# INTELLIGENT COMPUTING INDUSTRY APPLICATION SOLUTIONS

# **Smart Retail and Payment**

Al Heterogeneous Computing / Multimodal Interaction High Speed Transmission / Biometrics









Yuntion Wireless Technology

# Leading the Digital Transformation of the Retail Industry

In the face of an increasingly complex market environment, the pace of integration and important in the retail industry is accelerating, and digital technology is becoming an important means for retailers to improve customer experience, improve operational efficiency, and enhance profitability. Yuntionsmart retail and payment solutions are consumer-centric, and optimize store operation efficiency, provide high-quality consumer experience, and promote digital transformation of retail enterprises.





Yuntions mart store and restaurant solutions integrate intelligent hardware devices such as interactive self-service terminals and smart payment terminals, and integrate cutting-edge technologies such as AI, IoT, machine vision, and 5G.

The solution helps stores achieve agile operations and cost optimization, while allowing customers to enjoy a more personalized and immersive shopping experience.

## **Technical Features**





# **Unmanned Retail Convenience Store**

The unmanned retail convenience store integrates multiple technologies such as composite sensors, biometrics, computer vision, etc.

Through Yuntion intelligent computing products, smart retail terminals can be empowered to create a shopping experience of grab-and-go and non-inductive payment.





By integrating core technologies such as AI, IoT, and edge computing, Yuntion empowers various smart retail devices such as smart self-service terminals, smart shelves, and unmanned vending machines to realize wireless communication, face recognition, human-computer interaction, and biological payment and other functions to help retail stores reduce costs and increase efficiency, improve service efficiency, and enhance customer experience.

## **Technical Features**





# Intelligent Self-service Equipment

The Yuntion intelligent self-service terminal solution is based on the intelligent computing board and adopts Qualcomm Snapdragon chip to provide a stable and reliable 4G wireless network. It supports Android operating system and various peripheral interfaces such as display screen, touch screen, speaker, camera, etc., supports 1080P dual-screen different display, adopts new artificial intelligence algorithm, realizes finding products, services and information, and quickly and accurately self-checkout.



# **Smart Vending Machine**

Yuntion intelligent vending machine software and hardware solutions are based on intelligent computing boards, integrating AI, IoT, mobile payment methods, and dynamic visual recognition technology. Commodity identification and settlement are carried out through AI visual dual-camera recognition, and large-screen display and advertisement customization can also be externally connected.





Yuntion intelligent computing products and solutions are based on SOC heterogeneous processors. With super AI computing power and connection capabilities, Ubiot empowers various payment terminals to achieve intelligent upgrades, which is not only helps merchants realize digital operation, but also refreshes the experience of consumers

# **Technical Features**





# **Smart POS Device**

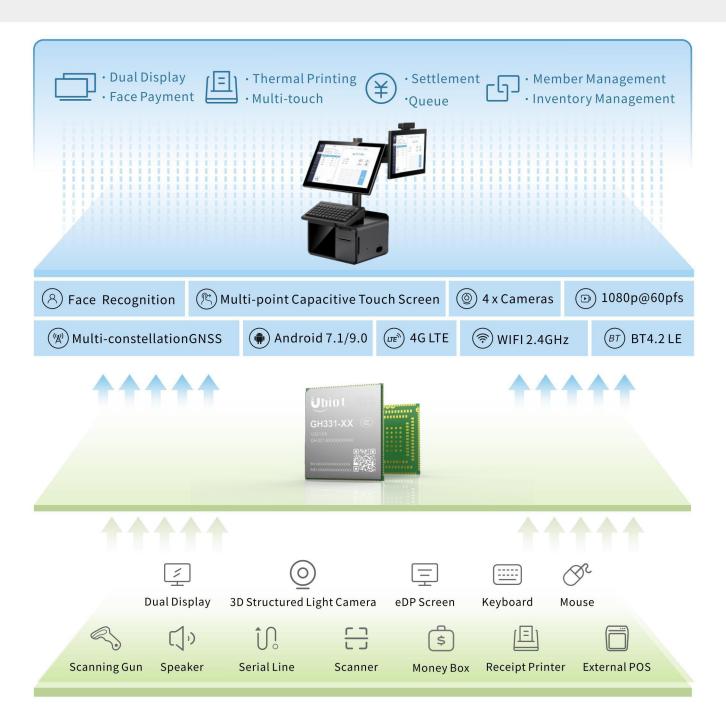
Yuntion intelligent POS machine solution is based on GH331 intelligent module, which integrates functions such as printing, scanning code, voice broadcasting, and touch control, helping merchants to provide services such as cashier, ordering, and management.

