accessed on 12 October 2022

https://dronedj.com/2021/08/12/autel-ceo-randall-warnas-resignation/ accessed on 17 October 2022

https://ccfs.sos.wa.gov/#/BusinessSearch/BusinessInformation accessed on 9 October 2022

Officers/Directors/Members/Managers of a company are all listed as Governors, per Washington's Secretary of State.

https://www.linkedin.com/in/garydeluca accessed on 11 October 2022

other two governors listed are Pan Xiangxi and Cheng Zhuanpeng. 18 Pan Xiangxi (潘相熙) is also the legal representative for Autel Intelligent Software Development Co., Ltd. 19

Though Autel Technology and Autel Robotics are no longer legally part of the same corporate structure, the two companies' shared owners and history of leadership that has worked at both companies show that the two entities continue to have a close relationship. According to Autel Technology's 2021 annual report, Autel Robotics and Autel Technology continue to have daily transactions with each other that do not exceed 6 million RMB (approximately \$830,000).²⁰

Autel Robotics advertises several kinds of drones on its website, for both consumer and commercial use. The company sells its EVO Nano, EVO Lite, and EVO II to consumers and advertises its Dragonfish, EVO II Enterprise, and Autel Skycommand Center to its commercial and government customers. The "Solutions" page on the company's website divides potential uses for Autel Robotics drones into security, patrol and investigation, emergency response, and surveying and mapping.²¹

Autel Robotics Ownership

Autel Robotics underwent a seed funding round in July 2020 in which four investment companies participated²²: CITIC China Securities (中信证券投资有限公司) (currently owns 3.03 percent of Autel Robotics), Jiaze Beirui Venture Capital Partnership of Ningbo Meishan Free Trade Port (L.P.) (宁波梅山保税港区加泽北瑞创业投资合伙企业(有限合伙)) (currently owns 2.6 percent of Autel Robotics), Pingtan Lava Strategic Equity Investment Partnership (L.P.) (平潭熔岩新战略股权投资合伙企业(有限合伙)) (currently owns 3.03 percent of Autel Robotics), and Jundu Investment (君投投资), which could refer to either Ningbo Jundu Jinghong Equity Investment Partnership (宁波君度景弘股权投资合伙企业(有限合伙)) (currently a 6.18 percent owner of Autel Robotics) or Ningbo Jundu Shangzuo Equity Investment Partnership (LP) (宁波君度尚左股权投资合伙企业(有限合伙)) (currently a 3.33 percent owner of Autel Robotics). ^{23,24} Autel Robotics has also undergone A-, B- and pre-IPO rounds of funding. ²⁵

CITIC China Securities is a subsidiary of CITIC Securities²⁶ which is a publicly traded company (Shanghai Stock Exchange: 600030). CITIC Securities is 15.52 percent owned by CITIC

https://ccfs.sos.wa.gov/#/BusinessSearch/BusinessInformation accessed on 9 October 2022

https://www.qichamao.com/orgcompany/searchitemdtl/be71fb466065dec42e38d45e2f7dce0a.html accessed on 9 Octobrer 2022

Autel Technology 2021 Annual Report, p. 88, accessed 9 October 2022

²¹ https://www.autelrobotics.com/article/solution.html accessed on 19 October 2022

Only partial names for the seed funding are provided. The full names listed here are current shareholders that have a partial match to those names.

²³ https://pitchhub.36kr.com/project/1713082351151625 accessed 20 November 2022

https://www.qichamao.com/orgcompany/searchitemdtl/3c4bb4b190888e9b99a9e383dd20a43b.html accessed on 8 October 2022

²⁵ https://pitchhub.36kr.com/project/1713082351151625 accessed 28 November 2022

http://www.cs.ecitic.com/newsite/yqlj/kgzgs/ accessed 20 November 2022

Corporation Limited which is owned by China's Ministry of Finance.^{27, 28} Li Hongjing is Autel Robotics' largest shareholder, directly owning 34.2287 percent of shares in addition to being involved in many partnerships that own shares of Autel Robotics. Remaining shareholders each own less than 7 percent of Autel Robotics.²⁹

