

## Product Introduction

CM580-59F is a low-power, high-performance embedded **Industrial PC** , independently developed by Xiamen Caimore Communication Technology Co., Ltd. It adopts Rockchip RK3399 series CPU. The ARM-based processor combined with the Android operating system provides a very broad and free App operating environment; excellent computing and graphics performance, especially suitable for harsh or demanding industrial occasions and public space applications, It supports wide temperature operation, and expands a rich peripheral function interface.



### Applicable Scene:

- ✦ 3D, VR, Face recognition, Intelligent advertising terminal
- ✦ Industrial field control acquisition
- ✦ Financial POS machine, on-board control terminal
- ✦ Intelligent terminal in unattended environment
- ✦ Human-computer interaction, intelligent retail



## Model No.

Model No.	CPU	System Version	Dual screen different display	Screen Interface	Wi-Fi	Shell	Ethernet Port
CM580-59F	RK3399	Android7.1.2/Linux	Support	LVDS, HDMI	Optional	Optional	1 port/4-port

# Product Features

## Main Features of Rockchip RK3399 series CPU

- ✧ Based on the Big.Little architecture, a dual-core Cortex-A72 and quad-core Cortex-A53 combined architecture with independent NEON co-processor;
- ✧ The GPU adopts the quad-core ARM new generation high-end image processor Mali-T860, which integrates more bandwidth compression technologies: such as smart superposition, ASTC, local pixel storage, etc., and supports more graphics and computing interfaces;
- ✧ Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps;
- ✧ Built-in multiple high-performance hardware processing engines that support video decoding in multiple formats, such as: H.264/H.265/VP9 of 4K\*2K@60fps, also support H.264/MVC/ VP8 of 1080P@30fps and high-quality JPEG codec and image pre- and post-processor;

## GPU Advantages

- ✧ Integrated USB3.0 Type-C dual port, and supports the audio and video output of the Type-C display port;
- ✧ Dual ISP has 800MPix/s pixel processing capability, supports simultaneous data input and advanced processing of dual cameras (such as 3D and depth information extraction);
- ✧ MIPI / eDP interface supports 2560×1600 screen and dual-screen display;
- ✧ HDMI2.0 interface and H.265 / H.264 / VP9 4K @ 60fps support decoding and display of high-definition video;
- ✧ PCI-e built-in interface supports high-speed Wi-Fi and storage expansion based on PCI-e;
- ✧ Support 8-channel digital microphone array input;

## Interface





- ◇ Support Dual USB3.0 Type-C interface;
- ◇ Support PCIe 2.1 (4 full-duplex lanes );
- ◇ Built-in low-power MCU;
- ◇ Support 8-channel digital microphone array input;

## Technical Parameters

### Device interface diagram



## CM580-59F Accessories

			
Power Connector	Ethernet Cable	Antenna	Serial Cable

## Performance Parameter

Item	Description
<b>CPU</b>	RK3399 dual Cortex-A72 + four Cortex-A53 Big.Little CPU structure.The main frequency is up to 2GHz
<b>Memory</b>	DDR3 Default 4GB (Expandable)
<b>Storage</b>	Onboard eMMC, default 16GB, support 8/16/32GB optional

