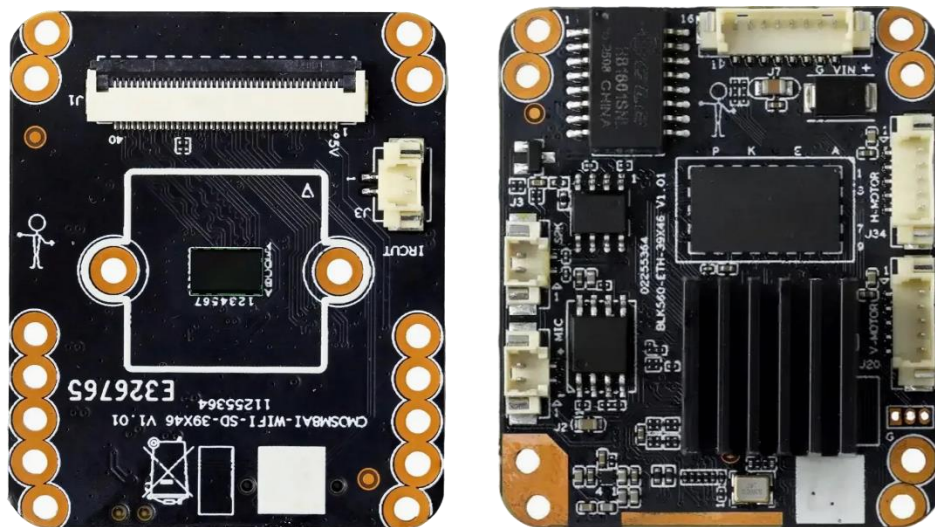


IVG-N12 Module Specification

Version: 20250607



Introduction

IVG-N12 is a 12MP Ultra HD Blacklight IP Camera Module, support human shape detection, face detection, car shape detection, support H.265AI coding, mainly used in night vision Ultra HD video surveillance camera.