Equipped with Qualcomm Snapdragon SDM450 platform and Android system, integrated high-performance 8-core Cortex-A53 processor, supports multi-channel high-definition camera input, supports dual-screen display and touch, and integrates feature-rich expansion interfaces to achieve efficient wireless communication transmission.



# **Smart Cash Register**

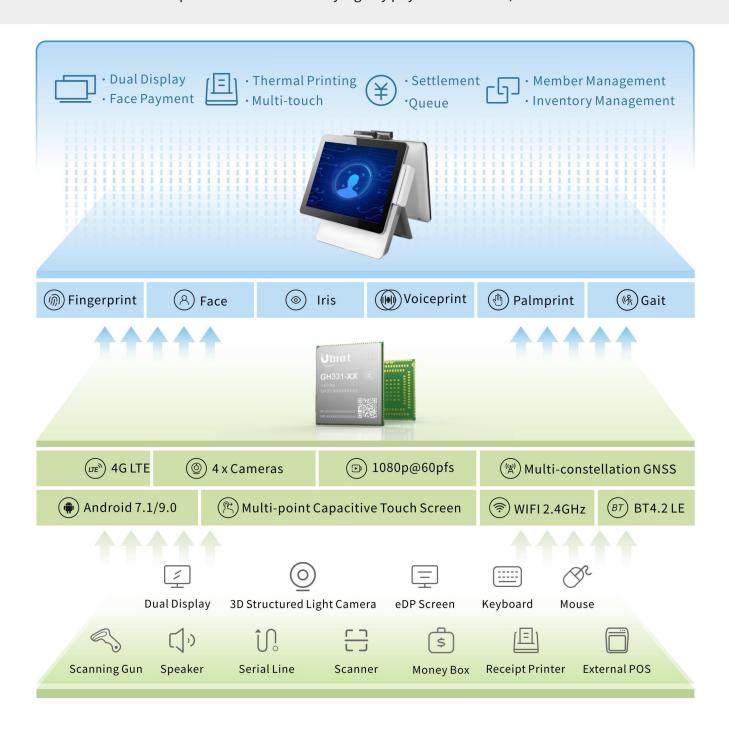
Yuntion smart cash register solution is based on Qualcomm Snapdragon chip, integrates functions such as cashier, weighing, printing, etc. It is equipped with advanced face recognition algorithm, and supports face-swiping payment, QR code payment, digital keyboard and other functions. Customized solutions that integrate software and hardware can be provided according to customer needs.



# **Smart Biometric POS Machine**

Yuntion smart biometric POS machine solution adopts Qualcomm SDM450 processor, realizes POS machine biometric function through low power consumption and high integration embedded industrial mainboard, integrated scanning code, bank card, identity recognition and other functional modules.

Customers can make purchases without carrying any payment medium, which is safe and convenient.



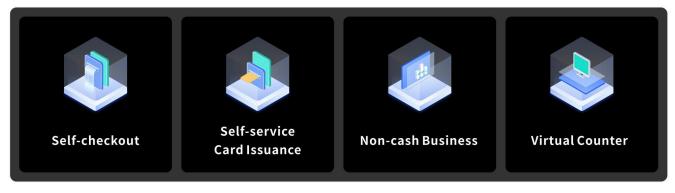


At present, the wave of intelligence is unstoppable, and China's banking industry is actively embracing changes.