Autel Technology Chinese Military Connections

Though no direct ties between Autel Robotics and China's military were identified using publicly available sources, Autel Robotics does advertise its drones for security, border, and coastal patrol and appears to expect inquiries from military personnel. The company's Chinese-language website has a "Contact Us" form that solicits information about the inquirer's industry with a drop down menu that includes options for public security, army, national defense, and armed police, among others. Autel Robotics also planned to exhibit its new drone offerings at the Indo Defense Expo in Jakarta, Indonesia in November 2022. Though it is possible that Autel Robotics' drones are intended only for the civil and commercial uses advertised on its website, China's Military-Civilian Fusion doctrine has increased the porosity between commercial and military technology and repurposed many civil technologies for military use. This is especially true for technology with security applications.

Autel Technology, the former parent of Autel Robotics, is listed on the E Fund National Defense and Military Industry Hybrid Securities Investment Fund (易方达国防军工混合型证券投资基金), which is run by the Chinese capital market company E Fund Management (易方达基金). That fact indicates that Autel Technology does conduct business with the Chinese military. Several other defense conglomerates are also part of this fund, including Aviation Industry of China (AVIC) companies such as AVIC Optoelectronics (中航光电), AVIC Electromechanical (中航机电), AVIC Shenfei (中航沈飞), and AVIC Hi-tech (中航高科).34

Autel Drones Used in Ukrainian Conflict

In early 2022, it was discovered that Autel Robotics EVO II series drones were being used in combat by both the Ukrainian military and Russian-backed separatists. Ukrainian forces use the drone for surveillance and to drop thermite bombs on Russian adversaries, while Russian

²⁷ https://www.citic.com/en/aboutus/history/ accessed 20 November 2022

https://vip.stock.finance.sina.com.cn/corp/go.php/vCI_StockHolder/stockid/600030.phtml accessed 28 November 2022

https://www.qichamao.com/orgcompany/searchitemdtl/3c4bb4b190888e9b99a9e383dd20a43b.html accessed 13 October 2022

https://www.autelrobotics.com/article/security.html accessed on 19 October 2022

https://web.archive.org/web/20220829045207/https://www.autelrobotics.cn/productdetail/21.html accessed on 16 October 2022

https://www.autelrobotics.com/articledetail/1050.html accessed on 16 October 2022

E Fund Defense and Military Industry Hybrid Securities Investment Fund 2021 Q3 Report [易方达国防军工混合型证券投资基金2021 年第3 季度报告] accessed on 9 October 2022

³⁴ E Fund Defense and Military Industry Hybrid Securities Investment Fund 2021 Q3 Report [易方达国防军工混合型证券投资基金2021 年第3 季度报告] accessed on 9 October 2022

separatists reportedly use the drones to drop improvised "Khattabkas", which are modified from a 30mm Vog-17 grenade.^{35, 36} Drone enthusiasts noted that the EVO II drones are similar to the DJI Mavic 2, which has been used for similar purposes in Ukraine, but have the added advantage of being undetectable by DJI's Aeroscope surveillance system.³⁷ EVO II drones also have the added benefit of a two pound carrying capacity, unlike similar DJI drones.³⁸ The weaponization of a civilian-use drone likely eases procurement efforts and U.S. groups like San Diego's House of Ukraine and the Czech Post Bellum- Ukraine Foundation have sponsored the purchase of EVO II drones for use by Ukrainian forces as recently as August 2022.^{39, 40} In February 2022, in response to news reports about the weaponization of its drones, Autel Robotics stated on its website that it only manufactures drones for peaceful and non-violent purposes.⁴¹

Autel Robotics Chinese Government Connections

Autel Robotics has benefited from Chinese government support in the form of tax incentives and monetary awards. The Chinese government has long sought to foster development in industries that produce dual-use technologies, such as UAVs. This fits into the wider Military-Civilian Fusion doctrine that China has emphasized in recent years.