## Function Interface

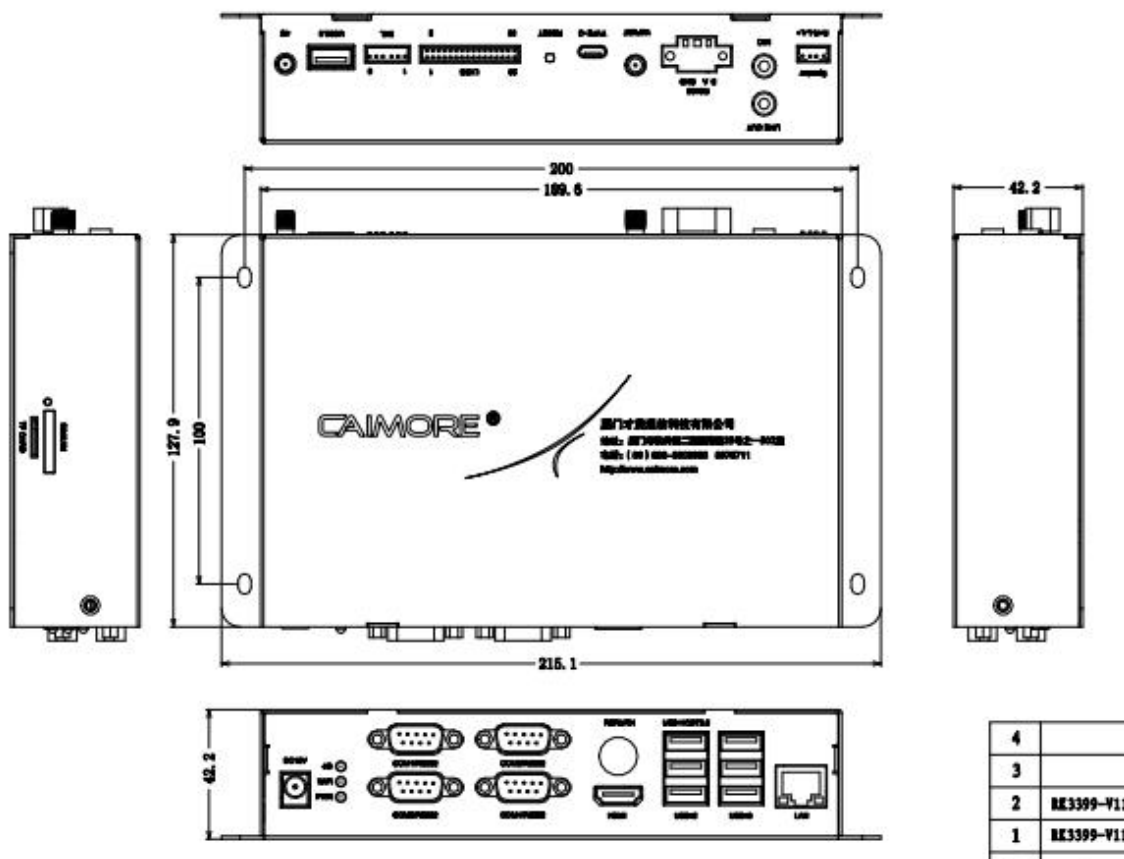
Item	Interface Description
<b>LED</b>	1 channel power indicator, 1 channel Wi-Fi indicator, 1 channel 4G indicator,
<b>KEY</b>	1 RESET key, 1 RETURN key
<b>Input Voltage Range</b>	DC 9V~28V wide voltage design, built-in power supply reverse protection and over-voltage over-current protection. Standard power supply 12V/3A
<b>Standby Current</b>	9V/330mA, 12V/250mA, 24V/125mA
<b>Maximum Operating Current</b>	9V/660mA, 12V/500mA, 24V/250mA
<b>Audio</b>	1 channel 3.5mm headset and Mic Shared interface, 1 channel 4Ω 1W external speaker interface
<b>Serial Port</b>	1 channel debug serial port, 4-channel RS232, 1 channel RS485
<b>USB</b>	4-channel standard USB 2.0, 1 channel TYPE-C
<b>SIM</b>	2-channel standard push rod SIM card slot, support dual card single standby function
<b>Positioning</b>	Built-in 1 GPS/BD dual-mode positioning module
<b>RJ45</b>	1 channel 10M/100M/1000M bps
<b>3G/4G</b>	Mini PCIE Interface, module is optional.
<b>Wi-Fi/Bluetooth</b>	1 on-board 5G/ 2.4G Wi-Fi with hotspot function, 802.11b/G/ n, BT4.0
<b>TF Card</b>	Support 8G/16G/32G/64G/128G storage expansion function
<b>Dimension</b>	188.4mm(L)*131.4mm(W)*35mm(H)

Item	Interface Description
HDIM	1 channel HDMI, support 1080P @60Hz,4K* 2K@60Hz output
LVDS	1 channel dual LVDS, output 1080P video, can directly drive 50/60Hz LCD screen
Image Engine	Support OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11 Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps 1080P multi-format video decoding (VC-1, MPEG-1/2/4, VP8)1080P video encoding, support H.264, VP8 format
RTC	Real Time Clock, Onboard RTC battery, support timing switch
WatchDog	Support software watchdog, system exception, automatic restart