Through intelligent financial equipment equipped with Yuntion intelligent computing products and solutions, such as self-service billing machines, and self-service terminals, the efficiency of business processing can be improved, and the increasingly diverse and personalized financial needs of customers can be better met.

## **Technical Features**





# **Smart ATM**

Smart ATM is a new generation of intelligent autonomous equipment specially designed to realize the digital upgrade of banks.

Yuntion smart ATM solution efficiently integrates multimedia communication technology, remote collaborative operation function and integrated business processing system to help banks optimize business processes and improve customer experience.



# **Product Selection**

## **Intelligent Network Module**

### GH580 Flagship Al Intelligent Module

Qualcomm QCS8250 CPU: 1+3+4 Kyro 2.84GHz/2.4GHz/1.8GHz NPU: INT8 15TOPS Camera: 64MP/24MP+24MP+24MP+2MP+2MP+2MP

USB: USB3.1+Type-C with DP PCIe: 2\*2Lane Gen3 Size:39\*49\*2.4mm



### GH360 4G Intelligent Module

Qualcomm SDM660 CPU: 4+4 Kyro 2.2GHz/1.8GHz Camera: 24MP/16MP+16MP Modem: LTE Cat6 Size:43\*44\*2.6mm



### GH331 4G Intelligent Module

Qualcomm SDM450 CPU: 8\*A53 1.8GHz Camera: 24MP/13MP+13MP Modem: LTE Cat6 Size: 35\*40\*2.6mm



### GH331C 4G Intelligent Module

Qualcomm SM6115 CPU: 4+4 Kyro 2.0GHz/1.8GHz Camera: 25MP/16MP+16MP Modem: LTE Cat6 WIFI: 2.4GHz/5.8GHz BT5.0



### GH330 4G Intelligent Module

Qualcomm SDM450 CPU: 8\*A53 1.8GHz Camera: 24MP/13MP+13MP Modem: LTE Cat6 Size: 43\*44\*2.6mm



### GH331D4G Intelligent Module

Qualcomm QCM2290 CPU: 4\*A53 2.0GHz Camera: 24MP/13MP+13MP Modem: LTE Cat6 WIFI: 2.4GHz/5.8GHz BT5.0 Size:35\*40\*2.6mm



### GH300 4G Intelligent Module

Qualcomm MSM8909 CPU: 4\*A7 1.1GHz Camera: 8MP Modem: LTE Cat4 Size: 39mm\*29mm\*2.6mm



### GH201 4G Cat4 Full Netcom Module

Qualcomm MDM9x07 CPU: Cortex-A7 1.3GHz Package: LGA+LCC Size: 32mm\*29mm\*2.6mm



### GH160 4G Cat1 Module

ASR1603,RTOS Package: LGA+LCC Size:23mm\*23mm\*2.6mm





## **Intelligent Computing Mainboard**

### SD5580(A)

Qualcomm 8 Series Flagship SoC Intelligent Computing Platform CPU: Qualcomm QCS8250,4+4 Kryo 3.2GHz Support Multi-screen Display, 4K Video Display & 8K Codec Support Wi-Fi 6/BT 5.0 Wireless Connection Support USB/LAN/RS232/RS485/I2C/SPI Interface Protocols



### **SD5360**

Qualcomm 6 Series SoC Intelligent Computing Platform CPU: Qualcomm SDM660, 4+4 Kryo 2.2GHz Support Multi-screen Display, 4K Video Display & Decoding Integrated 4G LTE Cat6/WIFI/BT/GPS Multiple Wireless Connections USB/RS232/RS485/I2C/SPI Interface Protocols



### **SD5300**

Qualcomm 4Series SoC Intelligent Computing Platform CPU: Qualcomm SDM450,8\*AS3 2.2GHz
Support Multi-screen Display,
Full HD Video Display & Decoding
Integrated 4G LTE Cat6/WIFI/BT/GPS
Multiple Wireless Connections
USB/R5232/R5485/12C/SPI Interface Protocols