In 2018, Autel Technology transferred a government subsidized drone project and its related assets to Autel Robotics. The two companies signed a "Fixed Assets Transfer Contract" wherein assets related to a fixed foldable drone project were transferred to Autel Robotics and 5 million RMB of funding for Shenzhen UAV Collaborative Control Technology Engineering Laboratory (深圳无人机协同控制技术工程实验室) were also transferred.⁴² Autel Intelligent Software Development Co., Ltd. was exempted from paying taxes from January to August 2017 as part of a broader package of tax incentives for companies operating in China's software industry.⁴³ It is possible that the "fixed foldable drone project" mentioned relates to the company's Dragonfish drone, however this could not be confirmed.

http://www.xuandouwan.com/article-68582-1.html accessed on 19 October 2022

³⁶ https://www.forbes.com/sites/davidhambling/2022/02/18/russia-wants-a-pretext-for-war-and-these-drones-could-supply-it/?sh=7901e7ce2d77 accessed 15 November 2022

https://dronexl.co/2022/03/31/autel-drone-baby-bayraktar/ accessed on 21 October 2022

https://www.forbes.com/sites/davidhambling/2022/02/18/russia-wants-a-pretext-for-war-and-these-drones-could-supply-it/?sh=7901e7ce2d77 accessed 15 November 2022

https://houseofukraine.org/blog/autel-evo-ii-pro-and-body-foot-warmers-for-regiment-a0284/ accessed on 21 October 2022

https://dronexl.co/2022/04/29/aerorozvidka-4-autel-evo-ii-drones/ accessed on 21 October 2022

https://www.autelrobotics.com/articledetail/807.html accessed on 21 October 2022

Autel Technology IPO Prospectus for the Science and Technology Innovation Board , p. 1-1-232, accessed on 8 October 2022

Autel Technology IPO Prospectus for the Science and Technology Innovation Board , p. 1-1-278, accessed on 8 October 2022

In August 2022, Autel Robotics was named a "Little Giant" (小巨人) enterprise. ^{44, 45} Little Giant enterprises, also known as specialized and sophisticated enterprises (专精特新), are smaller businesses that are engaged in specialized research or manufacturing in strategic sectors that China wants to build up indigenously. "Little Giants" are selected by the Ministry of Industry and Information Technology (MIIT) and Autel Technology has also been selected as a "Little Giant."

Autel Robotics' campus is situated in Shenzhen's Nanshan District, which is currently home to more than 150 drone companies, including approximately 26 drone manufacturers , 65 parts companies, and 50 supporting service companies. In 2021, the total output value of the drone industry in Nanshan District was predicted to exceed 40 billion RMB. Nanshan promotes technological integration among the companies located there and promotes drone companies conducting related research in partnership with universities. Li Hongjing has said that "The Nanshan District government actively supports our entrepreneurship, and uses various channels to create an open and high-quality financing environment for us." 47

Autel Robotics and Chinese Universities

Autel Robotics advertises that several of its core team members were educated at Tsinghua University, University of Science and Technology of China, Huazhong University of Science and Technology, Beihang University, and Northwestern Polytechnical University. All of these universities are known for their close connections to China's military industrial complex; Beihang University and Northwestern Polytechnical University are further designated as "Seven Sons of National Defense" universities that specialize in aeronautics and astronautics. Seven Sons of National Defense universities are subordinate to MIIT and describe themselves as part of China's defense system. Graduates of these schools often attain employment with stateowned defense conglomerates.

Autel Robotics also advertises that it partners with several foreign universities including Massachusetts Institute of Technology, Carnegie Mellon University, Technical University of Munich, and University of Stuttgart. Partnerships with foreign universities and academics are fertile ground for China's technology transfer efforts. In interviews Li Hongjing has alluded to Autel Technology's efforts to attract top international talent, saying that the company has gone to MIT and the Technical University of Munich to find drone experts and experts in artificial intelligence. ⁵¹

https://www.qichamao.com/orgcompany/searchitemdtl/3c4bb4b190888e9b99a9e383dd20a43b.html accessed 13 October 2022

