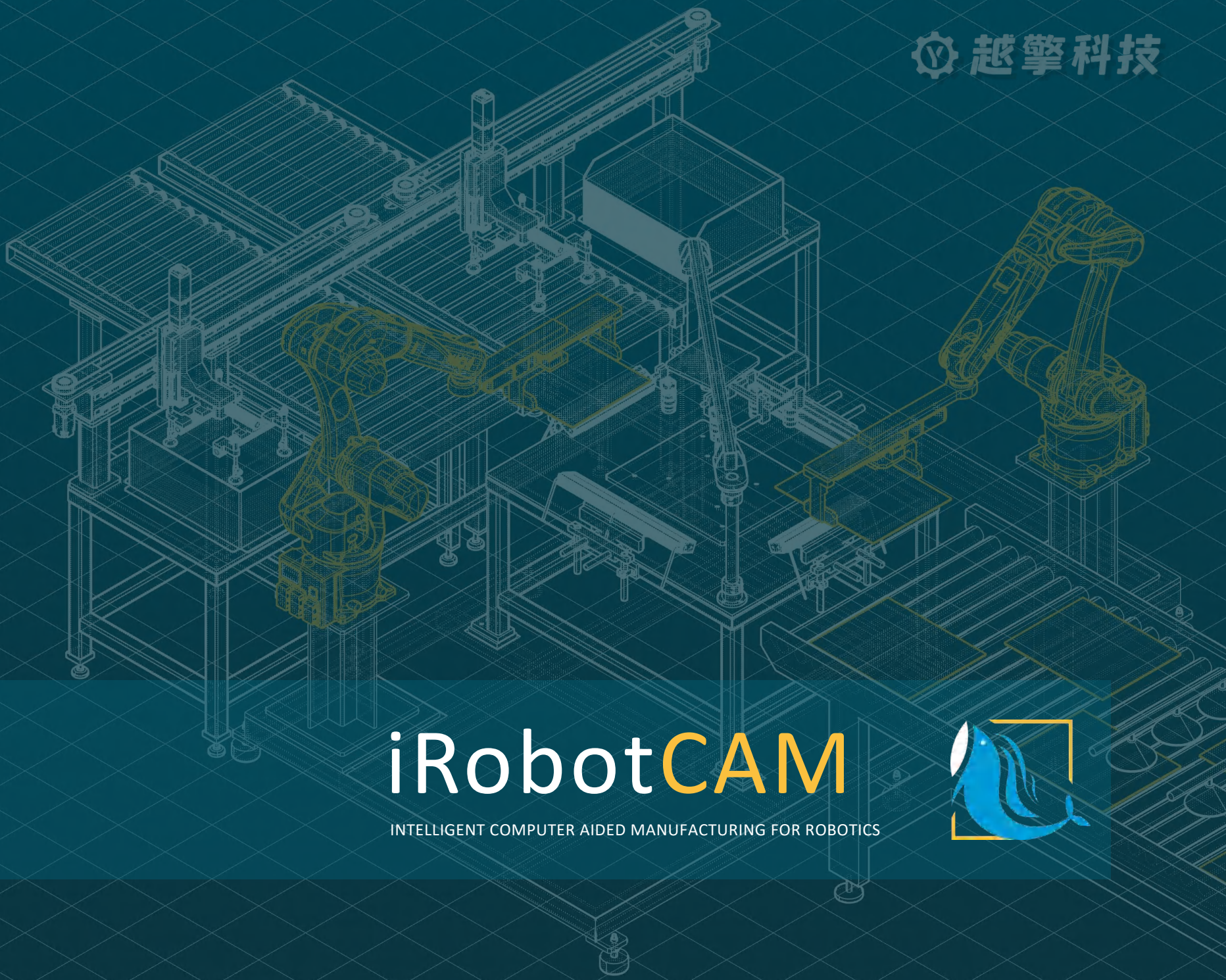
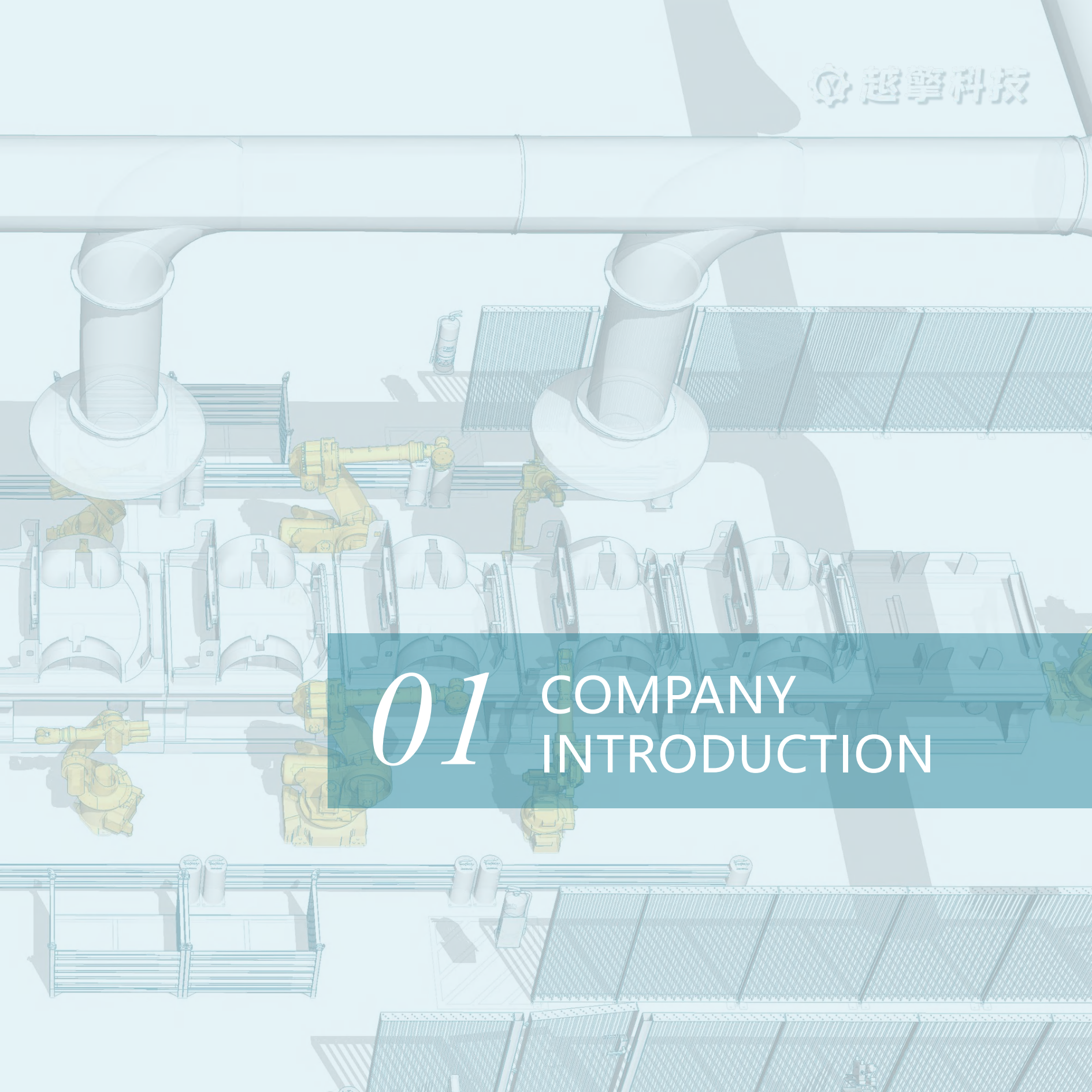
越擎科技



