

INTELLIGENT COMPUTING INDUSTRY APPLICATION SOLUTIONS

# HEALTHCARE AND LIFE SCIENCE

AI Heterogeneous Computing / Image Processing  
Ultra-low Power Consumption / Wireless Connection



# Driving Digital Change in the Healthcare Industry

Yuntion smart medical solution is based on an excellent SoC chip platform and AI computing power, and integrates technologies such as machine vision, image processing, AI-assisted analysis, and edge computing to realize intelligent medical capabilities, improve medical efficiency, and optimize patient experience services.



# Smart Hospital



Smart hospitals cover three major areas: "smart medical care" for medical staff, "smart services" for patients, and "smart management" for hospital management.

Yuntion relies on its excellent intelligent computing products and integrates new technologies such as cloud computing, IoT, AI, cognitive technology and 5G to help the construction of smart hospitals.

## Technical Features

AI Heterogeneous Computing  
Simple & Fast  
Algorithm Deployment



4G/WIFI/BT  
Multimode  
Wireless Connection



Gbps  
Wireless Transfer Rate



High-performance ISP  
Image Processing



## Solution Highlights



4K Extraordinary  
Display



Ultra Low Power  
Consumption



Rich IO  
Extension Interfaces

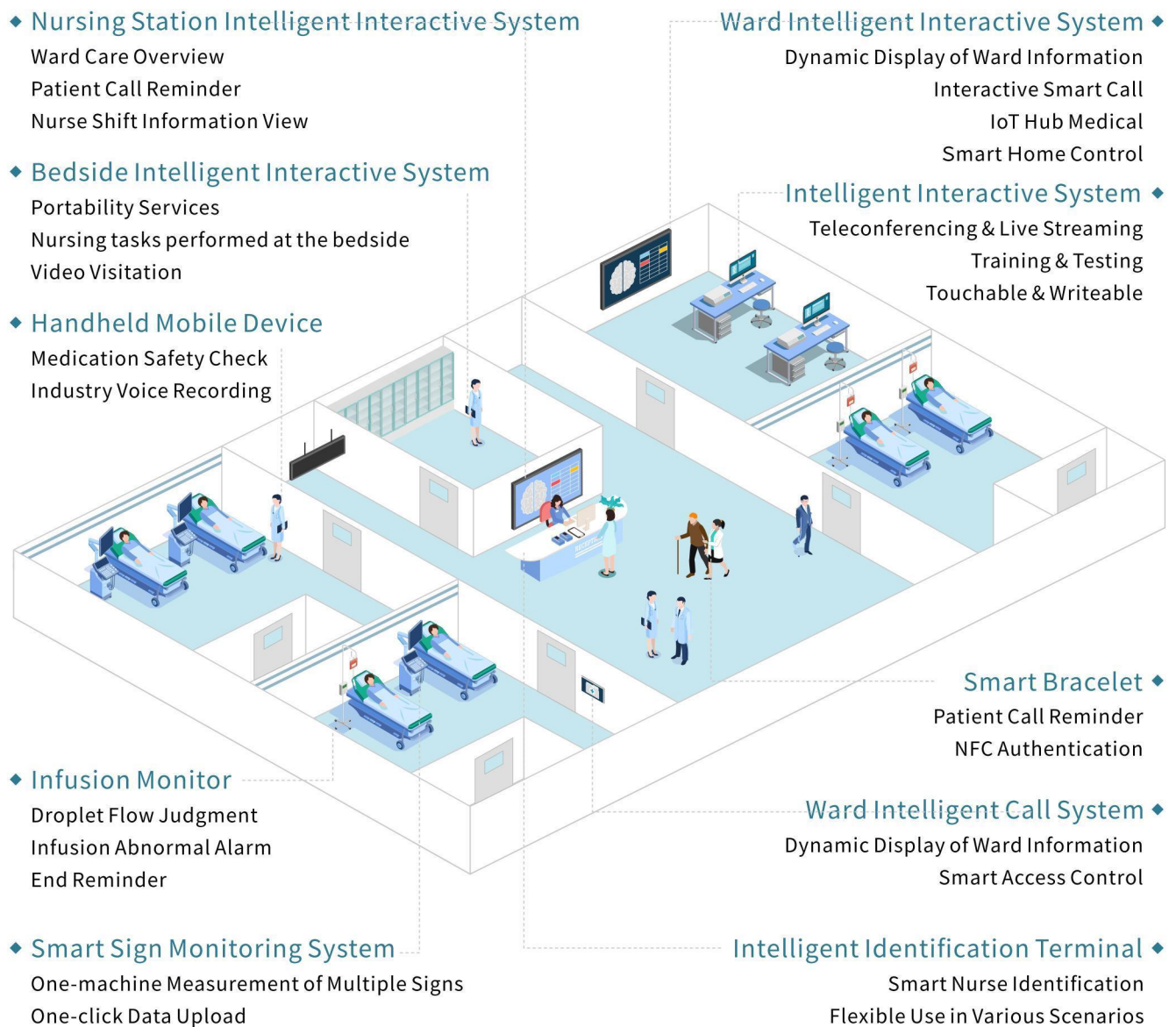


AI-assisted  
Analysis

## Application

# Smart Ward

Yuntion intelligent computing products and solution is based on SoC heterogeneous processors and GPGPU development processors to realize efficient collection and use of medical data, timely reminder of early warning information, real-time risk monitoring and inquiry at any time, and help transform intelligent wards.

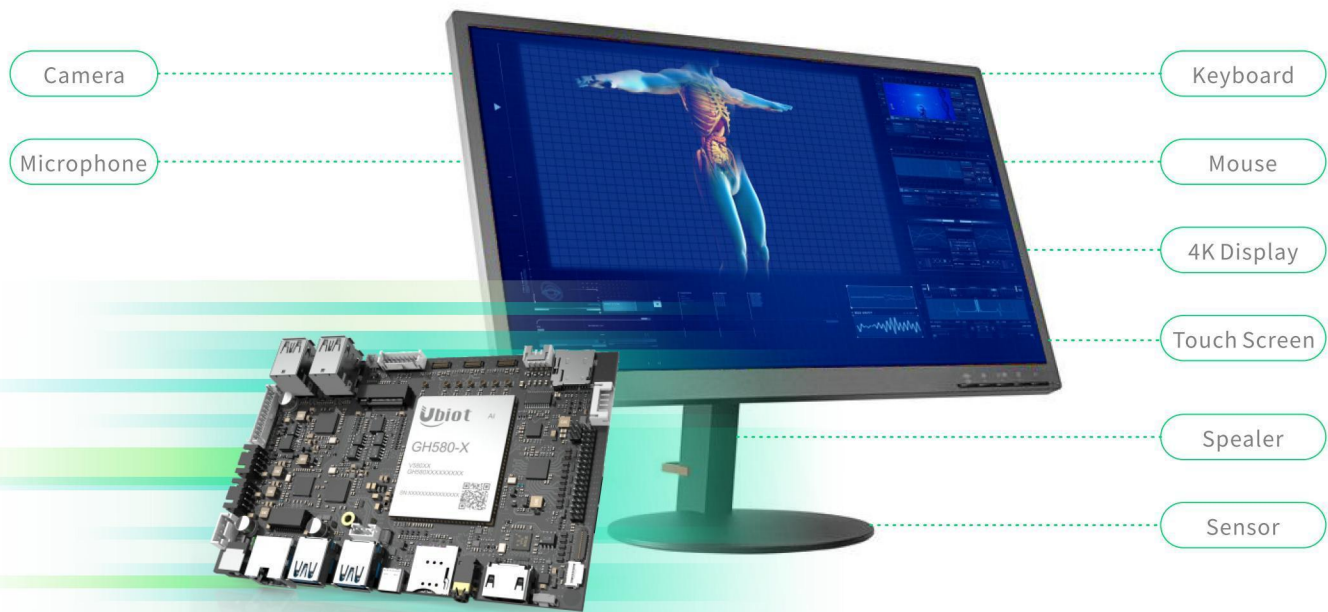
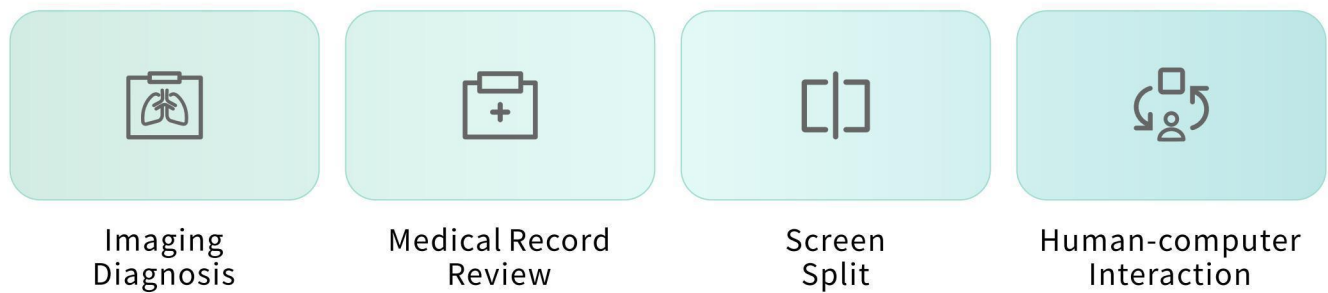