https://www.zgznh.com/news/show-873313.html accessed 16 October 2022

⁴⁶ https://www.zgznh.com/news/show-873313.html accessed 16 October 2022

https://www.163.com/dy/article/HHOI7C220539LWPU.html accessed 17 October 2022

https://zhuanlan.zhihu.com/p/410094544 accessed 17 October 2022

https://www.aspi.org.au/report/china-defence-universities-tracker accessed 13 October 2022

https://zhuanlan.zhihu.com/p/410094544 accessed 17 October 2022

https://www.163.com/dy/article/HHOI7C220539LWPU.html accessed 18 October 2022

Autel Made in USA Initiative

Autel Robotics appears to be positioning itself to expand its United States market share. In an interview, Maxwell Lee said "In terms of international growth, the US is the single most important market for Autel Robotics," Lee explained "Consumers here are excited about drone technology and have a lot of buying power. If you can succeed in the US, you can succeed in the rest of the world." Autel Robotics' Public Safety/North American Enterprise Sales manager indicated that the drive behind the Made in USA initiative was to get business from public safety and federal agencies. ⁵³

In September 2020, Autel Robotics released its EVO II Dual Enterprise UAS bundle which was created for use by public sector customers. An announcement on the company website related to the release states that Autel Robotics offers "aircraft manufactured in the USA with foreign and domestic parts and labor." Autel Robotics went on to say that the bundle's airframe is manufactured in China, the thermal cameras are manufactured in the United States, the Sony imagers are manufactured in Japan and final assembly takes place in Bothell, Washington and that the bundle is specifically designed to aid public safety personnel.⁵⁴ Notably, Autel Robotics did not state the origin of software used for the EVO II Dual bundle.

In a February 2022 *DroneBrews* podcast recording, John McBride, Autel Technology's Vice President of Technology and Training, acknowledged that Autel Technology is a Chinese company with a Chinese owner and that the bulk of the company's manufacturing is done in China. Sha such, it is unclear how the EVO II Dual bundle can comply with the Federal Trade Commission's (FTC) guidelines for marketing products as Made in the USA, which state that "all or virtually all" components must be made in the USA for the designation, when the bundle's airframe is manufactured in China and substantial other parts are also foreign-made. The EVO II Dual drone (Model: MDCD, FCC ID: 2AGNTMCD2409A) is a modified version of the EVO II drone (Model: MDCS, FCC ID: 2AGNTMC2409A), and a product similarity declaration filed with the Federal Communications Commission (FCC) states that the main difference between the two drones lies in the camera used for each.

Internal photos of the EVO II drone published with the FCC indicate that it uses a HiSilicon Hi3559 V100 Mobile Camera system-on-a-chip⁵⁸ and a ZTE-manufactured ZXIC chip.⁵⁹

https://dronedj.com/2022/01/15/autel-robotics-interview-maxwell-lee/ accessed 11 October 2022

https://dronelife.com/2020/09/03/autel-drones-made-in-u-s-what-made-in-america-means-for-the-drone-industry/ accessed 22 October 2022

https://shop.autelrobotics.com/blogs/news/autel-enterprise-is-announcing-its-made-in-usa-evo-ii-dual-bundles

https://www.youtube.com/watch?v=j55dlKLpFsE&t=2663s (41:18) accessed 8 January 2022

https://www.ftc.gov/business-guidance/advertising-marketing/made-in-usa accessed 12 November 2022

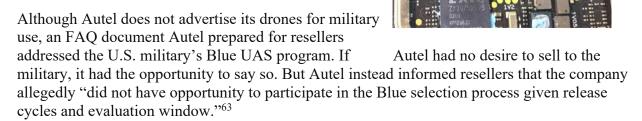
https://fccid.io/2AGNTMCD2409A/Letter/Product-Similarity-Declaration-Rev-4554518 accessed 23 November 2022

⁵⁸https://www.silicondevice.com/file.upload/images/Gid1319Pdf_Hi3559_V100_2K4K_MobileCamera_SoC_Brief Data Sheet.pdf acessed 26 November 2022

⁵⁹ https://fccid.io/2AGNTMC2409A/Internal-Photos/Internal-Photos-4528188 accessed 22 November 2022