iRobotCAM

INTELLIGENT COMPUTER AIDED MANUFACTURING FOR ROBOTICS

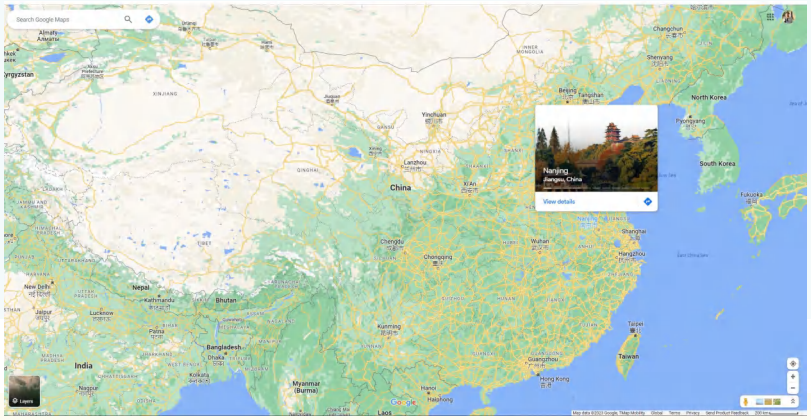
Outline



01 COMPANY INTRODUCTION

Brief

Yueqing Technology was founded in 2020 and located in Nanjing, JianSu Province.



Team

Dedicated in developing the digital robot machining platform

Focus on mechatronics concpet design, robot machining simulation, and virtual debugging.

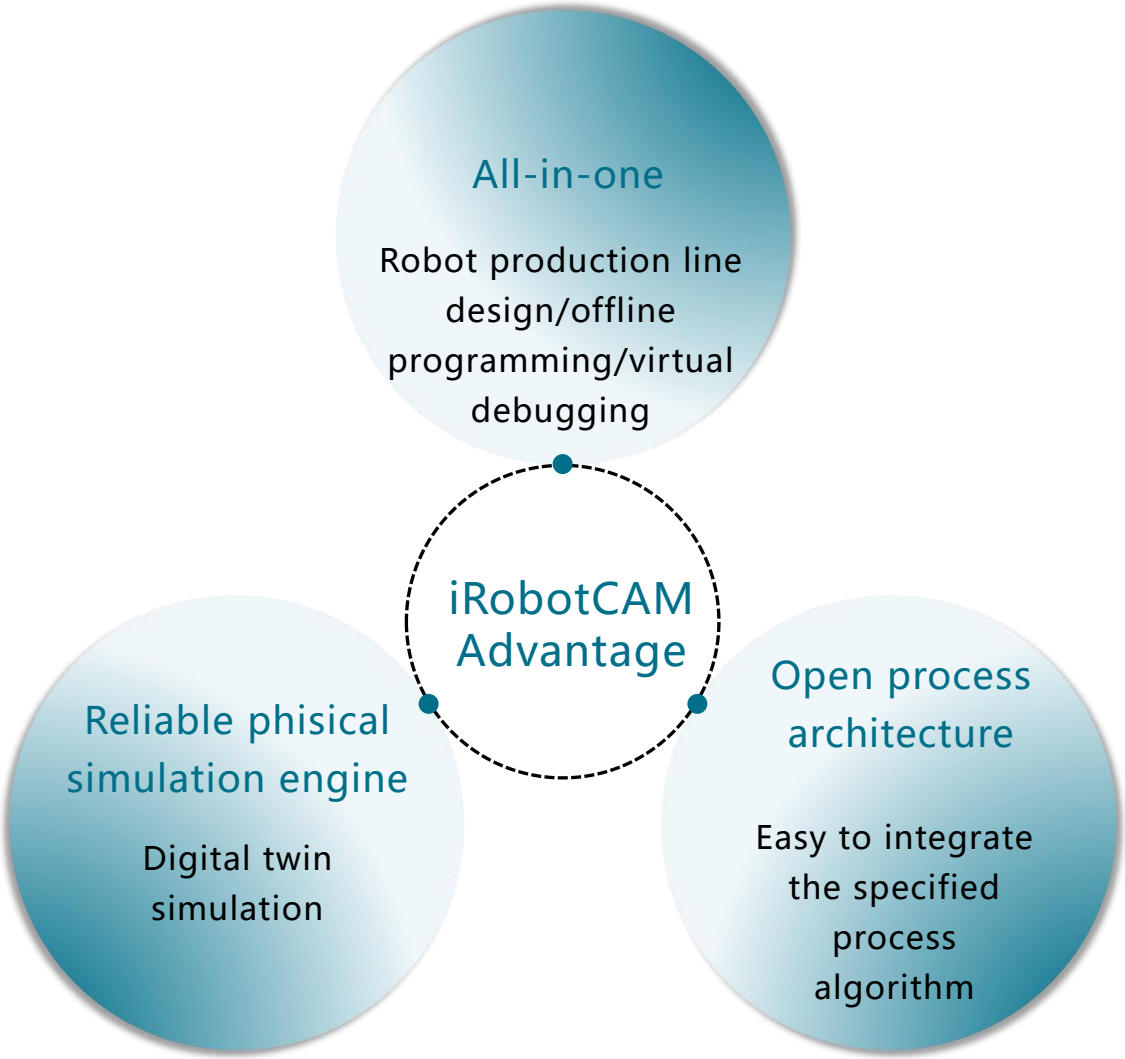
History

- **2020** Yueqin Technology was founded, started the development for iRobotCAM, with the collaobraiton with SouthEast University.
- **2021** iRobotCAM Preview was released, started to collaboate with ZWSOFT.
- **2022** Started Mechatronics design module and process simulation and collaborate with GSK.
- **2023** iRobotCAM V1.0 was officially released.

