



Yuntion Wireless Technology (Shenzhen) Co.,Ltd.

Intelligent Edge Station Astro200

User Manual

Rev: V1.0

Date: 2021-10-21



History

Revision	Date	Description
V1.0	2021-10-21	● Initial

DECLARAION

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1 Production Information

1.1 Application

There are many application scenarios of Astro200 intelligent edge station, including safe cities, smart security, smart transportation, smart manufacturing, smart retail, and smart light poles. In these application scenarios, the typical architecture is as follows

- ∞ End: Connect IPC (IP Camera) or other front-end equipment via wireless or wired
- ∞ Edge: The edge realizes value information extraction, storage and upload
- ∞ Cloud: Data center model push, management, development and application

1.2 Overview

Astro200 is a lightweight edge device of Yuntion for a wide range of edge intelligent application scenarios. It has excellent CPU processing capability, AI computing capability, large-capacity storage, flexible configuration, small size, wide temperature range and high speed. It has the characteristics of high wired and wireless connection speed, strong environmental adaptability, and easy maintenance and management.

It supports dual versions of Android OS and Linux, which can provide customers with rich AI audio and video multimedia processing services, facilitate the secondary development of applications and access to a wide range of Android ecological applications, and can also provide professional, In-depth custom-developed applications in vertical fields based on Linux.

Astro200 is mainly used in intelligent audio and video collection, high-definition display, analysis, data storage and other application scenarios. It can be widely deployed in various edge and central computer rooms to meet the application in complex intelligent terminals, road traffic, communities, parks, shopping malls, supermarkets and other complex environment areas.

