Product Introduction

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- Product modules
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Business cooperation

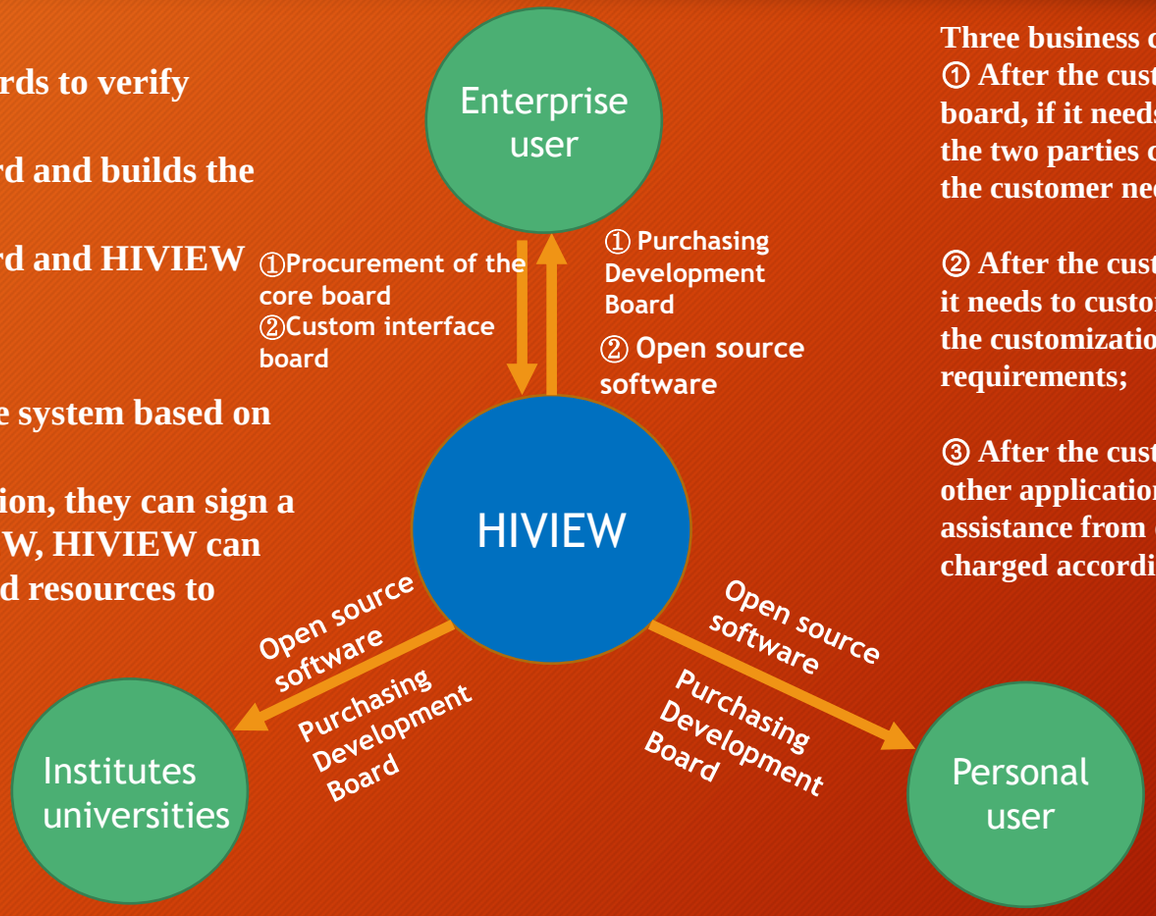
Goal：To help customers develop their own customized product with open software/hardware

Hardware:

- **Users purchase development boards to verify functional requirements**
- **The user purchases the core board and builds the board according to the needs**
- **The user purchases the core board and HIVIEW customized base board**

Software:

- **Provide free open source software system based on HiSilicon SDK**
- **If users need function customization, they can sign a business cooperation with HIVIEW, HIVIEW can realize the function or seek related resources to realize the function**



Three business cooperation modes:

① After the customer purchases the development board and the core board, if it needs to open the board information and technical guidance, the two parties can sign an NDA and a technical guidance agreement, and the customer needs to pay a technical guidance service fee of US$3,000;

② After the customer purchases the development board and core board, if it needs to customize the board, HIVIEW can provide customization, and the customization fee is charged according to the specific functional requirements;