## Application

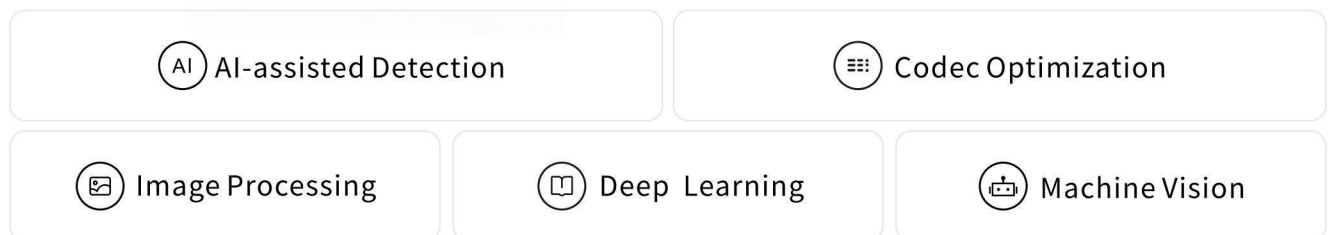
# Intelligent Medical Display Terminal

The image quality presented by the medical display terminal is an important basis for doctors to diagnose, so higher resolution, brightness and contrast are required.

Yunti on flagship intelligent computing products support 8K displays, achieve high resolution, wide color gamut, high brightness contrast and low latency, and are perfectly suitable for intelligent medical display terminals.