02 PRODUCT INTRODUCTION

iRobotCAM Product architecture

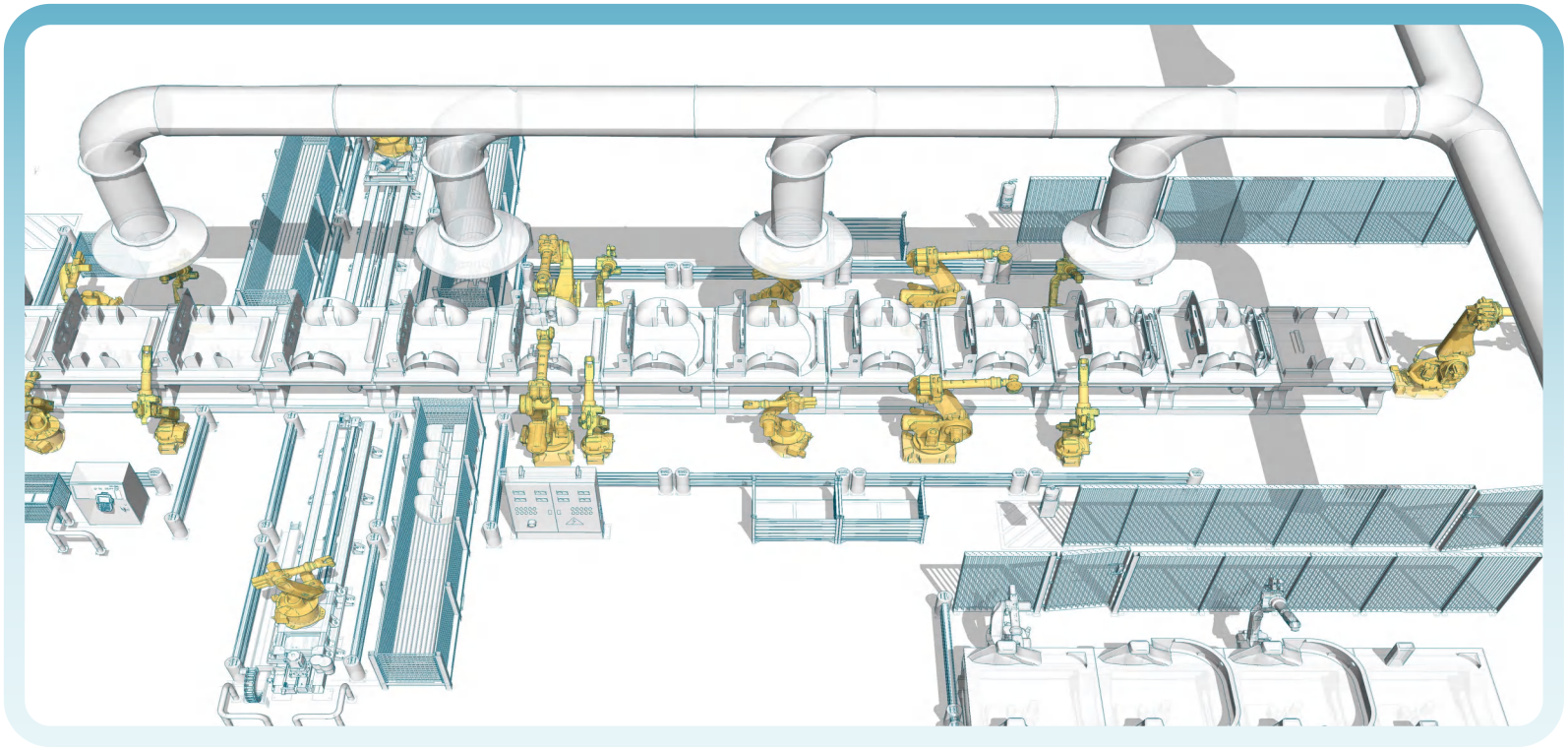
Application Level	Platform Level	Core Engine
Welding Spraying Virtual debuggin Additive machining Assembly simulation	iRobotCAM Digital Machining Platform	Geometry Modeling Phisical motion engine Robot Tragetory Algorithm Robot motion simulation



iRobotCAM Functions

Robot production line design

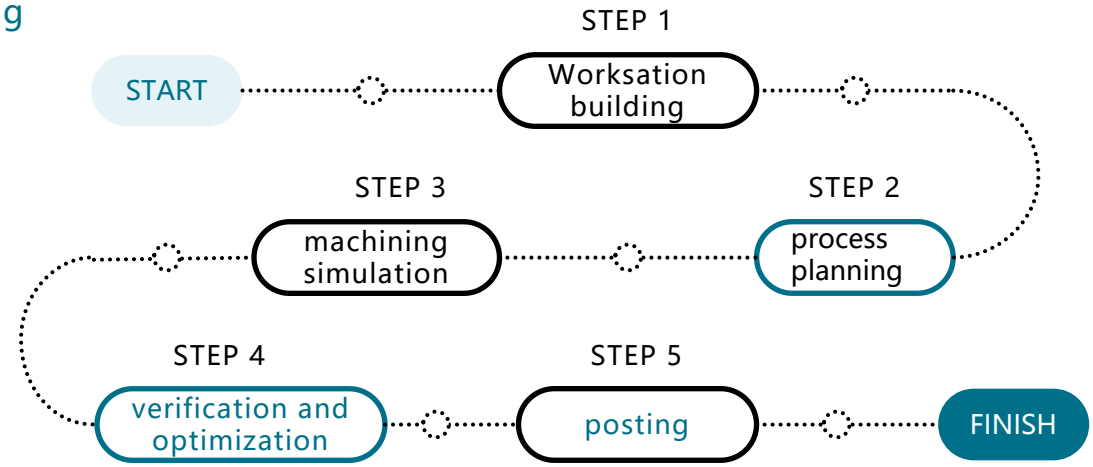
With the parametric design capablity to fulfill the robot workstation or production line design



Robot offline programming

programming process:
Robot import-->process planning-->machining simulation-->workstation optimization-->posting

