边缘计算型数字网关

产品介绍

—

Digital Gateway with Edge Computing

PRODUCT
INTRODUCTION

开放设计 无限可能
Open Design Infinite Possibilities

FINGER
iLINK

LAN 0
LAN 1
LAN 2
LAN 3
LAN 4
LAN 5

USB 3.0

24V 0V

广州亿达科技有限公司
Guangzhou Finger Technology Co., Ltd
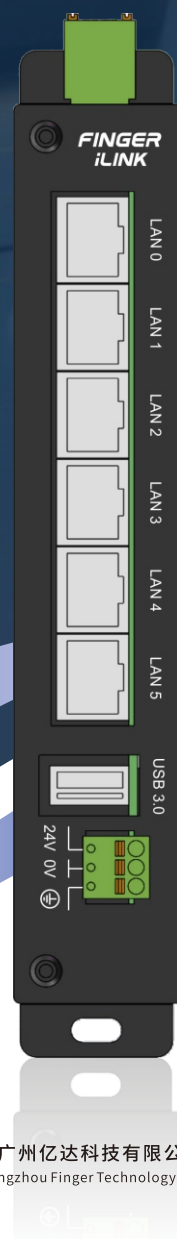
公司简介

广州亿达科技有限公司旨在打造性能卓越的开放式数控系统，让自动化开发变得更简单。 作为中国高性能控制器制造商之一，亿达科技专注于客户需求，不断突破技术研发边界，形成了完善的自动化关键技术生态系统，以行业广度和专业深度为客户提供具有差异化的解决方案和便捷服务，竭力让客户从产品中获得助力，快速成长，产生价值。

亿达科技以技术为本，始于数控，却不止数控。坚定立足于数控技术，积极探究运动控制器、边缘计算控制器、Open CNC开发平台、CAD/CAM技术、机器视觉技术、工业物联网技术等。领先行业的Open CNC开发平台，让机器设备的电控客制化开发变得成本更低、更简单；7个核心技术内嵌（运动控制、HMI、PLC、机器视觉、CAD/CAM、物联网、3D仿真），为客户提供最佳一站式解决方案。

凭借出色的开放式产品架构和多种技术集成能力，亿达科技在车床、铣床、磨床、弹簧机、刀具机、木工机械、绕线机、弯管机、3C电子等行业，积累了丰富的产品经验和客户基础，并持续创造卓越。

潜心笃志，匠心创变，厚发求精，共生共赢，崇德守信是亿达科技创立以来所秉持的经营理念和企业价值。一直以来，我们坚持初心，砥砺前行，为成为世界领先的开放式数控系统品牌不断努力。让中国智造，中国服务响彻全球。

Guangzhou Finger Technology Co., Ltd. is committed to creating high-performance open CNC systems, making automation development simpler. As one of China's leading high-performance controller manufacturers, Finger Technology focuses on customer needs and continually pushes the boundaries of technological innovation. The company has built a comprehensive automation ecosystem with key technologies, offering differentiated solutions and convenient services to clients. Finger strives to help customers gain value from its products, accelerate growth, and generate substantial returns.

Finger Technology is fundamentally driven by technology, originating from CNC but not confined to it. Firmly rooted in CNC technology, the company actively explores motion controllers, edge computing controllers, Open CNC development platforms, CAD/CAM technologies, machine vision technologies, and industrial Internet of Things (IoT) technologies. Its industry-leading Open CNC development platform makes the customized development of machine equipment electrical controls more cost-effective and simpler. With seven core technologies embedded (motion control, HMI, PLC, machine vision, CAD/CAM, IoT, and 3D simulation), Finger Technology provides customers with the best one-stop solutions.

Leveraging its outstanding open product architecture and diverse technology integration capabilities, Finger Technology has accumulated extensive product experience and a solid customer base in industries such as lathes, milling machines, grinding machines, spring machines, tool machines, woodworking machinery, winding machines, pipe bending machines, and 3C electronics, continuously achieving excellence.

Devotion to excellence, innovation with craftsmanship, pursuit of precision, symbiosis and win-win, and integrity are the core business philosophy and values upheld by Finger Technology since its establishment. We have always remained true to our original intention, striving forward with determination, and continuously working towards becoming the world's leading open CNC system brand, ensuring that Chinese manufacturing and Chinese services resonate globally.