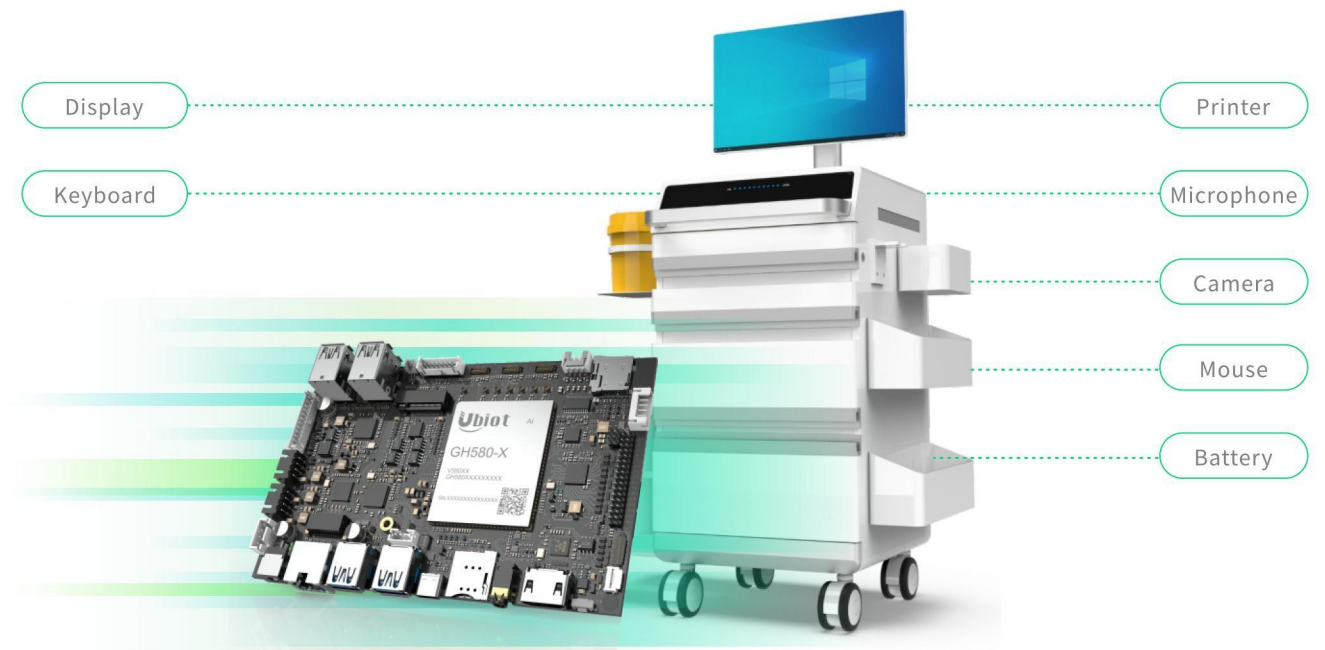
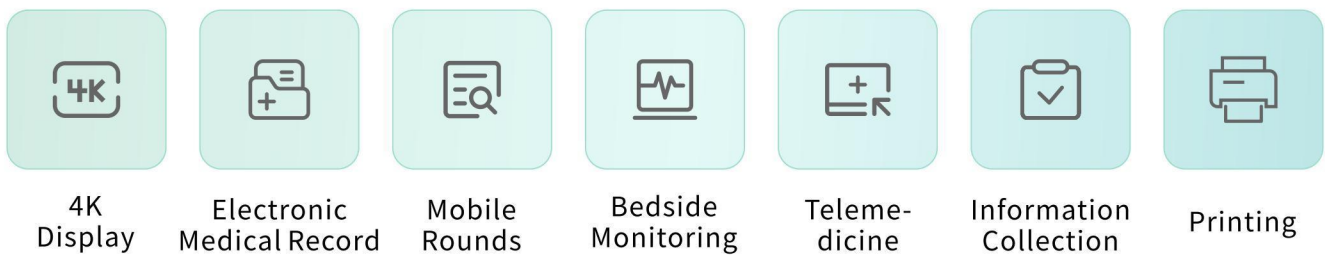
### Core Algorithm:



## Application

# Mobile Healthcare Workstation

Yuntion mobile medical workstation is based on the intelligent computing mainboard SD5580, which provides high AI computing power, advanced graphics processing functions, and high-speed wireless connection functions. It is an ideal choice for building an excellent mobile medical workstation.



### Product Advantages:

Wi-Fi 6 Ultra-fast Wireless Connection

24-channels FHD Video Decoding Capability

Android/Ubuntu  
Free Choice of Multiple Systems

Equipped with Qualcomm SNPE inference engine  
Support model conversion and deployment include  
Caffe/PyTorch/TensorFlow

# Application

## Telemedicine

Telemedicine consultation generates a large amount of real-time conference audio and video data and medical image data, which puts forward higher requirements for image processing capability, network bandwidth, and data processing. With Yunti on intelligent edge and cloud server, 4K/8K remote high-definition consultation and high-speed transmission and sharing of medical images can be realized.