## Environment Parameters

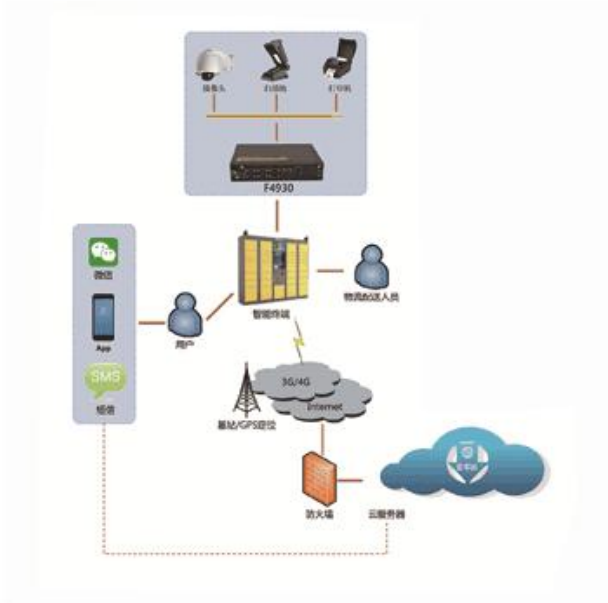
Item	Description
Operating Temperature	-20 °C ~+70°C
Storage Temperature	-40 °C ~+80°C
Operating Humidity	95% no condensation

## Installation Dimension



# Product Application

## 1. Express cabinet



## 2. Topology Diagram of Caimore industrial PC



### 2、快递员取件





## Typical Application



## Corporate Qualification

### Item

### Content

2011, it was rated as "the best supplier for customer satisfaction in China's industrial control industry"; the company's GPRS DTU product was rated as "innovative product award".

2012, the company became a member of "China Quality Travel".

2013, the company became a member of the "Technical Innovation Strategic Alliance of Intelligent Power Transmission and Distribution Equipment Industry".

2014, it was rated as an innovative pilot enterprise .

2014, the company's Zhanjiang Wi-Fi coverage project was awarded the "Sample Engineering Award" by the 13th China Automation Annual Conference.

2015, its video products were rated as "Top Ten Video Transmission Enterprises" by China's

<b>Corporate Honor</b>	<p>industrial control industry.</p> <p>2015, the noise monitoring project was awarded the "Sample Project Award" by the 14th China Automation Annual Conference.</p> <p>2015, its video products were rated as "Top Ten Video Transmission Enterprises" by Huaqiang Security Network.</p> <p>2016, the video products was rated by Huaqiang Security Network as "2015-2016 High-quality Supplier in China's Security Industry".</p> <p>2016, it was rated as the "best supplier of charging equipment parts" by charging pile communication equipment.</p> <p>2016, won the " Product Gold Award of 2016 7th Guangzhou International New Energy Automobile Industry Exhibition ".</p> <p>2016, The 3rd China Good Wi-Fi Organizing Committee awarded Caimore "2016 Best Wi-Fi Industry Application Solution Provider".</p> <p>2018, the company's industrial router was rated as "China's Top Ten Industrial Router Brands", and DTU was rated as "China's DTU Top Ten Brands"</p> <p>2018, it was rated as a key listed reserve enterprise in Xiamen City.</p> <p>2019, it was rated as a key listed reserve enterprise in Xiamen City.</p> <p>2019, it was rated as a key listed reserve enterprise in Fujian Province.</p> <p>2019, Shortlisted for China Telecom Corporation Limited, DICT solution partner of Shanghai branch</p> <p>2020, Selected as a key listed reserve company in Xiamen</p>
<b>High-tech Enterprise</b>	2009, it was recognized as a high-tech enterprise by the country
<b>Double-soft Enterprise</b>	2010, it was recognized as a double-soft enterprise by the country
<b>Occupational Health and Safety Management System Certification</b>	<p>ISO9001:2015 quality management system conforms to the standard</p> <p>ISO14001:2015 environmental management system conforms to the standard</p> <p>ISO45001:2018 occupational health and safety management system conforms to the standard</p>
<b>Copyright</b>	The company has 7 patented technology certificates to maintain equipment stability and 31 software copyright certificates.
<b>Offices</b>	Nine regional offices have been established nationwide to provide customers with close and considerate services.
<b>Registered Capital</b>	The company has a registered capital of 20.58 million; it is a key high-tech enterprise supported by Xiamen City.
<b>Historical Accumulation</b>	18 years of industry R&D accumulation and industry application test.