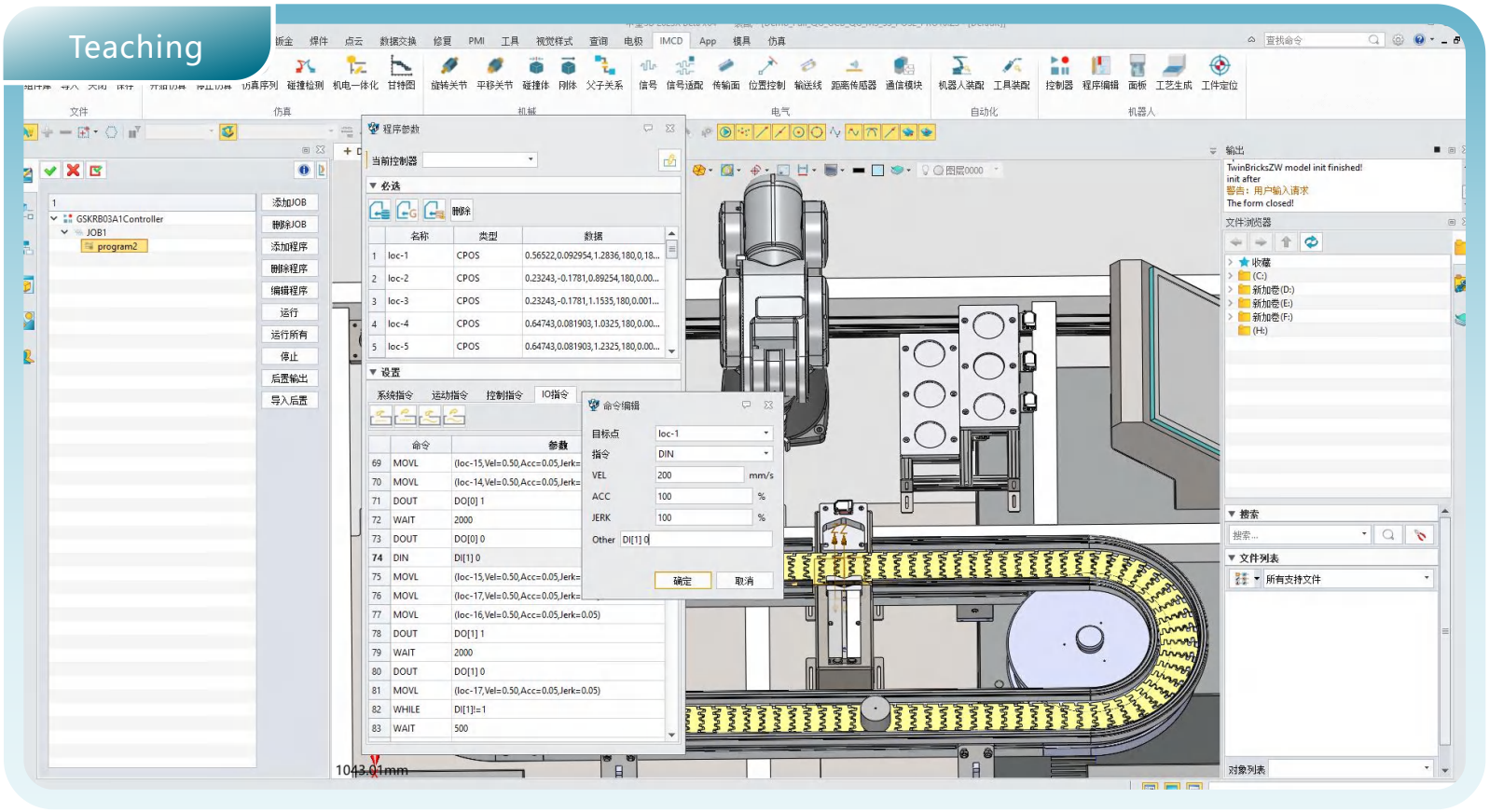
verification:
program decompilation, verification and optimization