### Core Algorithm:



# Medical Imaging Equipment

Precise imaging is the premise of precise diagnosis and treatment.

Medical imaging equipment equipped with YunTion intelligent computing products and solutions, with the excellent coding capabilities provided by high-performance SOC chips, fully meet doctors' high-level requirements for ultra-high-definition images, low-latency real-time image transmission, and image processing. It can also assist doctors in medical image processing, identification and analysis.

## Technical Features

AI Heterogeneous Computing  
Simple & Fast  
Algorithm Deployment

Ultra HD Camera  
Access Capability

High-performance ISP  
Image Processing

4K 60FPS  
Dual Channel Low-latency HD Display

Various Image  
Processing  
&  
Compositing  
Algorithms

## Solution Highlights



4K Display  
Clear View



Extraordinary  
Image Optimization Solution



Low-latency high-bandwidth  
Wireless Transmission  
Freedom of Use



AI-assisted Analytics

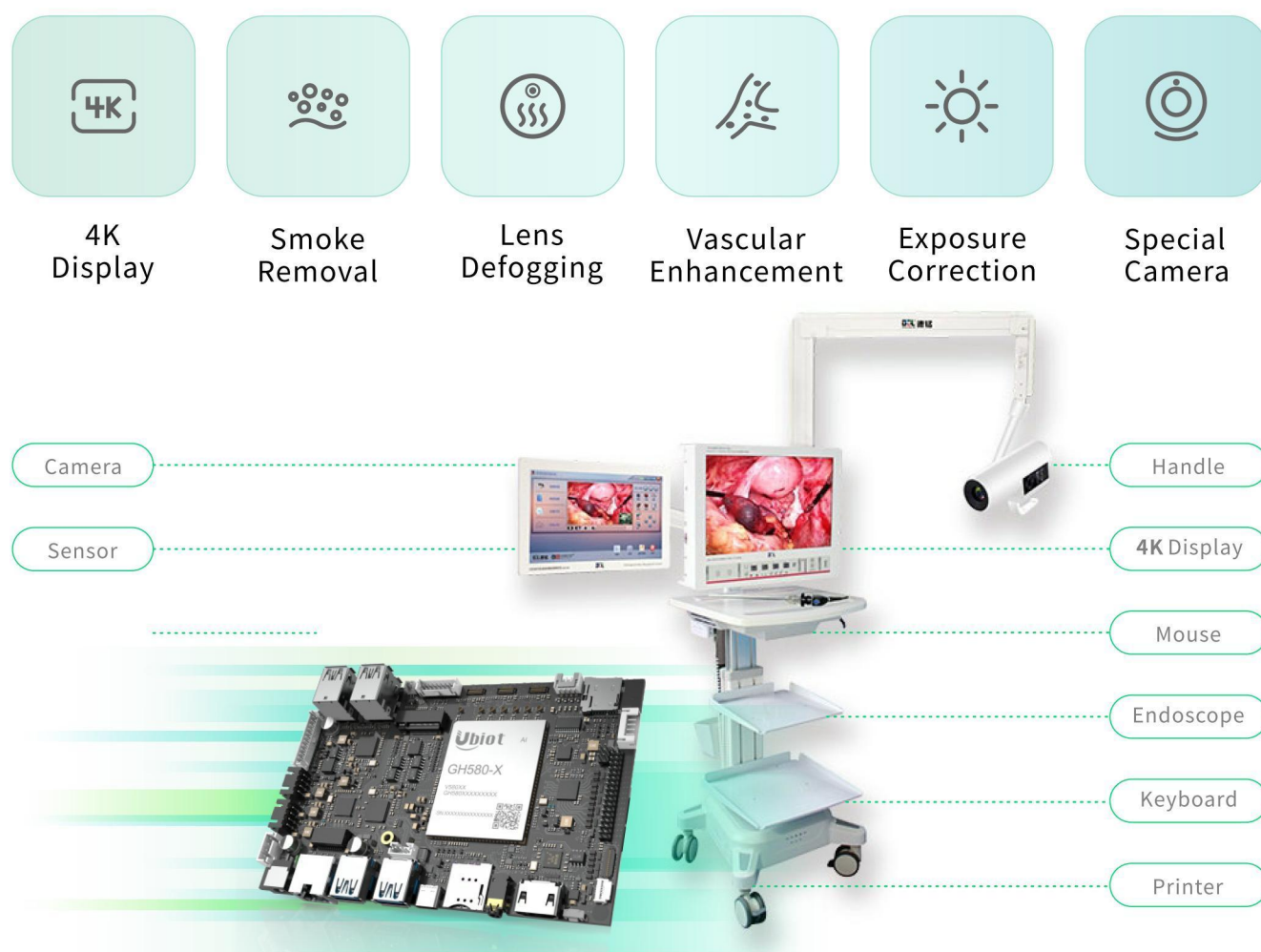


## Application

# 4K HD Endoscope Vision System

The 4K high-definition endoscopic vision system has a 4K-level resolution, providing operators with a clearer surgical field of vision and improving the precision of surgery.