③ After the customer purchases the development board and core board, if other application functions need to be customized, HIVIEW can seek assistance from external resources, and the customization fee will be charged according to the specific situation;

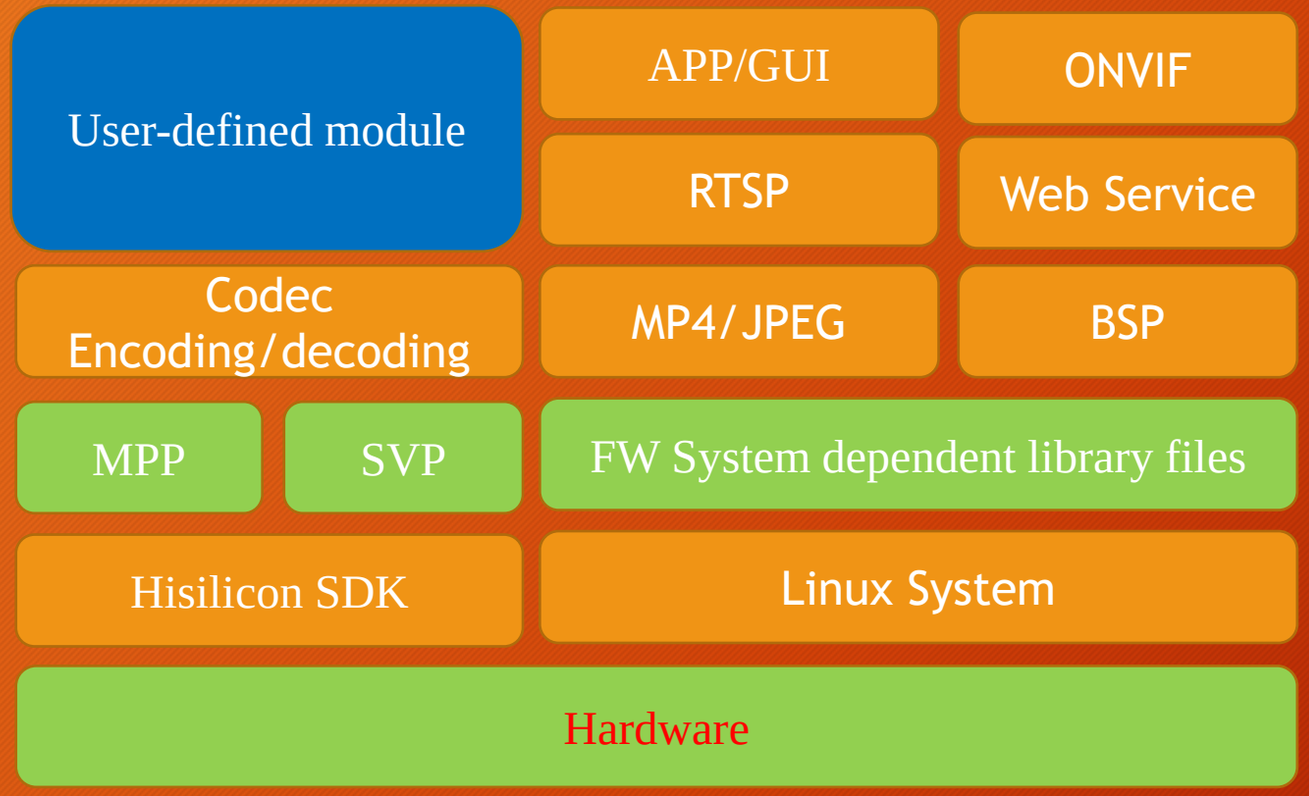
HISILICON Chip Introduction

Chip	Hi3516AV300	Hi3516DV300	Hi3559V200	Hi3519V101	Hi3531DV200
Processor Core	Dual-core ARM Cortex-A7@900MHz		ARM Cortex A7 MP2@900MHz	Dual-core A7@800MHz	ARM Cortex A53 Duad Core @1.15GHz
NPU	1Tops	1Tops	0.4Tops	--	1.2Tops
ISP	Up to 3840-pixel wide and 3840 x 2160 resolution for H.264/H.265 encoding and decoding. Only the decoding of self-encoded streams is supported.	Up to 3072-pixel wide and 3072 x 1728 resolution forH.264/H.265 encoding and decoding. Only the decoding of self-encoded streams is supported	Up to 3840-pixel wide and 3840 x 2160 resolution	Up to 16M wide and 4608x3456 resolution	■ 8x4K@30fps Input ■ 8x1080P@30fps Encoding ■ 8x1080P@30fps Encoding
VEDU	H.265/H.264				
VI	2-channel VI MIPI 4-Lane，BT601,BT656, BT1120			2-channel VI，DC video input，BT601,BT656,BT1120, 12xLane MIPI/LVDS	8 x MIPI D-PHY，1x MIPI support 4-Lane，and 1x BT1120
VO	BT656,BT1120,4-Lane MIPI-DSI,HDMI1.4,RGB parallel LCD			BT656,BT1120,CVBS,LCD Output	HDMI2.0,VGA,BT1120,CVBS，DHD0, DHD1
