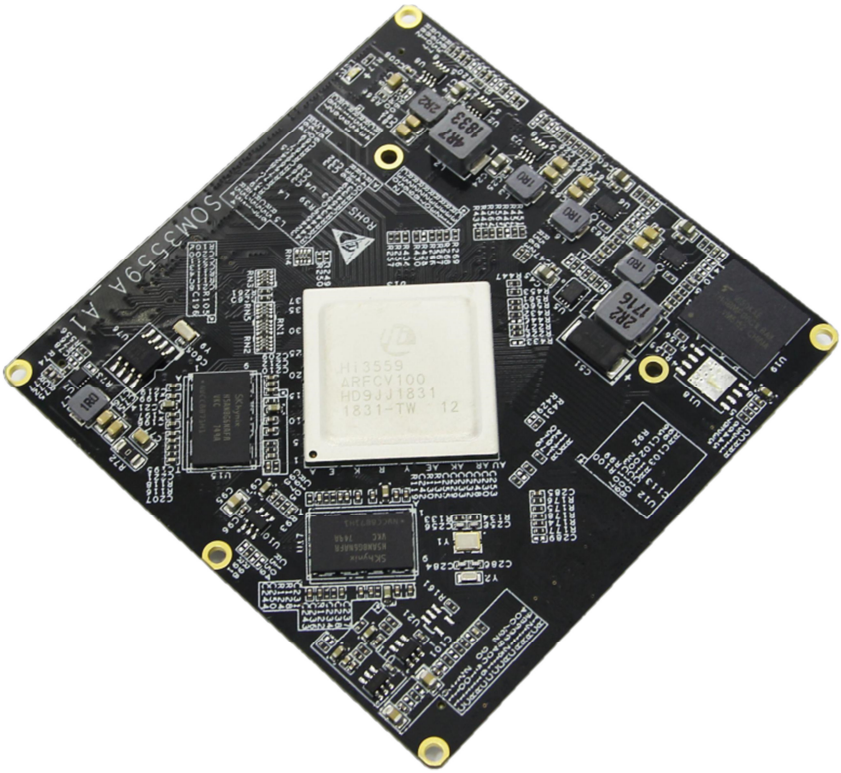
HW59ACB

Introduction

- Based on Huawei Hisi chip HI3559AV100 microprocessor design
- The board adopts immersion gold lead-free, eight-layer board design
- You can use this core board to develop your product, we will provide the software services and hardware services you need.

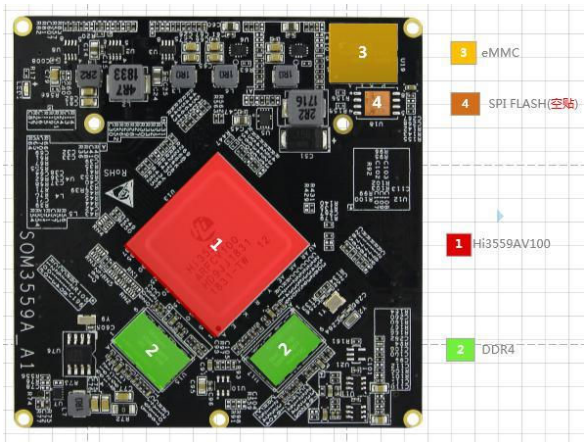


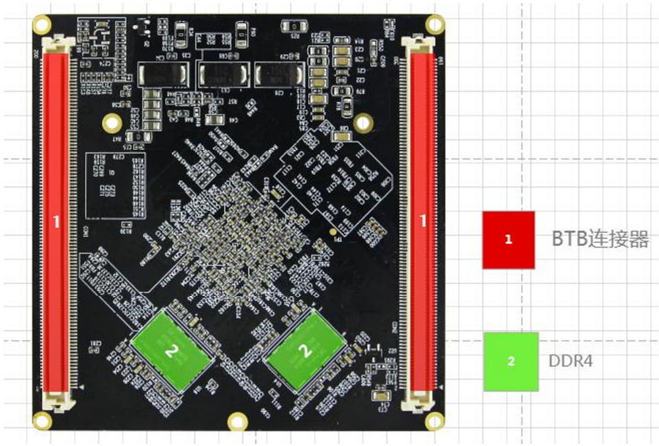
Application Fields

HI3559AV100 is versatile for various video processing applications such as intelligent Security cameras, video conference, intelligent video analysis, 4K video codec and UAV.