Yunti onflagship intelligent computing mainboard SD5580A adopts Qualcomm QCS8250 processor, has 15TOPS super AI heterogeneous computing power, and supports up to 24 channels of FHD video decoding capability at the same time. It is an ideal choice for cutting-edge endoscopic vision systems.



### Core Algorithm:

Image Segmentation

Target Detection

Image Classification

Image Registration

Image Mapping

# Medical Instruments

Yuntion intelligent computing products have powerful AI computing power, outstanding video and graphics processing capabilities, and advanced connectivity capabilities, meeting the strict demands of the medical instrument industry for intelligence and high precision.

## Technical Features

High-performance CPU Processing

3D GPU HD Display

ISP HDR Image Processing

AI Computing Power

4G/WIFI/BT  
Multimode  
Wireless Connection

Rich IO Extension Interface



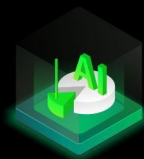
Ultra Low Power Consumption



## Solution Highlights



Wireless Transmission



AI-assisted Analysis



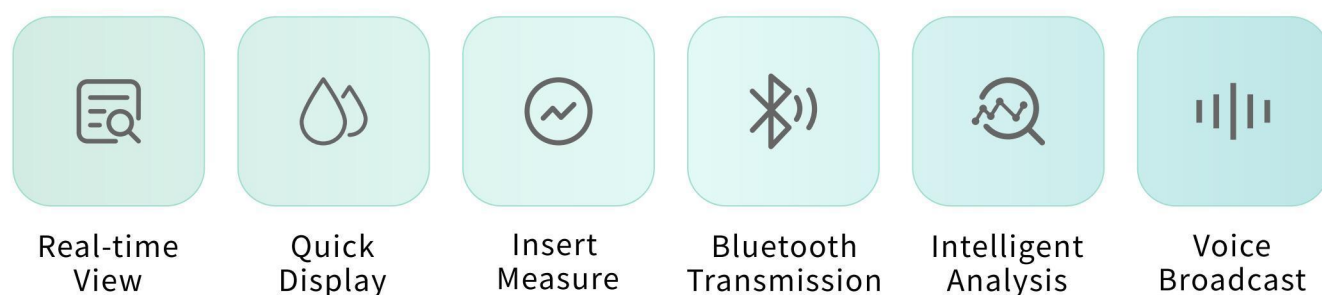
Visual Human-Computer Interaction

## Application

# Handheld POCT Auxiliary Diagnostic Equipment

POCT blood glucose meter is a common instrument for blood glucose monitoring.