HiSilicon has been on the Department of Commerce Bureau of Industry and Security (BIS) Entity List since May 2019.⁶⁰

In FAQs related to the EVO II Dual release, Autel Robotics stated that it is working towards being "a USA-only" brand. In the same FAQs Autel Robotics stated that data safety was assured with its products as they "do not rely on LTE, do not connect to servers and may be operated either without mobile devices, connectivity, or in Airplane modes" and further mentioned that Autel Robotics has no servers outside of Houston, Texas. ⁶¹ Autel Robotics USA LLC has received several shipments from its Chinese counterpart, including a shipment of EVO Nano+ bundles and EVO Lite+ parts on 24 April 2022 and a shipment of EVO II Dual parts on 10 September 2021. ⁶²



Autel Robotics USA LLC has sold drones and related items to government clients and is registered with the System for Award Management (SAM) of the U.S. General Services Administration (CAGE code: 840D1).⁶⁴ On 24 August 2014, the Department of Agriculture paid \$33,200 to Empire Drone Company LLC for Autel Robotics EVO II UAS with 8K and thermal camera bundle.⁶⁵ On 27 July 2021, the Department of Commerce paid \$4,813 for Autel Robotics UAS drones.⁶⁶ Autel is the second largest supplier of drones to US local law enforcement agencies and state and local governments.⁶⁷

⁶⁰ https://www.federalregister.gov/documents/2019/05/21/2019-10616/addition-of-entities-to-the-entity-list accessed 21 November 2022

https://drone-works.com/autel-made-in-the-usa-initiative-faqs/#:~:text=A%3A%20The%20Autel%20EVO%20II,if%20further%20detail%20is%20required. Accessed 12 October 2022

https://panjiva.com/Autel-Robotics-Co-Ltd/39497411 accessed 18 October 2022

⁶³ https://drone-works.com/autel-made-in-the-usa-initiative-faqs/

⁶⁴ https://opengovus.com/sam-entity/PFGKNNL9RSD3 accessed 16 October 2022

https://www.usaspending.gov/award/CONT_AWD_12639520P0387_12K3_-NONE-_-NONE- accessed 16 October 2022

⁶⁶ https://www.usaspending.gov/award/CONT_AWD_1305M321PNWWP0409_1330_-NONE-_-NONE-accessed 16 2022

https://www.govtech.com/em/emergency-blogs/disaster-zone/what-brand-of-drone-are-public-safetyorganizations-flying accessed 2 February 2023

Autel Robotics in Xinjiang

Though no direct evidence of Autel Robotics selling to government entities in Xinjiang was identified, the company does advertise that it has seven authorized sales agents in the Xinjiang region:⁶⁸

- Yining Li Changling Computer Technology (Yili District, Xinjiang) (伊宁市李长玲电脑科技 (新疆伊犁地区))
- Changji Zhongtian Space Information Co., Ltd. (Changji, Xinjiang) (昌吉市中天空间信息技术有限公司 (新疆昌吉市))
- Kashgar Yifei Photography Electronic Technology Operation Department (Kashgar, Xinjiang) (喀什市翼飞摄影电子科技经营部 (新疆喀什地区))
- Aksu International Communication Co., Ltd. (Aksu Xinjiang) (阿克苏世际通讯有限公司 (新疆阿克苏地区))
- Qitai County Baide Computer (Changji, Xinjiang) (奇台县百得电脑 (新疆昌吉州))
- Xinjiang Miaolong Trading Co., Ltd. (Korla, Xinjiang) (新疆妙龙商贸有限公司 (新疆库尔勒地区))
- Xinjiang Liansheng Technology Co., Ltd. (新疆联昇科技有限公司)

Yining Li Changling Computer Technology and Kashgar Yifei Photography Electronic Technology Operation Department are both sellers of surveillance equipment.^{69, 70}

⁶⁸ https://www.autelrobotics.cn/page/agent.html accessed 9 October 2022

⁶⁹ https://www.11467.com/qiye/90141254.htm#gongshang accessed 15 October 2022

https://aiqicha.baidu.com/company_detail_87495353192612