SD5400

RK High-end General SoC Intelligent
Computing Platform
CPU: RK3588,4\*A764\*A552.4GHz
Support Multi-screen Display, 8K Video Display & 8K Codec
Support WIFI5/BT5.0 Wireless Connection
Support USB/LAN/RS232/RS485
/PCIe/SPI Interface Protocols



### SD5200

RK General SoC Intelligent Computing Platform CPU: RK3568, 8\*A55 2.0GHz Support Multi-screen Display, 4K Video Display & Decoding Support WIFI4/BT5.0 Wireless Connection Support USB/LAN/RS232/RS485/SPI Interface Protocols



### SD5000

Qualcomm 2 Series SoC Intelligent Computing Platform CPU: Qualcomm MSM8909,4\*A7 1.1GHz Multi-screen Display, Full HD Video Display & Codec Integrated 4G LTE Cat4/WIFI/BT/GPS Multiple Wireless Connections Support USB/RS232/RS485/I2C/SPI Interface Protocols



# **Product Selection**

# **Intelligent Edge and Cloud Server**

### Astro200Pro

Support Up to 5 x QCS8250 SoC

Max. Computing Power 75 TOPS INT8

Support Dual Gigabit Ethernet Ports

Support Dual HDMI 4K Display

Support USB/RS232/RS485 IO

Support WIFI6/BT5.0 Wireless Connection



### Astro200Lite

Adopt Rk3588 SOC

Max. Computing Power 6 TOPS INT8
Support Dual Gigabit Ethernet Ports
Support Dual HDMI 4K Display
Support USB/RS232/RS485 IO
Support WIFI5/BT Wireless Connection



### Astro200

Adopt QCS8250 SOC
Max. Computing Power 15TOPS INT8
Support Dual Gigabit Ethernet Ports
Support Dual HDMI 4K Display
Support USB/RS232/RS485 IO
Support WIFI6/BT5.0 Wireless Connection



### Astro500Pro

Support 4 GPU Inference Cards
Meet the needs of multi-scenario reasoning;
Max. AI Computing Power Over2000TOPS INT8
Provide 800+ channels of
HD video real-time analysis (1080P25FPS)



### Astro 800Max

Support 2 Second-generation Intel® Xeon Skylake/Cascade Series Scalable Processors
Max. AI Computing Power Over 5000 TOPS INT8;
Support 24 DIMM Memory Slots
Integrated 6-channel memory controller
Support Up to 10 full-height full-length
double-width GPU cards;



### Astro500Lite

Max. support 32 QCS8250 SOC
Max. Computing Power 480TOPS INT8
Support Dual Gigabit Ethernet Ports
Support Dual HDMI 4K Display
Support USB/RS232/RS485 IO



### Astro800

Max. support 96 QCS8250 SOC Max. Computing Power 1440TOPS INT8 Support Dual Gigabit Ethernet Ports Support Dual HDMI 4K Display Support USB/RS232/RS485 IO



### Astro500

Max. support 96 QCS8250 SOC Max. Computing Power 1440TOPS INT8 Support Dual Gigabit Ethernet Ports Support Dual HDMI 4K Display Support USB/RS232/RS485 IO



## Astro800Pro

Support 6 GPU Inference Cards
Meet the needs of multi-scenario reasoning;
Max. AI Computing Power Over 3000TOPS INT8
provide 1200+ channels of HD
video real-time analysis (1080P 25FPS)





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Yuntion was established in 2019 and is committed to becoming the world's leading provider of full-scene intelligent computing and machine vision infrastructure solutions. Yuntion is committed to empower applications in all walks of life with intelligent computing and machine vision technology, and build an intelligent world where everything perceives. Ubiquitous connections and perceptions are built.

Prerequisites and Foundations for an Intelligent World; Continuously improving computing power and algorithms make intelligence omnipresent. Through the continuous construction of full-scene infrastructure, consumers can get the ultimate personalized smart experience in home, travel, office, audio-visual entertainment, sports and health and other scenes, bringing people a more convenient, intelligent, comfortable and safe life.