AUDIO	supporting 16-bit input and output，I2S,MIC，Single-end dual-channel input				3 x I2S/PCM(2 input，1 output)
External Interface	SDIO3.0,UART，USB2.0,GPIO,PWM,I2C,SPI,LSADC,IR，PHY，RMII mode，10/100M full-duplex or half-duplex		SDIO3.0,UART,USB 2.0,I2C,SPI,IR,PWM ,LSADC, NO PHY	UART,IR,I2C,GPIO,PWM,SDIO, PCIe2.0,USB3.0, LSADC RGMII/RMII 10/100M,1000M full-duplex，	4 x SATA3.0/PCIE2.0 multiplexed USB3.0Host,USB2.0Host,UART, SPI,IR,I2C,GPIO Two gigabit Ethernet ports
Package	Body size：14mm x 14mm			Body size：10mm x 10mm	Body size：22.4mm x 31.2mm

■ For detailed parameters, please refer to the chip specification

OPENHISILICON Software Architecture

OpenHisilicon software system



- **Multi-process system structure, convenient for cooperative development and flexible expansion;**
- **Based on the secondary packaging of Sample in HiSilicon SDK, the development time is shortened;**
- **IPC/NVR share the same set of codes, which is convenient for maintenance;**
- **Support HI3516x, HI3519x, HI3559x, HI3536x and other mainstream chips;**
- **Code download: https://github.com/openhisilicon/HIVIEW**
- **HiSilicon solution technology discussion Telegram group https://t.me/openhisilicon**