企业愿景 Company Vision

让自动化开发变得更简单 Make automation development simpler.

企业使命 Company Mission

构建更开放、更便捷、更包容的控制器产品，竭力让客户从产品中获得助力，快速成长，产生价值，并成为世界领先的开放式数控系统品牌。让中国智造，中国服务响彻全球。
Build more open, convenient, and inclusive controller products. Strive to help customers gain support from products, grow rapidly, and create value. Become the world's leading brand in open CNC systems, and let "Made in China" and "China services" resonate globally.

核心价值观 Core Values

求实诚信	坚持初心	破旧立新	追求卓越	携手并进
Practical Integrity	Stay True to the Original Intention	Break Tradition, Embrace Newness	Pursue Excellence	Progress Together

FINGER iLINK

# 边缘计算型数字网关
Digital Gateway with Edge Computing

边缘计算型数字网关产品
是一款嵌入式高性能的工业级产品
Digital Gateway with Edge Computing Product
is an Embedded High-Performance Industrial-
Grade Solution.

▶ 产品简介 / Product Introduction

◆ 具备丰富的通讯接口和高性能的运算处理与高速数据通讯能力。
Rich communication interfaces and high-performance computing with high-speed data communication capabilities.

◆ 支持集成数字网关产品功能，包括多种方式实现边缘采集、数据中转功能、设备对时和断线数据缓存等功能。
Supports integrated digital gateway product functions, including various methods to achieve edge collection, data transfer functions, device timing, and offline data caching.

◆ 支持西门子、欧姆龙、GE等产品的专用数据采集通讯功能。
Supports dedicated data acquisition communication functions for products such as Siemens, Omron, GE, etc.

◆ 支持多种Linux工具，用户可动态部署依赖模块，安装组建二次开发环境。
Supports various Linux tools, allowing users to dynamically deploy dependent modules and install component secondary development environments.

◆ 客户可自由部署应用程序，例如OPEN CV、数据库、PYTHON执行器等。
Customers can freely deploy application programs, such as OpenCV, databases, Python executors, etc.
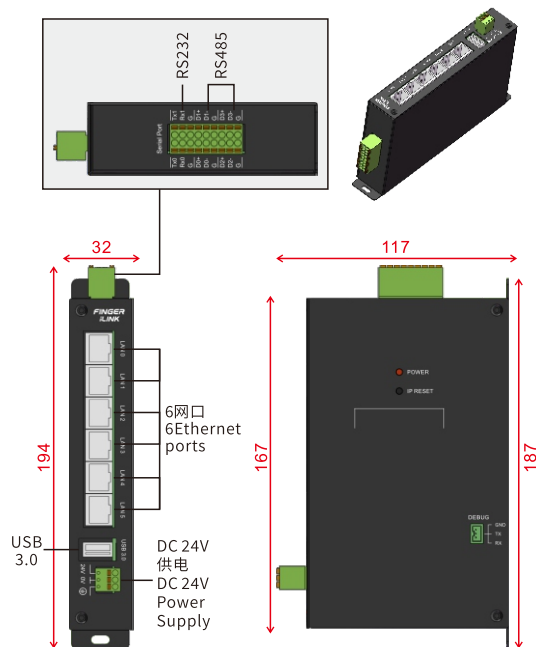
▶ 产品参数 / Product Parameter

| 基本参数 Basic Specifications			
芯片架构Chip Architecture	ARM A55 双核架构ARM A55 Dual Core Architecture	CPU主频 CPU Frequency	单核算力 2.0GHz Single Core Performance: 2.0GHz
RAM	2GB/4GB LPDDR4	存储 Storage	8GB/64GB EMMC5.0
通讯接口 Communication Interface			
串口 Serial Port	6路串口通讯,其中包含2路RS232接口和4路RS485接口 6 Serial communication ports, including 2 RS232 interfaces and 4 RS485 interfaces		
以太网 Ethernet	5路 100Mbps自适应网口,1路100Mbps网络配置端口。 5-port 100Mbps adaptive network interface, 1-port 100Mbps network configuration port.		
工业级防护 Industrial Grade Protection			
EMC	4.5KV (电源,耦合) 4.5KV (Power, Coupling)		
振动(工作/存储) Vibration (Work/Storage)	7mm@2~9Hz;2g@10~500Hz		
工作温度 Operating Temperature	-20~85℃	存储温度 Storage Temperature	-20~85℃
供电功耗 Power Supply Power Consumption			
供电电压 Power Supply Voltage	24 VDC		
功耗 Power Dissipation	10W	散热方式 Cooling Method	自散热 Passive Cooling
安装尺寸 Installation Dimensions			
安装方式 Installation Method	自由安装 Free Installation	尺寸 Dimensions	158*108*30 mm
重量(KG) Weight (KG)	0.6	材质外观 Material and Appearance	深灰色 Dark Grey
软件系统 Software System			
软件平台 Software Platform	Finger GateWay Link IDE	采集接口库 Acquisition Interface Library	6种 可扩展 6 Expandable Options
数据处理能力 Data-handling Capacity	20000点 20000 Points		
操作系统 Operating System	Debian 11	转发接口库 Forwarding Interface Library	3种 可扩展 3 Expandable Options