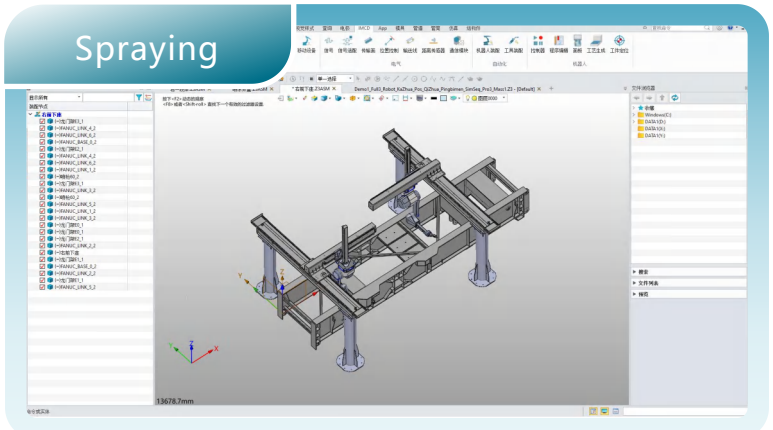
iRobotCAM Functions

Robot offline programming

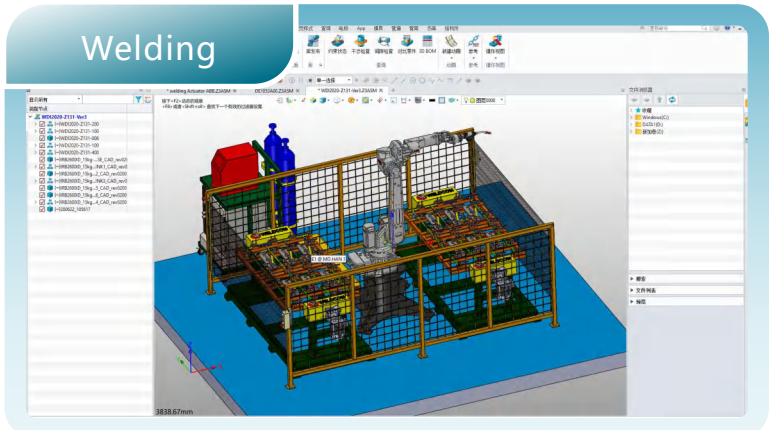
Teaching



Spraying



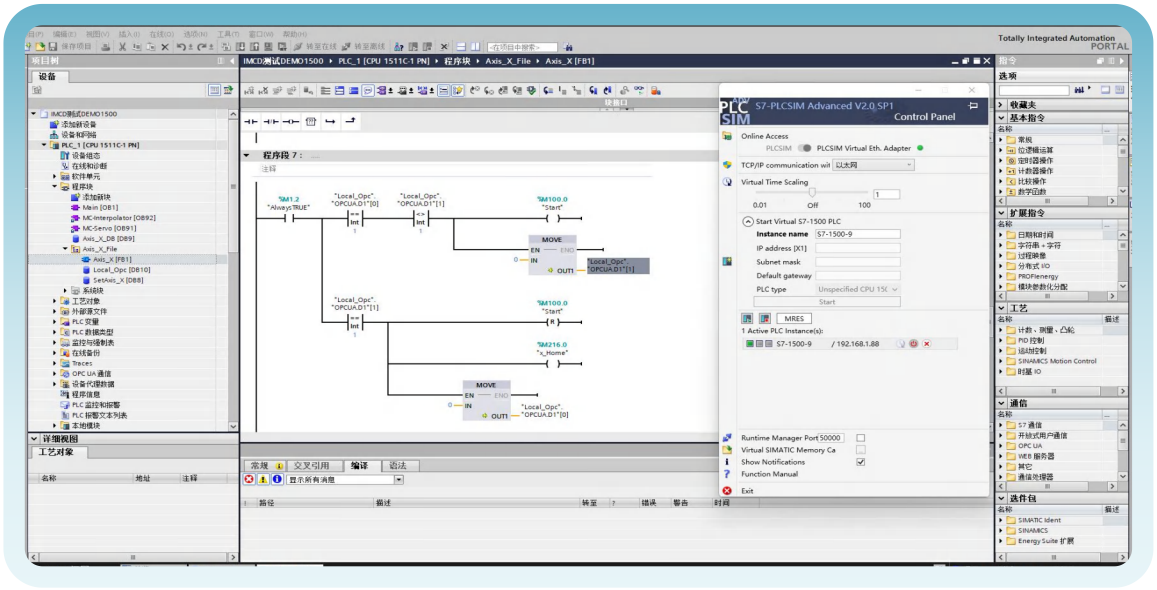
Welding

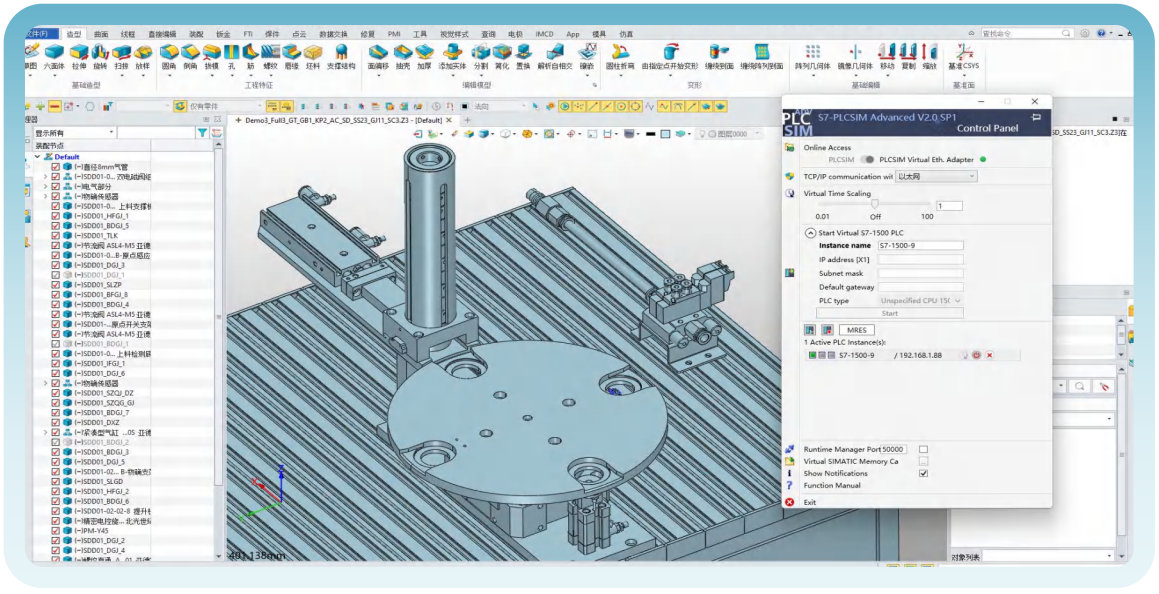


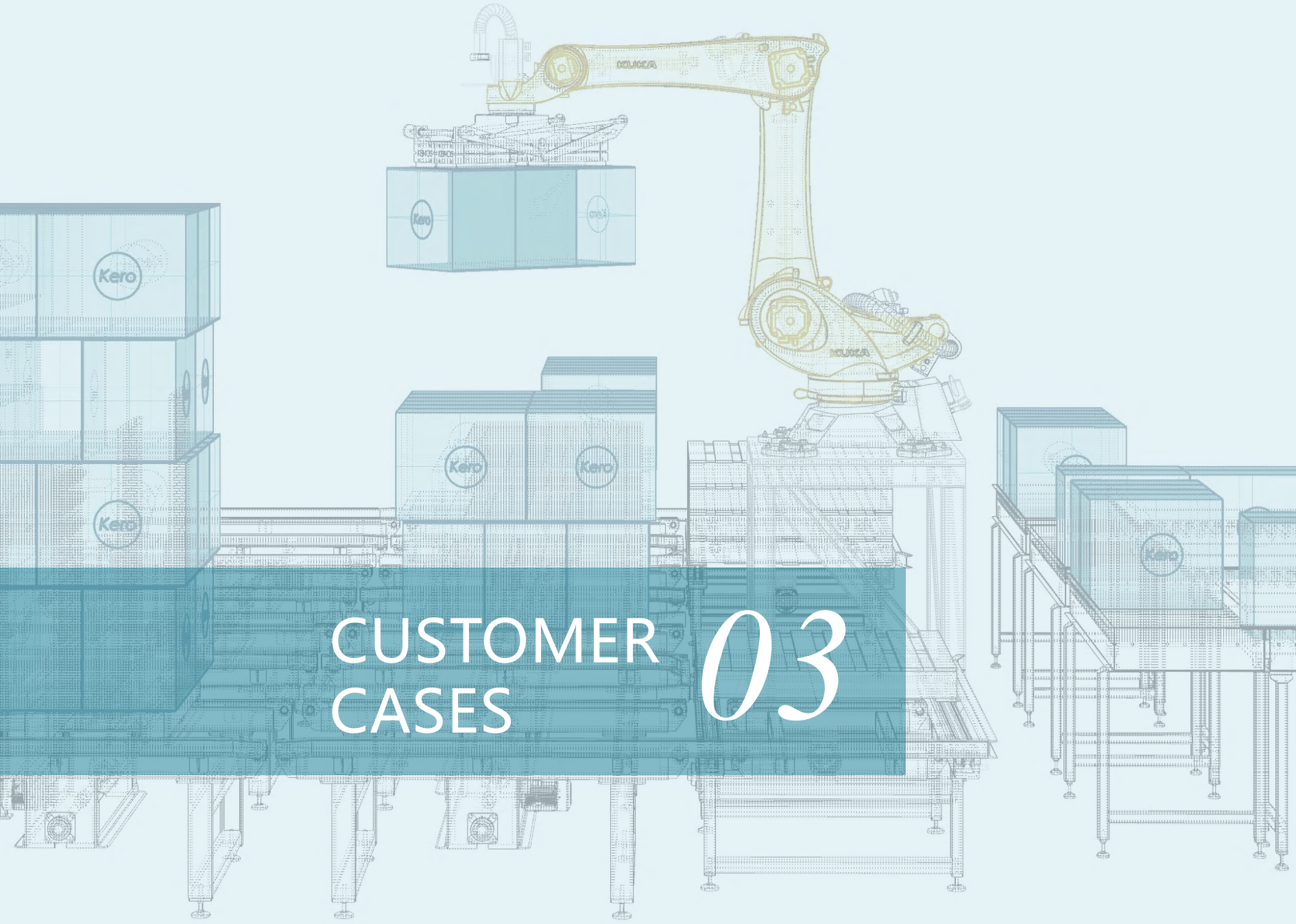
iRobotCAM Functions

Virtual debugging

virtual debugging and virtual monitoring by digital-twin; supports multi-machine IO communication simulation, multi-robot synchronization, and multi-axis linkage planning of robots.