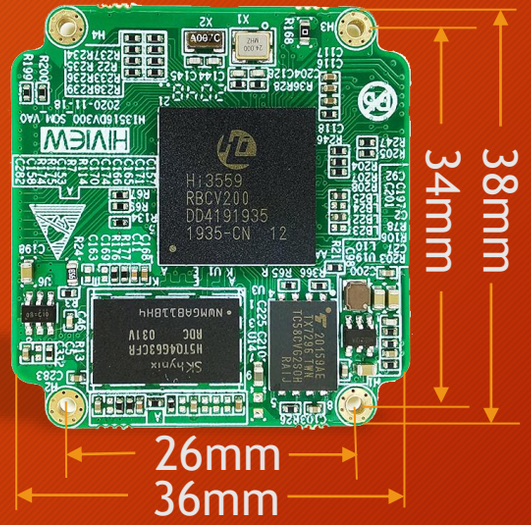
User | Open | Half open

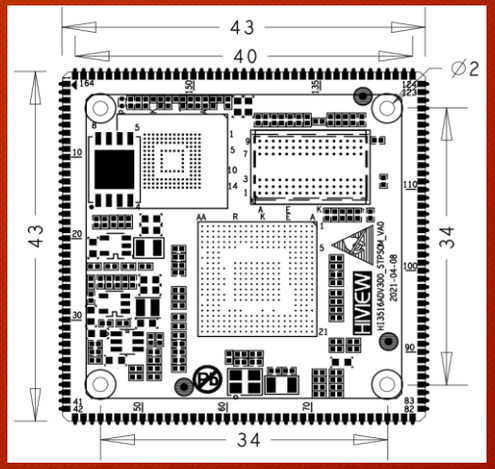
Product modules - Core Board

Hi3516DV300

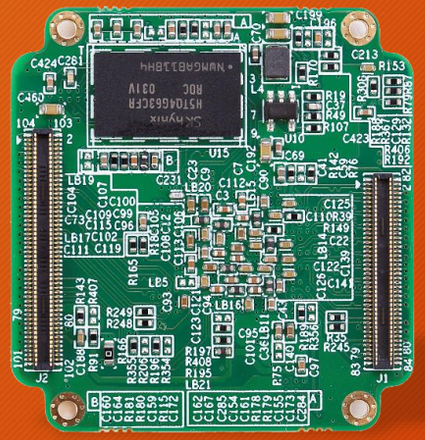
Hi3516AV300

Hi3559V200





Stamp hole core board



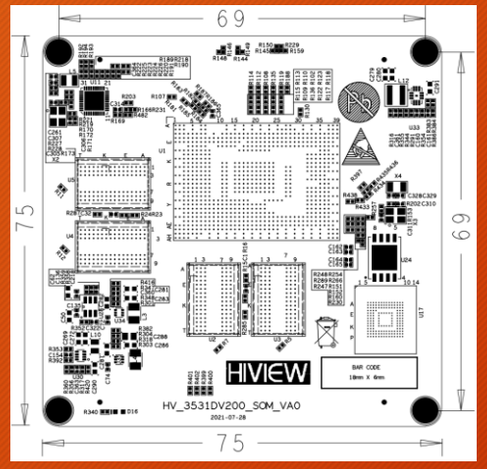
RAM: DDR3 1GB
ROM: 512MB Nand Flash
Dimension : 38mmx36mm
Connector : HIROSE DF40C-80DP-0.4V
HIROSE DF40C-100DP-0.4V

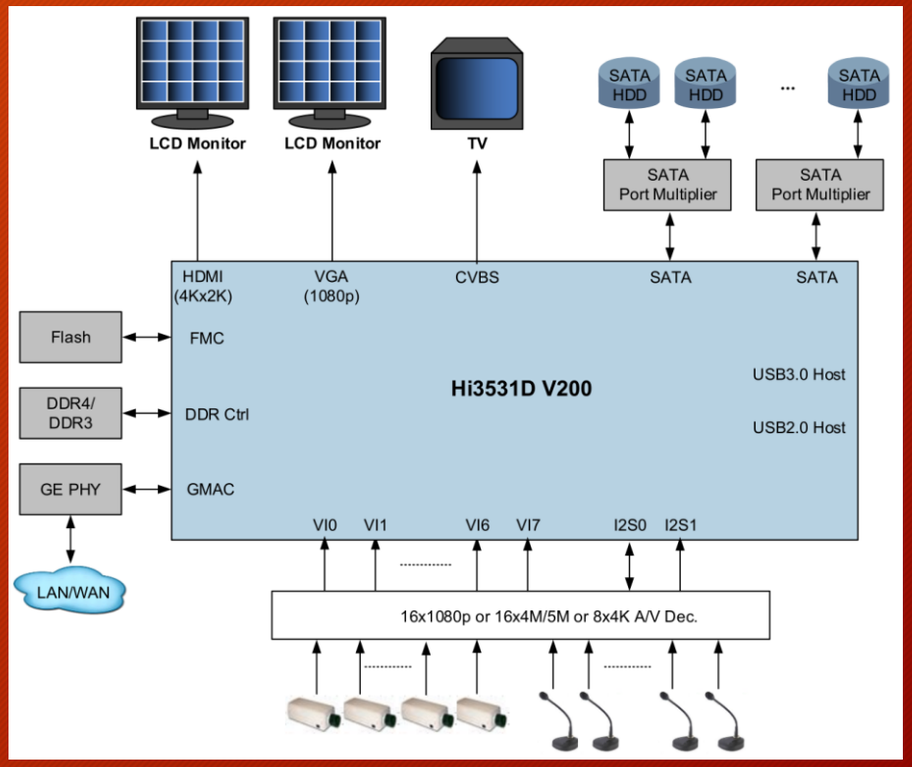
RAM: DDR3 1G (512M,2G optional)
ROM: EMMC 8G(4G,16G optional)
SPI NOR/NAND optional
Dimension: 43mm x 43mm x 3.0mm

Product modules - Core Board

Hi3531DV200

RAM: DDR4 4GB
ROM: 512MB Nand Flash
8GB EMMC Flash
Dimension : 75mm x 75mm
Connector : BTB connector, 2*160PIN, 0.635mm