Hardware Specification

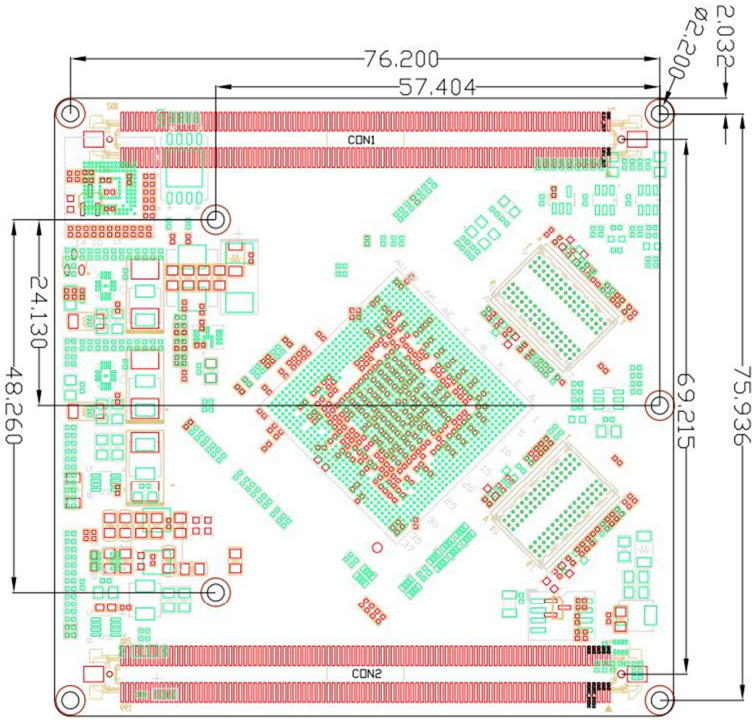
Item	Type	Model	Description
	Hi3559AV100	Processor Core	Dual-Core ARM Cortex-A73@1.6GHz Dual-Core ARM Cortex-A53@1.2GHz Single-Core ARM Cortex-A53@1GHz Neon acceleration and integrated FPU
		DSP	Quad-core DSP@700MHz,32KB I cache
		NPU	Dual-core NNIE@840MHz neural network acceleration engine
	RAM	DDR4	4G Byte (customizable)
	FLASH	SPI Flash(Optional)	256M Byte/512M Byte
		eMMC	8G Byte (customizable)
	Connector	BTB Connector	400PIN,0.635mm
Peripheral	Video Input	8 channel	Maximum 8-channel video input ,MIPI/BT1120
	Video Output	3 channel	HDMI2.0,Support maximum 4K@60fps output, 6-/8-/16-/24-bit RGB digital LCD output, supporting maximum 1920x1080@60 fps output. 4-lane MIPI DSI output, supporting maximum 2.5Gbit/s per lane frequency.
	Ethernet	2xEthernet	Integrated two GMACs, supporting RGMII/RMII
	SDIO	3xSDIO	SDIOO and SDIO1 support docking 3V3 interface level SDXC card, backward compatible with SDHC card, SDI02 supports docking 1V8 SDI0 interface WIFI.
	Audio Input	2x	Audio LINE-IN
	Audio Output	1x	Audio LINE-OUT
	PCIe	1x	multiplexing with USB3.0
	SPI	4xSPI	Partly multiplexing with SPI, SPI4 is used to control peripherals.
	UART	5xUART	UART0 is the 3V3 system debug serial port, UART2 and UART4 are 2-wire serial ports, UART1 and UART3 are 4-wire serial ports, and are multiplexed with other interfaces.
	CAN	3xCAN	UART0 is multiplexed with CANBUS0, UART1 is multiplexed with CANBUS1, and communicates with CAN.

	IIC	8xIIC	Mostly multiplexed with the SPI interface
	USB	4x	2x USB2.0 2x USB3.0, where USB3.0 and PCIE interface are multiplexed
	PWM	2x	PWM_OUT0/1 for docking peripherals
	IR	1x	Support infrared input signal
RTC	Internal RTC, Powered by button cell		
Operating Temperature:	0℃ ~ +70℃		
Storage Temperature:	-10℃ ~ 80℃		
Operating Voltage:	DC 5V/2A		

Software Specification

Linux	Uboot	version	U-Boot 2016.11
		Boot Mode	Supporting from eMMC
		Download Method	Serial Port/TF Card
	Kernel	Kernel Version	Linux 4.9.37
		File System	ext4/yaffs2/jffs2/ubifs
		Download Method	Serial Port/TF Card/Ethernet
	Device Driver	LED	LED Driver
		Serial Port	Serial Port Driver
		RTC	RTC Driver for saving system time
		Ethernet	10/100/1000M Ethernet Driver
		USB host	USB2.0 host driver
		OTG	USB2.0 OTG driver
		MMC/SD	MMC/SD controller driver
		INPUT	HDMI Input Driver
		I2S	I2S bus driver
		OUTPUT	HDMI output driver
		SPI	SPI bus driver
		eMMC	eMMC driver
		Audio input & output	Audio input/output driver
		TCP/IP	Offer complete TCP/IP driver
	System and Service Configuration	Ifconfig/route	For network configuration and related service program
	Basic Tool	Common Command	Cat , chmod, echo, free, init ,kill, ls, mkdir, mount, ps, reboot, rm, lsmod, rmmod
	GUI	QT4.8.7	Offer QT development resources

Mechanical Dimensions



Structural parameters	
Connector	BTB connector
Dimension	80mmx80mmx6mm
PIN spacing	0.635mm
PIN quantity	400(200x2)

Development Package

- Provide technical reference manual describing hardware design, system software porting, driver development and application software development environment.
- Provide CPU datasheet, SDK and software development environment. So you just need to focus on your core software development.
- Provide QT development environment.
- Provide a variety of Linux DEMO including VIO, AVS, VENC, VDEC, DSP, NNIE, IVE.

Free Technical Support Services

- Locate product fault
- Explain software and hardware resources in our embedded product.
- Help users compile and run correctly the source code we provided.
- Help user solve the abnormal problems while using our embedded product based on the development package we provided.