▶ 产品特点 / Product Features
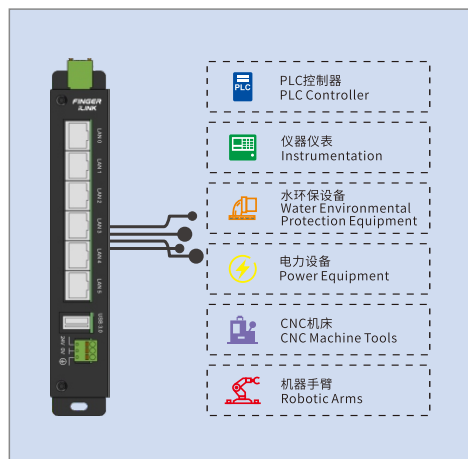
用户部署便捷
Convenient User Deployment

支持Linux工具，大大降低了运维人员部署环境的难度，只需要通过使用提供的工具按需进行动态部署。用户可以根据自己需求部署vsftp文件传输、Java、Python、opencv等环境。

By supporting Linux tools, it significantly reduces the difficulty for operations and maintenance personnel to deploy environments. Users can dynamically deploy environments based on their needs using the provided tools. They can deploy environments such as vsftp file transfer, Java, Python, OpenCV, and more according to their requirements.

边缘计算功能
Edge Computing Capabilities

1. 支持各种边缘计算功能：智能采集、数据过滤、公式计算、数据分组策略。

   Supports various edge computing functionalities: intelligent data acquisition, data filtering, formula calculations, and data grouping strategies.

2. 可实现不同设备数据标准化，极大节省开发成本。

   Enables standardization of data from different devices, significantly reducing development costs.
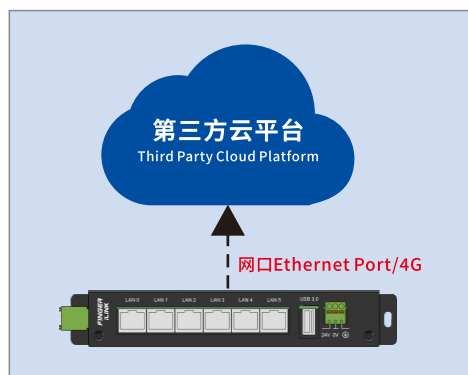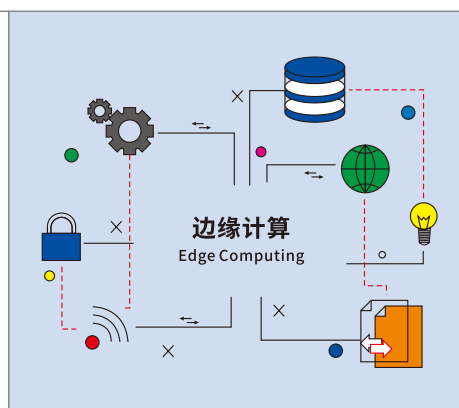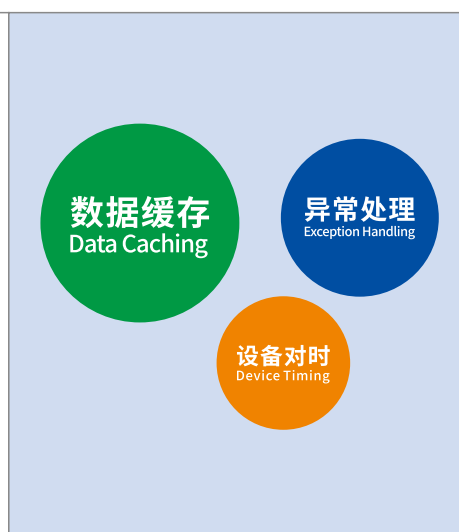