VI : 8 x MIPI D-PHY and 1x BT1120 Cascade interface

VO: 1 x HDMI 2.0、1 x VGA、1 x BT1120、1 x CVBS

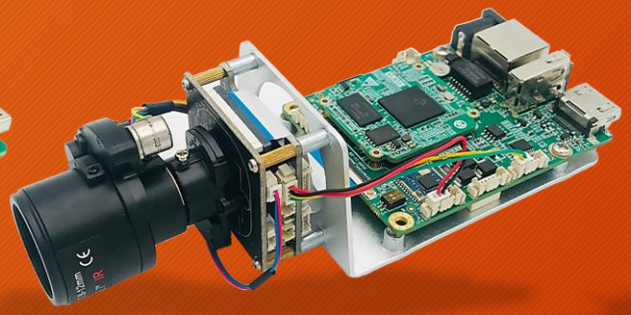
AUDIO: 3 x Single-end I2S/PCM interface

Ethernet : Two gigabit Ethernet ports

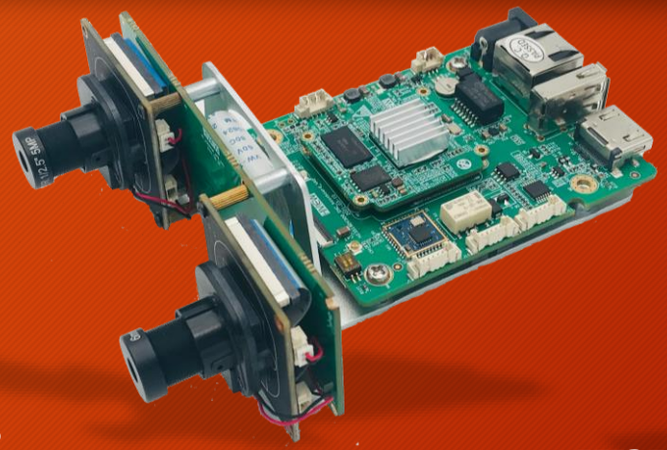
2 x I2C、5 x UART、1 x SPI、2 x USB2.0 and 1 x USB3.0、4 x SATA、1 x IR、GPIOs、RTC

Product modules -IPC Development Board

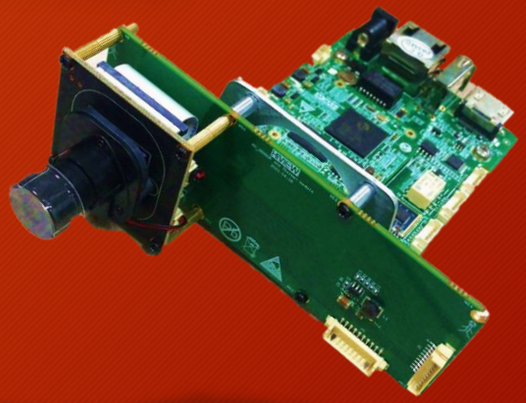
Lens : 6mm Prime Lens



Lens : 2.8mm~12mm Zoom Lens



HI3516DV300 + 2 x IMX290



HI3516DV300+IMX335+ BT656 Input

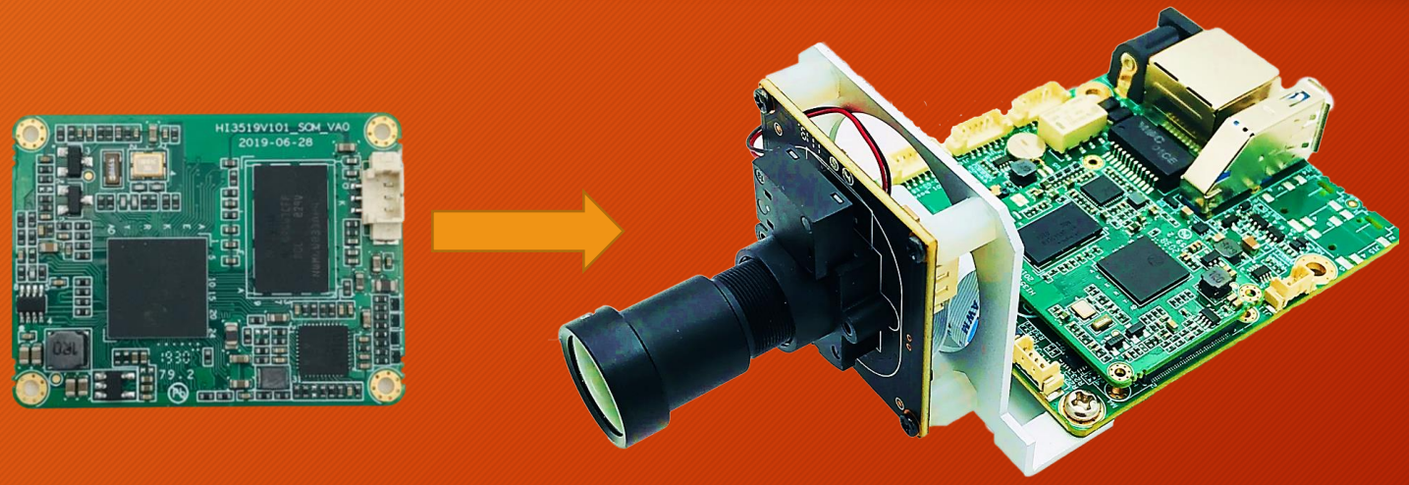
1: HI3516DV300 +IMX335
2: HI3516AV300 + IMX415
3: HI3559V200 + IMX415

