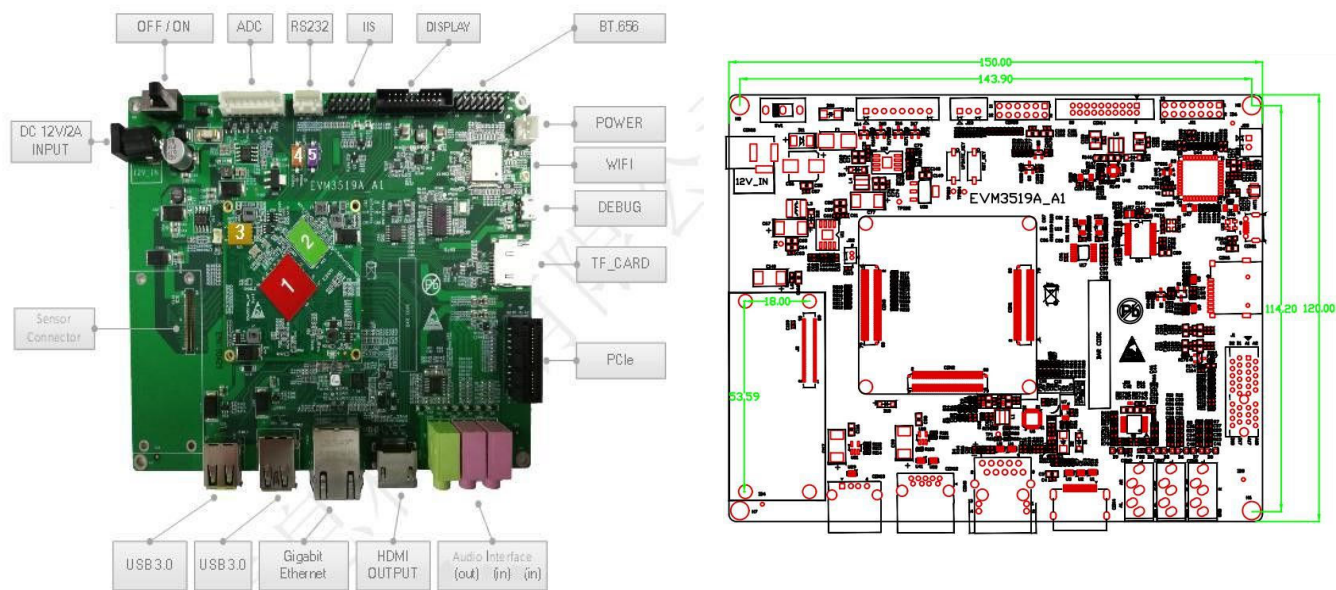## Introduction

HIVIEW provides a set of development boards. The kit is mainly composed of a core board and a mother board. The motherboard provides a rich set of interfaces that you can use to evaluate the capabilities of the HI3519AV100 chip, Or you can implement the features you need directly on the board; you can also directly use this mother board or the core board to develop a mass-produced product; or the core board. If none of the above is met, you can re-customize the board. We will provide basic software services to provide you with the necessary help to develop the products you want.

Application Fields

HI3519AV100 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
SOM3519A	Hi3519AV100	MPU	Dual Core ARM Cortex-A53@1.5GHz
		DSP	Single Core Tensilica Vision P6 DSP@630MHz
		NPU	Single Core NNIE,2.0TOPS neuralnetwork computing performance
	RAM	DDR4	2G Byte
	FLASH	SPI Flash	256M Byte
	Connector	BTB Connector	240PIN,0.5mm
Peripheral	Video Input	5 channel	12-lane MIPI Interface, Up to 5-channel sensor serial input (NOTE: External extension board is needed)
	Video Output	2 channel	HDMI2.0,Support maximum 4Kx2k@60fps output, 4-lane MIPI DSI ,Support up to 1080@60fps output
	Ethernet	1xGigabit	RJ45 connector
	WIFI	1x	Protocol: 802.11 b/g/n, External antenna
	Audio Input	2x	Audio LINE-IN
	Audio Output	1x	Audio LINE-OUT
	PCIe	1x	Mini-PCIe
	Debug UART	1x	Micro USB Interface
	USB	1x USB2.0 1x USB3.0	
	Extended Connector	1x I2S,1x I2C, 1xADC 1xSPI	2.54mm Pin Connector
	TF Card Slot	1x	Burning OS
RTC	Internal RTC, Powered by button cell		
Operating Temperature:	0℃ ～70℃		
Storage Temperature:	-10℃ ～80℃		

Operating Voltage:	11.7VDC ~ 12.5VDC Typical Value: 12VDC		

Software Specification

		version	U-Boot 2016.11
Linux	Uboot	Boot Mode	eMMC
		Download Method	Serial Port/TF Card
	Kernel	Kernel Version	Linux 4.9.37
		File System	ext4/yaffs2/jffs2
		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
		I2S	I2S bus driver
		SPI	SPI bus 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

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.