搭载轻量级linux系统
Equipped with a lightweight Linux system

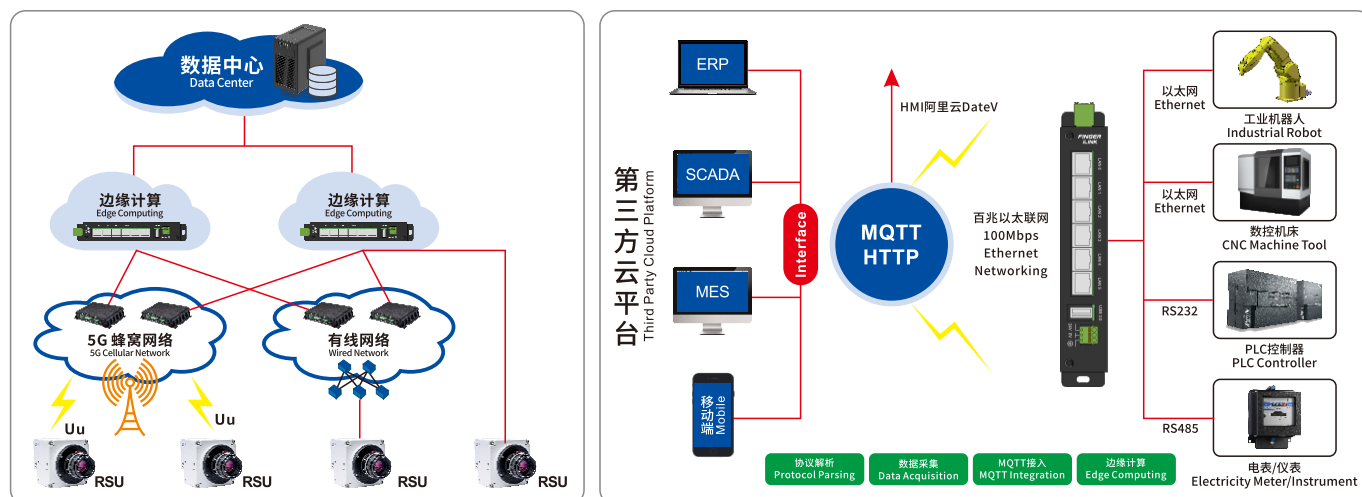系统在保证通用性和用户使用方便性的同时兼顾系统高执行效率、低冗余和占用系统资源尽可能少等特性，在通用性与效率找到一个平衡点。

The system ensures both versatility and user-friendliness while balancing high execution efficiency, low redundancy, and minimal utilization of system resources. It strikes a balance between versatility and efficiency.

集成数字网关产品功能
Integrated digital gateway product functionality

1. 丰富的数据采集协议。

   Rich data acquisition protocols.

2. 支持多种协议接入云平台：(MQTT、MODBUS、HTTP(s)、OPCUA等)。

   Supports multiple protocols for cloud platform integration, such as MQTT, MODBUS, HTTP(s), ,OPCUA etc.

3. 支持协议定制化适配。

   Supports customized protocol adaptation.