1.3 Features

- ∞ **Ease of use for edge scenarios**

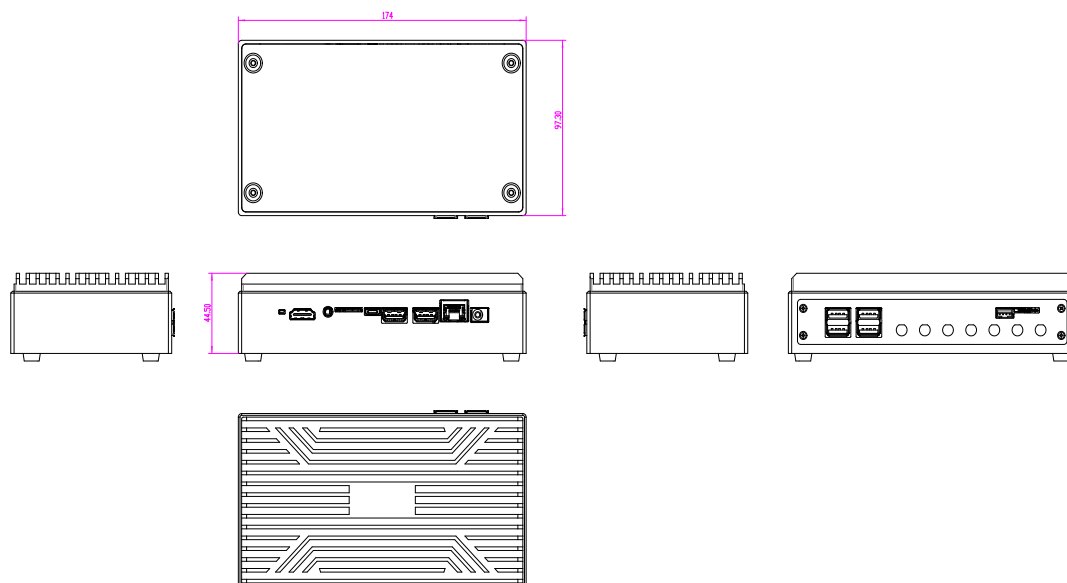


- Real-time: It can process data locally to provide real-time responses
- Low bandwidth: Only necessary information is sent to the cloud
- Privacy Protection: Customers can decide what information is sent to the cloud or kept locally. All information sent to the cloud can be encrypted
 - Supports standard container engines and supports rapid deployment of third-party algorithms and applications
- ∞ **24-channel video analysis and storage expansion capability**
 - Support 24-channel video analysis capability (maximum 24-channel 1080p decoding, 15TOPS INT8 computing power)
 - Support 12TB storage capacity expansion, 24-channel 1080p@4Mb stream video cache for 7 days, 8-channel 1080p@4Mb stream video cache for 30 days
- ∞ **Flexible configuration, wireless backhaul**
 - Support WIFI6 dual-band/gigabit LAN transmission
 - Support optional 5G/4G wireless module
- ∞ **Dual system version, taking into account ecological resource expansion and vertical field specialization**
 - Support Android OS version, quickly access Android ecosystem and convenient application development, and efficiently achieve side-end collaboration
 - Support Linux OS version, introduce specialized applications and algorithms for vertical fields, and efficiently realize cloud-edge-end collaboration
- ∞ **Powerful multimedia GPU processing capability**
 - Built-in high-performance GPU for outstanding 3D rendering
 - Support independent VPU and DPU, can realize up to 3 screens with different display function

1.4 Appearance and Interface



1.5 Dimension





Unit: mm

2 Hardware Specification

Table 1: Hardware Specification

Hardware Specification	
CPU	Qualcomm QCS8250 Three Kryo Gold Cores 2.419GHz One Kryo Gold Prime Core 2.842GHz Quad Low-Power Kryo Silver cores 1.805GHz
Memory	Default LPDDR4 4GB (Optional as 8GB)
Storage	Default 64GB UFS2.1 (Optional as 256GB UFS3.1)
Operating System	Android 10.0
WIFI,BT	2.4G 5G WIFI 802.11a/b/g/n/ac/ax 2x2 MIMO Bluetooth v5.1
Video Encoding and Decoding	H.264/H.265/VP8/VP9
Picture Format	BMP/JPEG/PNG/GIF
Power Input	12V DC
4G/5G	1 built-in M.2 interface, expandable to 4G/5G modules
RJ45	1 10M/100M/1000M Adaptive Ethernet
USB	Default: 6 USB3.1 HOST A port 1 Type-C debug port
HDMI	1 4K output
Headphone	1 3.5mm headphone interface
Speaker	Dual 5W/8R speaker interface
SIM card	1.8V/3/3V, Push-Push Micro-SIM card holder
SD card	Push-Push Micro-SD card holder
Antenna	2 WIFI/BT SMA interface 4 5G SMA antenna



3 Interface Description

3.1 Power interface

Astro200 adopts DC-044B power receptacle interface, suitable for common 5.5X2.1mm 12V DC adapter connector.

3.2 USB Interface

Astro200 supports 6 USB3.1 interfaces and 1 Type-C interface. The Type-C interface is only used for debugging. When Type-C is connected, HDMI 4K, network port and USB3.1 on the same side as Type-C interface will be disabled

3.3 LAN Interface

Astro200 supports one Gigabit Ethernet interface and adopts RJ45 standard network receptacle

3.4 SIM Interface

Astro200 supports one Micro-SIM interface and adopts Push-Push installation method

3.5 HDMI Interface

Astro200 supports one HDMI interface and supports 4K display

3.6 Headphone Interface

The headphone jack adopts 3.5mm standard headphone receptacle

3.7 Speaker Interface

Astro200 supports dual 5W/8R speaker output, the interface model is PH2.0-4A

3.8 Antenna Interface

Astro200 supports 6 SMA antenna ports, two of which are for WIFI antenna, one for GPS antenna, and three for 5G module

4 Electrical Parameters

Table 2: Astro200 Electrical Parameters

Item		Min	Typ.	Max	Note
Power Supply	Voltage	--	--	--	
	Ripple	--	--	--	
	Current	--	--	--	
Dc Output	5.0v Output Current	--	--	--	
	12v Output Current	--	--	--	
USB 3.1	Output Current	--	--	--	
Environment	Relative Humidity	--	--	--	
	Working Temp	--	--	--	
	Storage Temp	--	--	--	