The blood glucose meter with built-in Yuntion intelligent network connection module can monitor blood glucose levels in real time 24 hours a day, upload data to the cloud or send it to other devices such as mobile phones, and can also integrate user-friendly functions such as high-definition panels and automatic voice playback.



### Product Advantages:

Integrated 4G/WIFI/BT/GPS and Other Wireless Connection Methods

Support 4K HD Display

Support Different Performance Configurations of High, Medium and Low

Ultra-low Power Consumption Supports Long Battery Life

# Life Science Research

As a modern discipline that requires a large amount of experimental data research and deduction, life science research is inseparable from the assistance of high-performance computing. Yuntion intelligent edge and cloud servers provide high computing power, high value, and low power consumption infrastructure solutions for life science research, bringing new possibilities for life science research.

## Technical Features



ARM SOC  
Heterogeneous  
Computing Chips



Multi-platform  
Operating System



Multimode  
Wireless Connection



Device-side Real-time  
High-performance  
GPU Rendering


## Solution Highlights



Support Android Os & Ubuntu Os  
Rich Business Ecosystem  
Applications & Algorithms



Support CPU+GPU+NPU  
Heterogeneous Intelligent Computing  
Simple Algorithmic Model Deployment



Ultra Low Power Consumption  
Low Carbon Operation

## Application

# AI Data Analysis

AI technology is fundamentally changing the global healthcare system.

Yuntron intelligent edge server Astro500 is specially designed for digital transformation. It can build 32-96 high-performance heterogeneous ARM SoC chips with a computing power of up to 1440 TOPS, which can easily meet the needs of high computing power in the field of life sciences.



### Product Advantages:



#### Remove "Noise" from Data

Help people make sense of vast amounts of clinical data, medical literature, and population and usage data to inform decision-making.



#### Provide Contextual Relevance

Quickly interpret hundreds of millions of data points, including text and image data, to help healthcare providers discover contextually relevant information about each patient.









#### Reduce Errors Related to Personnel Fatigue

AI algorithms are not fatigued, distracted or affected by emotions. They can process massive amounts of data with incredible speed and precision.

# Product Selection

## Intelligent Network Module

<p><b>GH580 Flagship AI Intelligent Module</b>                  Qualcomm QCS8250                  CPU: 1+3+4 Kryo 2.84GHz/2.4GHz/1.8GHz                  NPU: INT8 15TOPS                  Camera: 64MP/24MP+24MP+24MP+2MP+2MP+2MP                  WIFI6/BT5.2                  USB: USB3.1+Type-C with DP                  PCIe: 2*2Lane Gen3                  Size:39*49*2.4mm</p> 	<p><b>GH360 4G Intelligent Module</b>                  Qualcomm SDM660                  CPU: 4+4 Kryo 2.2GHz/1.8GHz                  Camera: 24MP/16MP+16MP                  Modem: LTE Cat6                  Size:43*44*2.6mm</p> 	<p><b>GH331 4G Intelligent Module</b>                  Qualcomm SDM450                  CPU: 8*A53 1.8GHz                  Camera: 24MP/13MP+13MP                  Modem: LTE Cat6                  Size: 35*40*2.6mm</p> 
<p><b>GH331C 4G Intelligent Module</b>                  Qualcomm SM6115                  CPU: 4+4 Kryo 2.0GHz/1.8GHz                  Camera: 25MP/16MP+16MP                  Modem: LTE Cat6                  WIFI: 2.4GHz/5.8GHz                  BT5.0                  Size:35*40*2.6mm</p> 	<p><b>GH330 4G Intelligent Module</b>                  Qualcomm SDM450                  CPU: 8*A53 1.8GHz                  Camera: 24MP/13MP+13MP                  Modem: LTE Cat6                  Size: 43*44*2.6mm</p> 	<p><b>GH331D 4G Intelligent Module</b>                  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</p> 
<p><b>GH300 4G Intelligent Module</b>                  Qualcomm MSM8909                  CPU: 4*A7 1.1GHz                  Camera: 8MP                  Modem: LTE Cat4                  Size: 39mm*29mm*2.6mm</p> 	<p><b>GH201 4G Cat4 Full Netcom Module</b>                  Qualcomm MDM9x07                  CPU: Cortex-A7 1.3GHz                  Package: LGA+LCC                  Size: 32mm*29mm*2.6mm</p> 	<p><b>GH160 4G Cat1 Module</b>                  ASR1603,RTOS                  Package: LGA+LCC                  Size:23mm*23mm*2.6mm</p> 