4. 支持采集工程配置、设备维护、采集转发数据实时监看的功能。

   Supports functions such as engineering configuration acquisition, equipment maintenance, and real-time monitoring of collected and forwarded data.
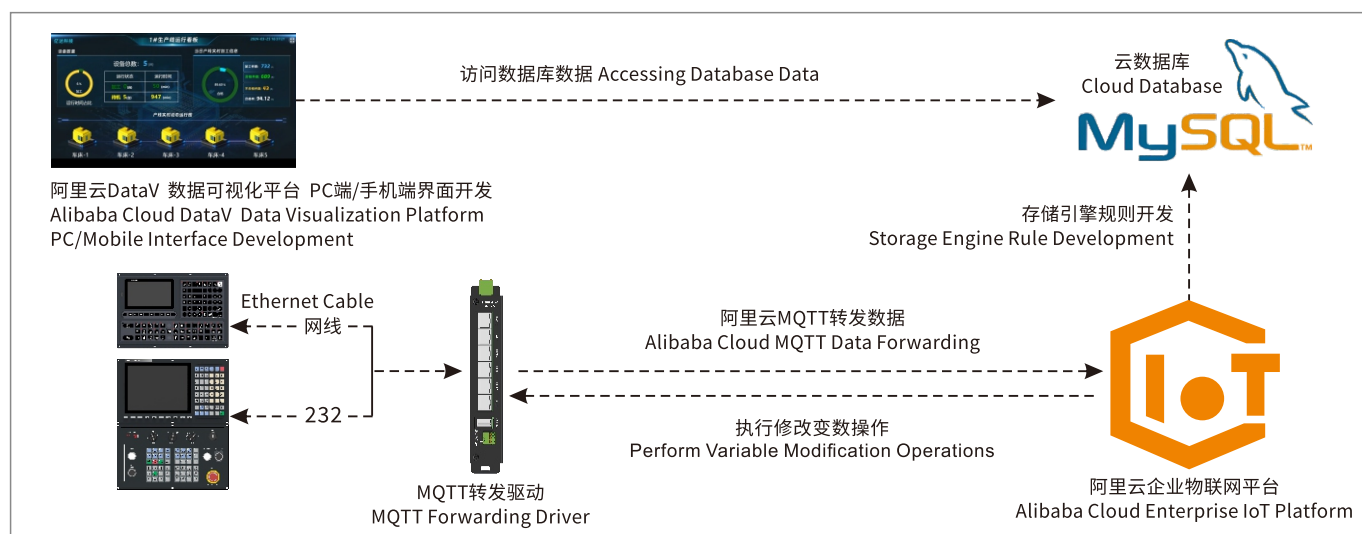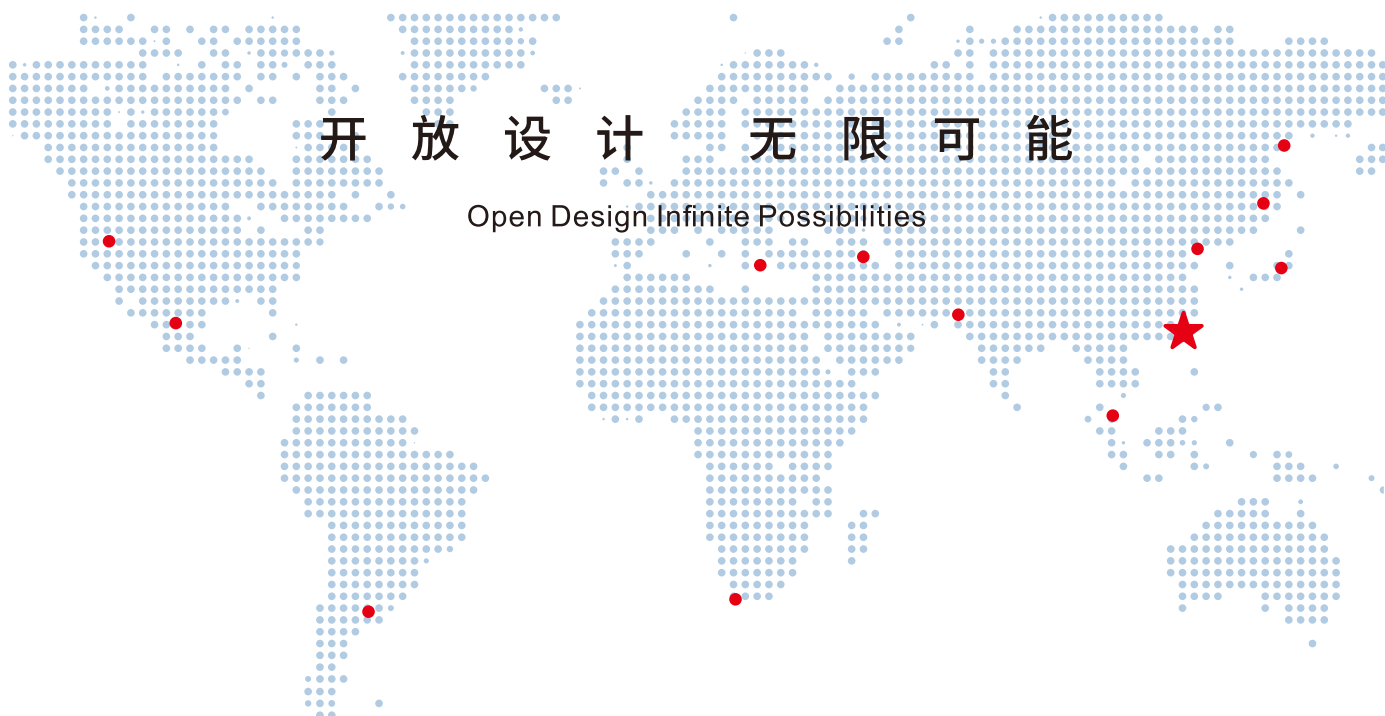
▶ 应用场景 / Application Scenarios