RAM: DDR3 1GB
ROM: 512MB Nand Flash
Dimension of the core board :
38mm x 36mm
Dimension of the base board:
60mm x 77mm

- ✓ HDMI1.4
- ✓ 2.4G Wi-Fi
- ✓ USB2.0
- ✓ SD Card
- ✓ Audio
- ✓ LCD Display Interface(MIPI-DSI)
- ✓ Alarm input and output
- ✓ Auto-IRIS Interface
- ✓ RS485
- ✓ UART
- ✓ CDS
- ✓ GPIO
- ✓ RJ45

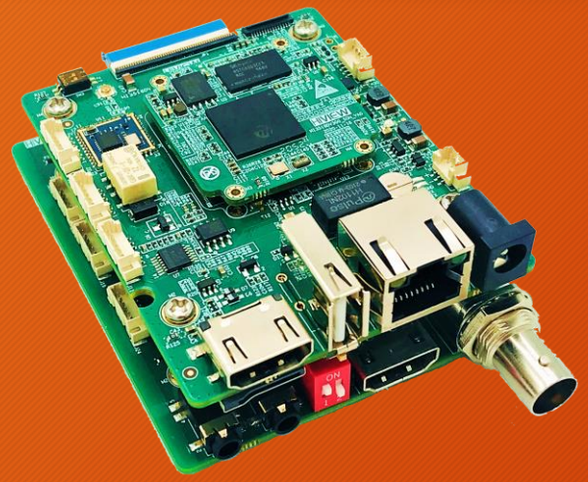
(Note : HI3559V200 does not support physical network ports , it is realized by USB network card)

Product modules -IPC Development Board

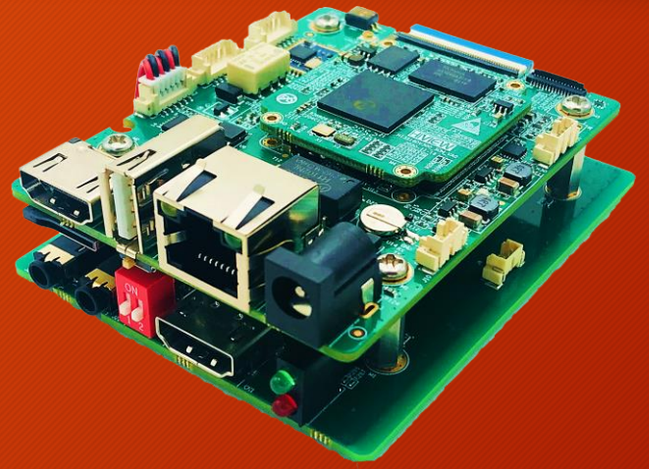


HI3519V101 + IMX334 + LVDS（SONY camer module）input
Dimension of the core board： 40mm x 30mm
Support RJ45 、USB3.0、UART，P-IRIS, LVDS，IR LED Driver，CDS，ADC，RS485, Alarm， BT1120 input interface, MIC-IN，TF Card

Product modules -Encoding Development Board



- 1 x HDMI1.4 Input;
- 1 x HDMI1.4 Output;
- 1 x 3G-SDI Input；
- 1 x LVDS(SONY camera module)Input;
- Support 1080@60fps Encoding
- Support H.265/H.264；
- Audio input source from HDMI or Audio In，AAC;
- Dimension：90mm*72mm*35mm