## Intelligent Computing Mainboard

<p><b>SD5580(A)</b>                  Qualcomm 8 Series Flagship SoC Intelligent Computing Platform                  CPU: Qualcomm QCS8250,4+4 Kryo 3.2GHz                  Support Multi-screen Display, 4K Video Display &amp; 8K Codec                  Support Wi-Fi 6/BT 5.0 Wireless Connection                  Support USB/LAN/RS232/RS485/I2C/SPI Interface Protocols</p> 	<p><b>SD5360</b>                  Qualcomm 6 Series SoC Intelligent Computing Platform                  CPU: Qualcomm SDM660, 4+4 Kryo 2.2GHz                  Support Multi-screen Display, 4K Video Display &amp; Decoding                  Integrated 4G LTE Cat6/WIFI/BT/GPS                  Multiple Wireless Connections                  USB/RS232/RS485/I2C/SPI Interface Protocols</p> 
<p><b>SD5400</b>                  RK High-end General SoC Intelligent Computing Platform                  CPU: RK3588,4*A76+4*A55 2.4GHz                  Support Multi-screen Display, 8K Video Display &amp; 8K Codec                  Support WIFI5/BT5.0 Wireless Connection                  Support USB/LAN/RS232/RS485 /PCIe/SPI Interface Protocols</p> 	<p><b>SD5300</b>                  Qualcomm 4Series SoC Intelligent Computing Platform                  CPU: Qualcomm SDM450,8*A53 2.2GHz                  Support Multi-screen Display, Full HD Video Display &amp; Decoding                  Integrated 4G LTE Cat6/WIFI/BT/GPS                  Multiple Wireless Connections                  USB/RS232/RS485/I2C/SPI Interface Protocols</p> 
	<p><b>SD5200</b>                  RK General SoC Intelligent Computing Platform                  CPU: RK3568, 8*A55 2.0GHz                  Support Multi-screen Display, 4K Video Display &amp; Decoding                  Support WIFI4/BT5.0 Wireless Connection                  Support USB/LAN/RS232/RS485/SPI Interface Protocols</p> 
	<p><b>SD5000</b>                  Qualcomm 2 Series SoC Intelligent Computing Platform                  CPU: Qualcomm MSM8909,4*A7 1.1GHz                  Multi-screen Display, Full HD Video Display &amp; Codec                  Integrated 4G LTE Cat4/WIFI/BT/GPS                  Multiple Wireless Connections                  Support USB/RS232/RS485/I2C/SPI Interface Protocols</p> 

# 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



### 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



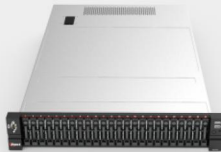
### Astro200Lite

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



### Astro500Pro

Support 4 GPU Inference Cards  
 Meet the needs of multi-scenario reasoning;  
 Max. AI Computing Power Over 2000TOPS 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)





## YunTion Wireless Technology (Shenzhen) Co., Ltd.

Website: [www.yunTion.com](http://www.yunTion.com)

Business Cooperation:

86 189 0246 9335

Email: [navy.yao@yunTion.com](mailto:navy.yao@yunTion.com)

Address: Room 1007-1008, Block C, Zhantao Technology Building, Minzhi Street, Longhua District, Shenzhen

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.