CUSTOMER CASES 03

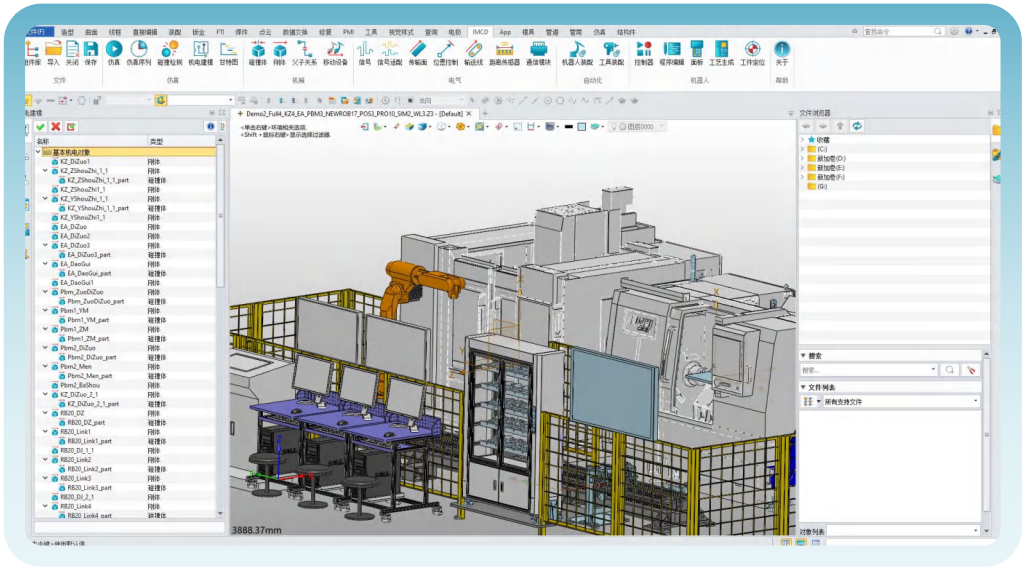
Numerical Control Equipment | GSK

Mechatronics design and virtual debugging platform

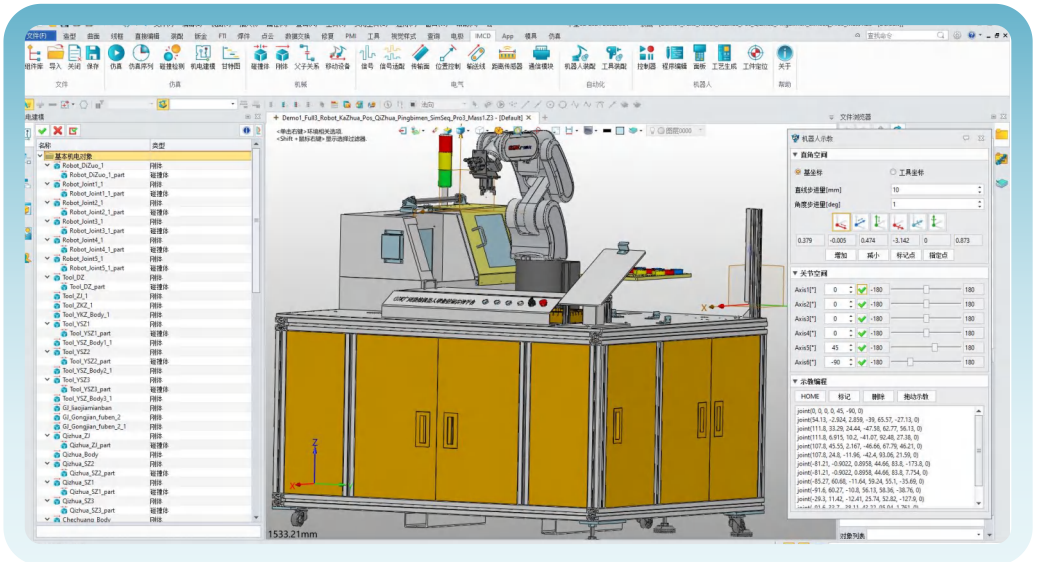
Robots, processing equipment (machining centers, injection molding machines, etc.)

Definition and control of motion mechanisms such as positioners, conveyor belts, and cylinders

Supports sensor modeling with the built-in library



Teaching

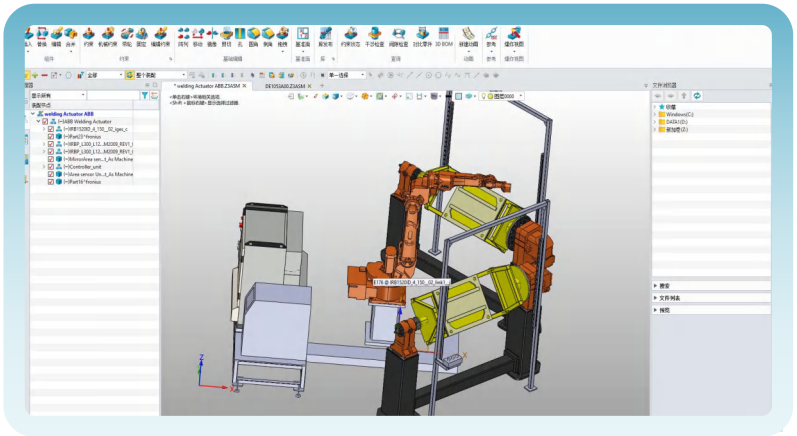


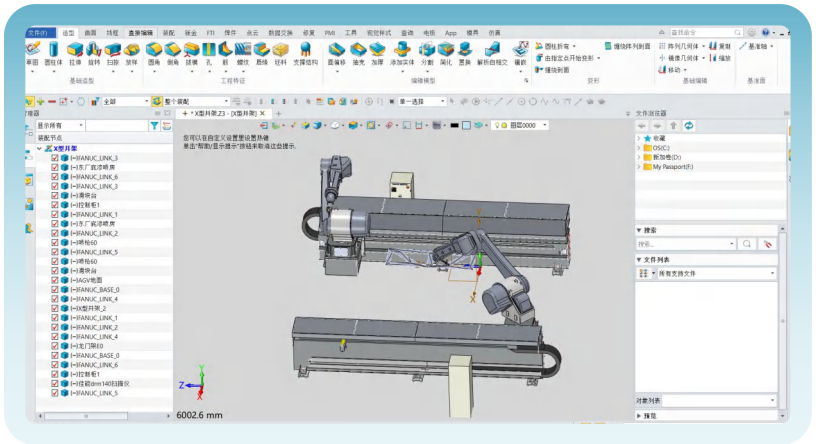
Robot interpolation algorithms, including several basic interpolation algorithms such as straight lines, arcs, joints, etc.