- 1 x HDMI1.4 Input;
- 1 x HDMI1.4 Output;
- HDMI support 4K(3840*2160/30Hz);
- Support 4K、1080P、720P resolution encoding;
- Support H.265/H.264；
- Audio input source from HDMI or Audio In，AAC
- Video input adaptive recognition or fix the input source ；
- Dimension ： 90mm*72mm*35mm

Product - IPC

Adapt to HI3516DV300、HI3559V200、HI3516AV300 board
CS LENS

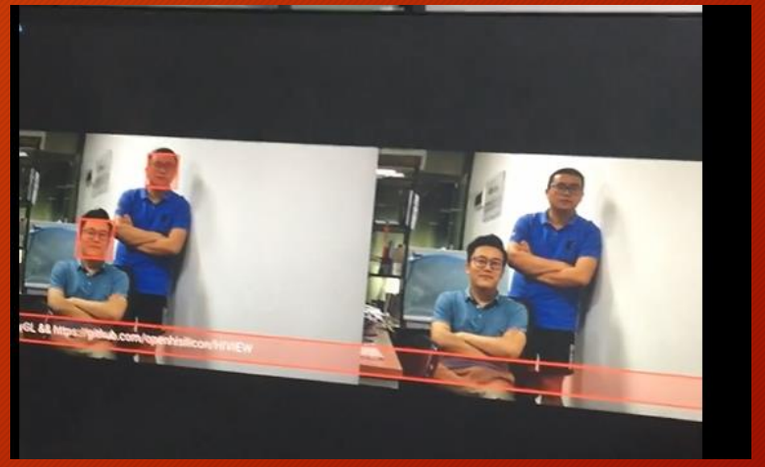
Product - Encoding

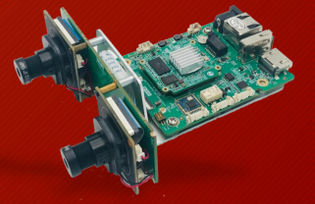
- ✓ **1x HDMI1.4;**
- ✓ **1x HDMI1.4 output;**
- ✓ **1x 3G-SDI input;**
- ✓ **1x LVDS(SONY camera module)input;**
- ✓ **1 x Audio input and output（HDMI or external input）**
- ✓ **1 x USB2.0**
- ✓ **Dimension： 46.1mm x 92mm**

Application examples

Thermal Imaging + One Sensor Input

Two Sensors Input

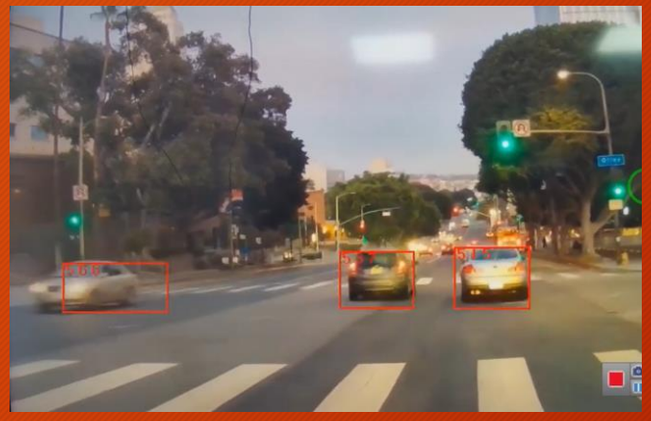




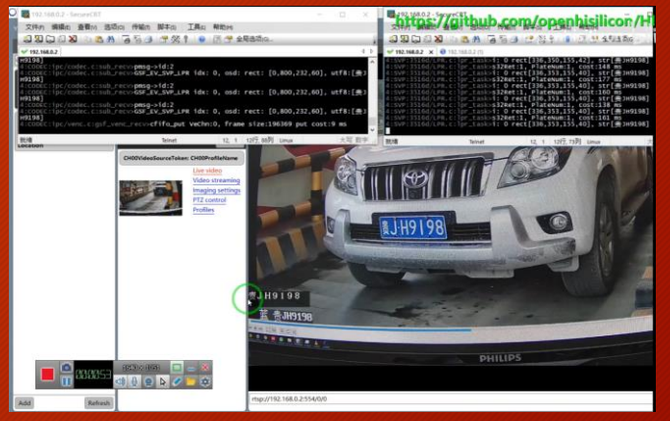
Application examples

Face recognition

Object detection



License Plate Recognition



Application examples-5G

THANKS!

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