IM80B01
8MP HD Network Module

The IM80B01 is a high-performance 8MP Low-illumination Network Module designed for both indoor and outdoor use. It features a 1/1.8” Sony IMX678 STARVIS CMOS and is powered by the Hi3519DV500 Ai SoC. It integrated with efficient neural network inference engine, with a maximum computing power of 2.5 TOPS. In terms of extended I/O capabilities, it supports dual light source illumination, as well as microphone and speaker connections, enabling two-way audio and additional interfaces.

For secondary development, the IM80B01 includes two set UART interfaces and provides SDK for Windows, Linux, and Android. It also supports the ONVIF standard protocol, along with OpenIPC and FPV firmware. This makes it highly convenient for secondary development and allows for quick integration into your projects.

Key Features:

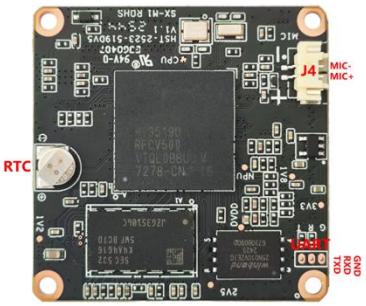
- 1/1.8” 8MP Sony IMX678 STARVIS CMOS
- Maximum resolution up to 3840×2160@30fps
- Hi3519DV500 AI SOC,supports 2.5TOPS
- Support motion detection
- Support the Tuya P2P on Android, IOS(Not Default)
- Support Two way audio, Built-in audio amplifier function
- Support ONVIF protocol
- Support TCP/IP/HTTP/NTP/DHCP/SMTP/RTSP/P2P
- Open SDK(Linux,Windows), CGI, Support OPENIPC development
- Support UART interface

Technical Specifications:

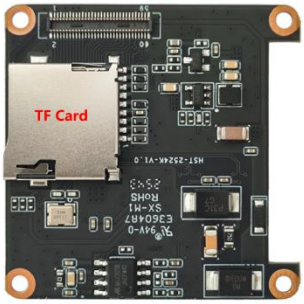
Image Sensor	
Model	IM80B01
Sensor	1/1.8” 8MP Sony IMX678 STARVIS CMOS
Maximum Resolution	3840x2160@30fps
Minimum Illumination	0.01lux @F1.0(Color) / 0.005 lux@F1.0 (B/W)
Camera	
AGC	Auto/Manual
S/N Ratio	≥50dB（AGC OFF）
Shutter Speed	1/2 - 1/20 ,000s,Slow shutter support
Wide Dynamic Range	Digital WDR
Exposure Mode	Auto/ Manual/shutter mode
AWB	Yes
Day & Night	External control（IR Cut Filter）
Light Control	Support IR/White/dual light, three mode independent control
Compression	
Video Compression	H.265/H.264 Main Profile /M-JPEG
Audio Compression	G711U,G711A,PCM
Image Resolution	
Main Stream	3840×2160/2592x1944/1920×1080@30fps
Sub Stream	800x448/640×480/480x360/352×288@30fps
General Protocol	
Network Protocol	TCP/IP/HTTP/NTP/DHCP/SMTP/RTSP/P2P
ONVIF protocol	Yes
P2P	
Support TUYA APP	Support for Tuya APP on Android, IOS(Not Default)
Function	
Web Configuration	Yes
OSD	Yes
Motion Detection	Yes
Reset	Support cable reset button(optional)
Amplifier	Built-in amplifier
Interface	
Wired	1ch 10/100 Base Ethernet,RJ45 interface
Audio	Microphone input/output
UART	Support
ALARM	Support
USB	Support
TF Card	Support,up to 256GB
Other	
Power Supply	DC 12V
Size/Weight	38x38mm,Three boards /≤30g
Operation Temperature	-30°C~70°C
Working Humidity	≤90%RH(non-condensing)

Interface Pin Definition:

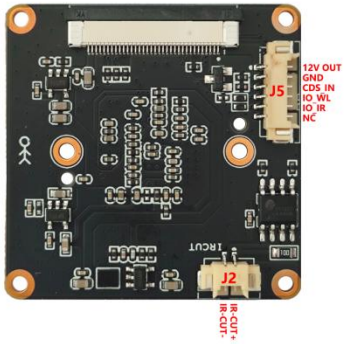
Motherboard

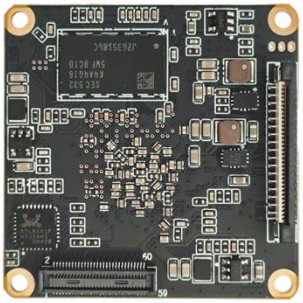


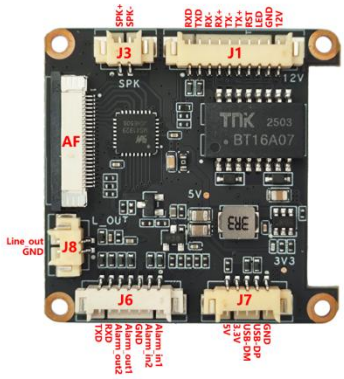
Function board

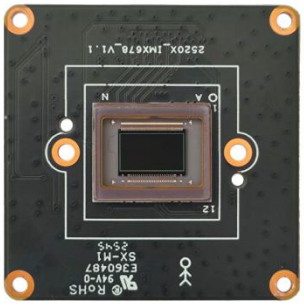


Sensor board









Interface	pin	Pin name	Functional parameter
J1	1	12VDC	DC power input, voltage range 9V-13.8V
	2	GND	GND
	3	ACT_LED	Network indicator light interface
	4	SYS_RST	Restore factory settings LOW valid
	5	PWR_TD+	Adaptive network interface, physically receiving/transmitting (differential +)
	6	PWR_TD-	Adaptive network interface, physically receiving/transmitting (difference -)
	7	PWR_RD+	Adaptive network interface, physically receiving/transmitting (differential+)
	8	PWR_RD-	Adaptive network interface, physically receiving/transmitting (difference -)
	9	UART1_TXD	Serial communication, sending TX
	10	UART1_RXD	UART1, receive RX
J2	1	IR-CUT＋	IRCUT signal +
	2	IR-CUT－	IRCUT signal-
J3	1	SPK+	SPK+
	2	SPK-	SPK-
J4	1	MIC+	MIC+
	2	MIC-	MIC-
J5	1	VCC	DC12V Out
	2	GND	GND
	3	CDS	Hard light sensitive infrared
	4	WLED	Soft photosensitive white light
	5	IRLED	Soft photosensitive infrared
	6	NC	(Reserved interface)
J6	1	Alarm_in1	Alarm input 1
	2	Alarm_in2	Alarm input 2
	3	GND	GND
	4	Alarm_out1	Alarm relay output 1
	5	Alarm_out2	Alarm relay output 2

	6	UART3_RXD	UART1, receive RX
	7	UART3_TXD	Serial communication, sending TX
J7	1	5V	5V power supply
	2	3.3V	3.3V power supply
	3	USB_DM	USB data D-
	4	USB_DP	USB data D+
	5	GND	GND
J8	1	Line_out	Connect the sound column
	2	GND	GND
TF	/	TF	TF card storage