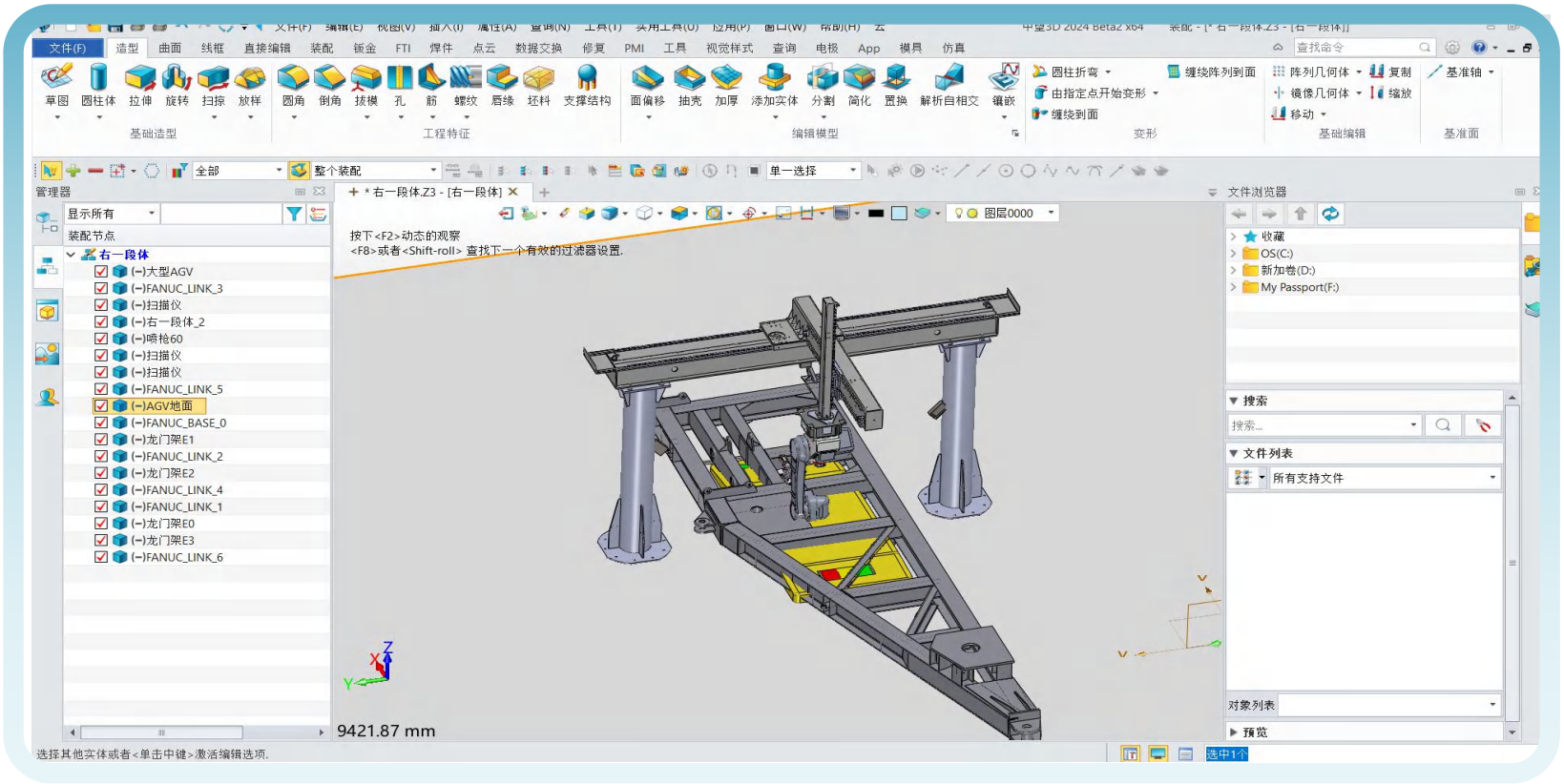
Achieve multiple programming mode selections for industrial robots, such as hand-held tool and hand-held workpiece modes.