数据中心 Data Center

边缘计算 Edge Computing

边缘计算 Edge Computing

5G 蜂窝网络 5G Cellular Network

有线网络 Wired Network

Uu · RSU · Uu · RSU · RSU · RSU

第三方云平台 Third Party Cloud Platform

ERP · SCADA · MES · 移动端 Mobile

Interface · MQTT HTTP · HMI阿里云DateV

百兆以太联网 100Mbps Ethernet Networking

以太网 Ethernet · 工业机器人 Industrial Robot

以太网 Ethernet · 数控机床 CNC Machine Tool

RS232 · PLC控制器 PLC Controller

RS485 · 电表/仪表 Electricity Meter/Instrument

协议解析 Protocol Parsing · 数据采集 Data Acquisition · MQTT接入 MQTT Integration · 边缘计算 Edge Computing

▶ 局域网+MySQL+HMI方案 / Local Area Network + MySQL + HMI Solution

HMI显示 HMI Display

云数据库 Cloud Database

MySQL™

轮询和读取CMD未处理状态的命令并将其标记为处理状态 Polling and reading CMD commands with unprocessed status and marking them as processed.

接收MQTT数据写入数据库 Receiving MQTT Data and Writing to Database

网关 Gateway

MQTT转发数据 MQTT Data Forwarding

执行变量修改操作 Perform Variable Modification Operations

NET · 232

MQTT

MQTT代理 MQTT Broker

MQTT订阅程序 MQTT Subscription Program

▶ [DataV + 云数据库]可视化方案/ [DataV + Cloud Database]Visualization Solution

访问数据库数据 Accessing Database Data

云数据库 Cloud Database

MySQL™

阿里云DataV 数据可视化平台 PC端/手机端界面开发 Alibaba Cloud DataV Data Visualization Platform PC/Mobile Interface Development

存储引擎规则开发 Storage Engine Rule Development

Ethernet Cable 网线 · 232

阿里云MQTT转发数据 Alibaba Cloud MQTT Data Forwarding

执行修改变数操作 Perform Variable Modification Operations

MQTT转发驱动 MQTT Forwarding Driver

阿里云企业物联网平台 Alibaba Cloud Enterprise IoT Platform

开 放 设 计　无 限 可 能

Open Design Infinite Possibilities

服务网点 Service Network

广州GuangZhou	190-6540-9303	泉州QuanZhou	190-6540-9954	宁波NingBo	181-2427-8569
玉环YuHuan	190-6540-9143	温州WenZhou	190-6540-9032	杭州HangZhou	190-6540-9143
南通NanTong	190-6540-9075	重庆ChongQing	181-2421-7208	成都ChengDu	181-2426-7408
济南JiNan	181-2796-9436				

温岭WenLing　181-2490-4248
常州ChangZhou　181-2794-8586
北京BeiJing　190-6540-9853

广州亿达科技有限公司 Guangzhou Finger Technology Co.,Ltd

咨询热线Hotline：020-39389901　　维修专线Repair Helpline：18127931302

传真号码Fax：020-39389903　　邮政编码Postal Code：511495

公司官网Website：www.finger-cnc.com　　电子邮箱E-mail：finger@fingercnc.com

公司地址Address：广东省广州市番禺区钟村街诚鼎街8号1楼

1F,No. 8, Chengding Street, Zhongcun Street, Panyu District, Guangzhou City, Guangdong Province

亿达官网
Finger Official Website

亿达微信公众号
Finger Official Wechat

版本号 (Version No.)：F202503D