Special Equipment Integration | Reference

Welding and spraying workstation with offline programming and virtual debugging





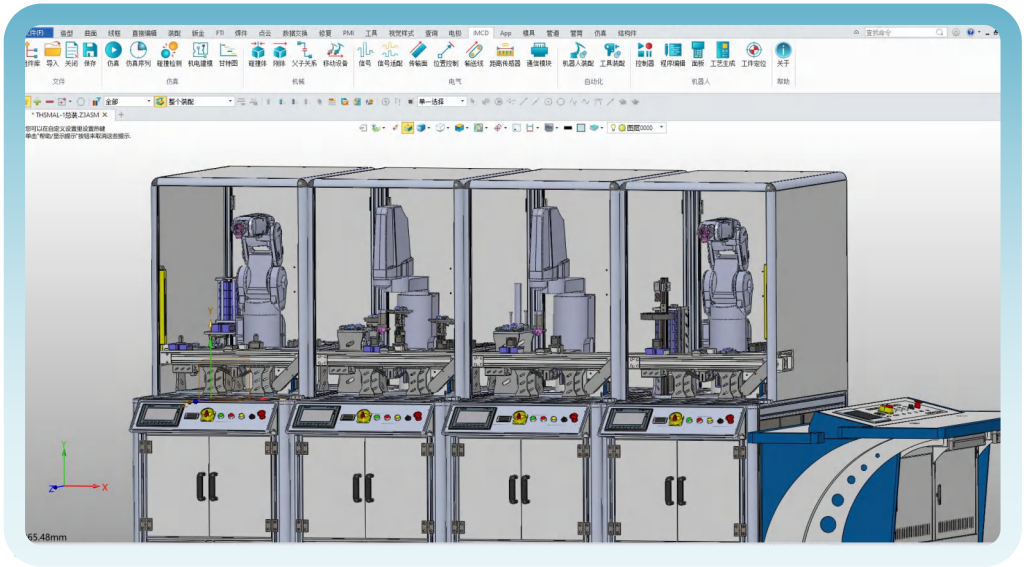


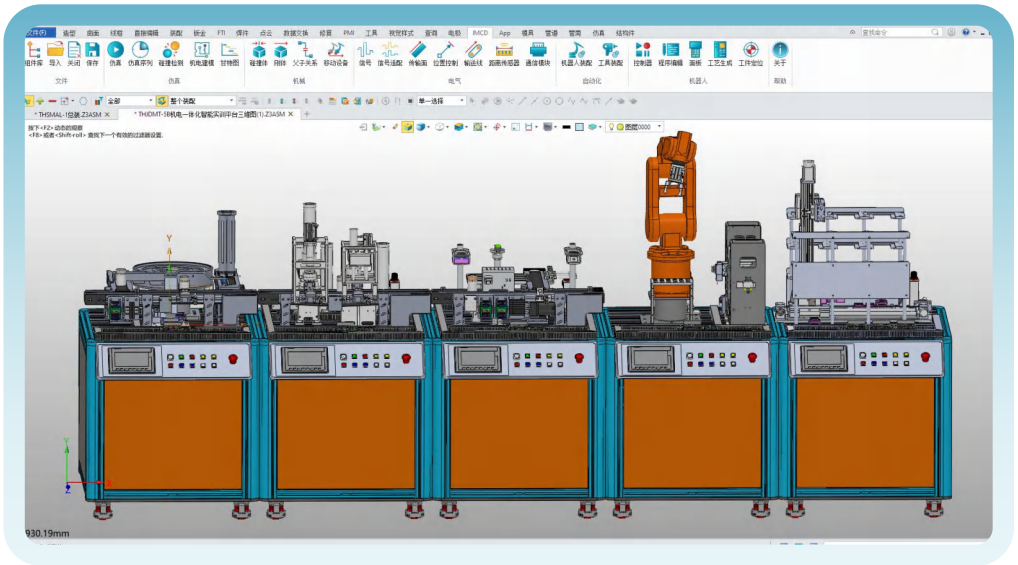
Education equipment

Motor assembly simulation, including robots, quick-change devices, conveyor lines, and various sensors

Digital twin simulation, collect production line data, and map motion controller data and PLC data to the simulation system

System simulation including conveyor lines, multi-robots, and material systems

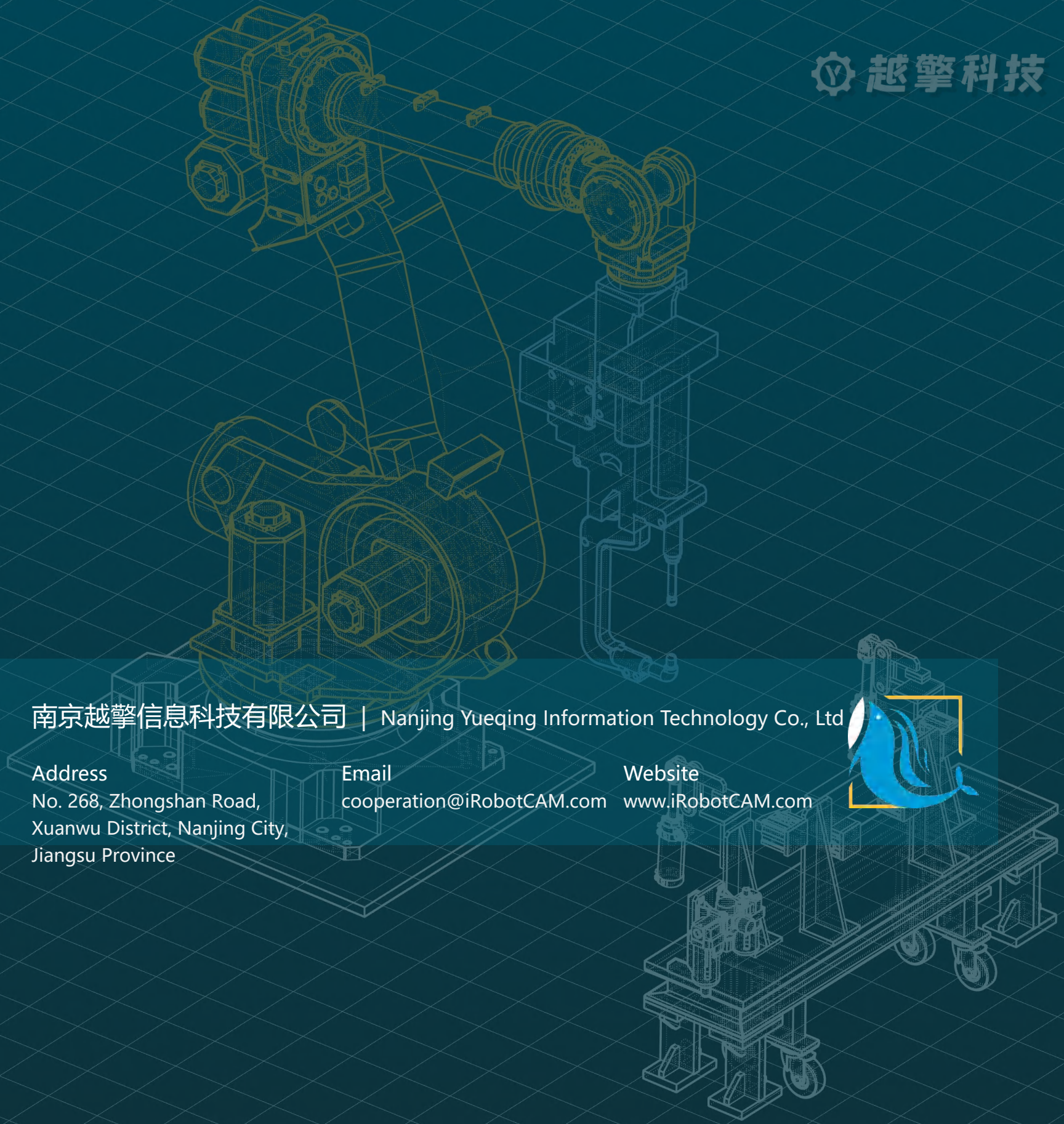




Material packaging simulation, including vibrating plates, multiple conveyor lines, robots, motor drives, material assembly, material transportation, and material warehousing

With data collection, data mapping, materials and motion equipment information, achive digital-twin virtual debugging in both of hardware and software

越擎科技



南京越擎信息科技有限公司 | Nanjing Yueqing Information Technology Co., Ltd

Address
No. 268, Zhongshan Road,
Xuanwu District, Nanjing City,
Jiangsu Province

Email
cooperation@iRobotCAM.com

Website
www.iRobotCAM.com