Main Features



Blacklight



H.265AI



AI Noise Reduction



Human Detection



Face Detection



Vehicle Detection



NPU



Humanoid
Tracking



Lightning Protection

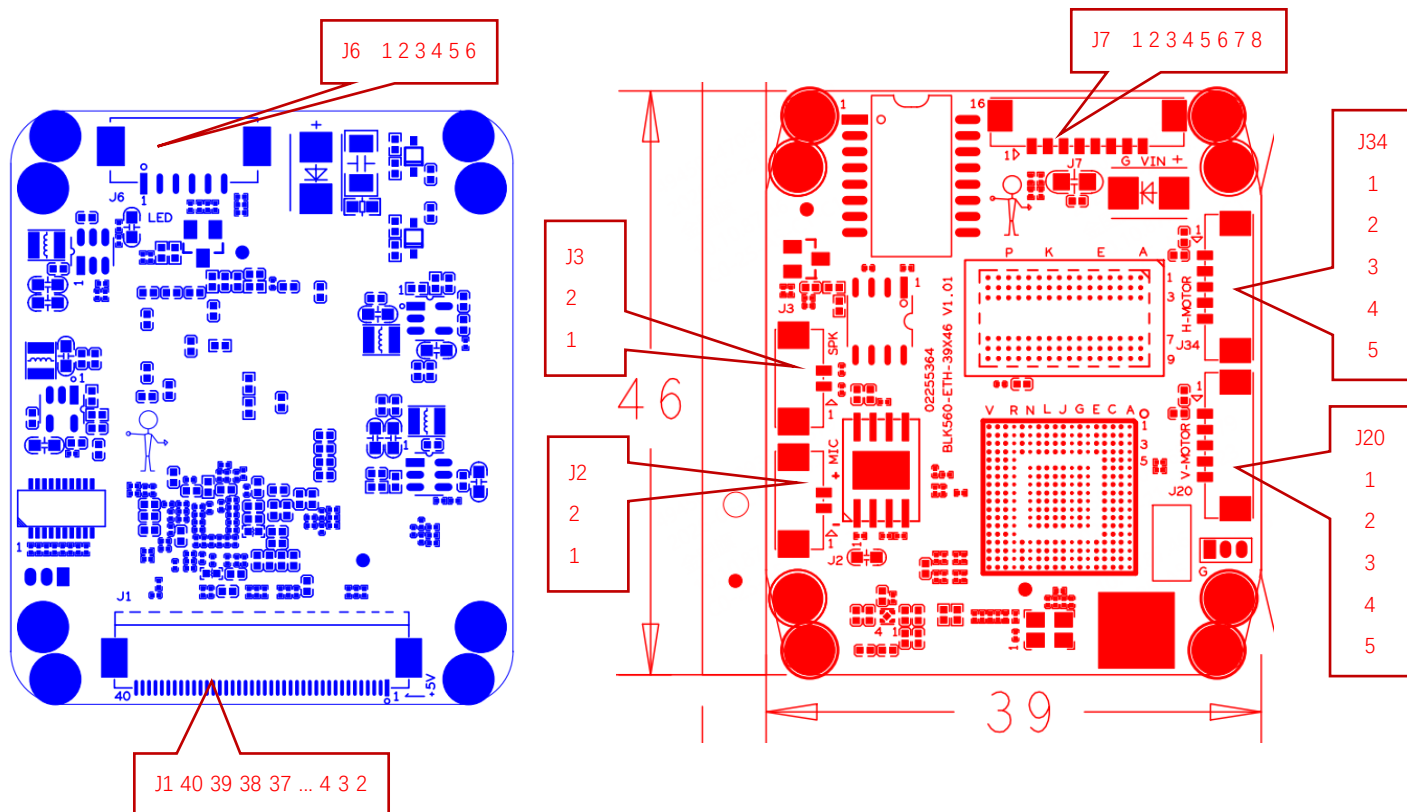
Content

1.Product Parameters.....	3
2. Interface Description.....	4
3. Electrical Parameters	7
3.1 Absolute Electrical Parameters.....	7
3.2 Working Conditions	7

1. Product Parameters

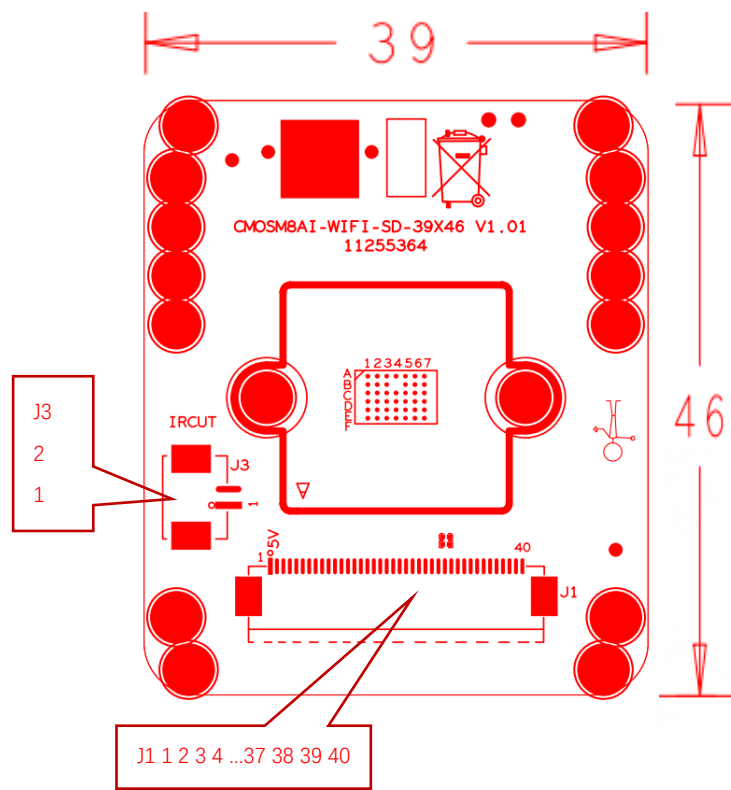
	Model	IVG-N12
Module	System structure	Embedded Linux 64 DSP,pure hard compression ,watch dog
	Sensor	1/2.7" CMOS sensor, color 0.0001Lux@F1.2, black/white 0.0001Lux@F1.2
	Video compression	H.265AI(Compatible with H.265/H.264), support dual stream, AVI;0.1M~10Mbps variable;1~30f/s variable
	Image output	Main stream:12MP 4000*3000@15fps(Default);8MP 3840*2160@15fps;5MP 2592*1944@25fps; 4MP 2560*1440@25fps;3MP 2304*1296@25fps;2MP 1920*1080@25fps; sub-stream: D1 704*576@25fps(Default);HD1 800*448@25fps; CIF 352*288@25fps; QVGA 640*360@25FPS;
	Shutter	1/50(1/60) s to 1/10,000s
	Lens	N/A(5v standard voltage supply)
Image	Noise reduction	Support 2D/3D
	Wide dynamic	Support digital
	Auto iris	N/A
Interface	Audio compression	G.711, Support bidirectional half duplex intercom,audio&video synchronization
	Audio interface	1 input, MIC: Selection range -28dB~-36dB, -33dB is recommended. 1 Output, Speaker: 8Ω2W is recommended.
	Network interface	1*RJ45 10/100M adaptive Ethernet port; support RTSP/FTPDHCP/NTP/UPnP etc
	Extension interface	N/A
	PTZ	1 vertical motor interface, 1 horizontal motor interface
	Alarm I/O	0/1 (supports alarm output and alarm linkage, supports 3.3V output)
	WIFI interface	N/A
	Reset interface	Support (customizable as alarm input)
	SD Card	Local TF card slot, up to 256G; cloud storage
Intelligence	Intelligence analysis	Supporting Human shape detection, face detection, face capture, and support to customize other intelligent functions
Other function	Value-added Service	Support cloud storage, scene AI (elderly care, child care) and other value-added services, need to be opened at your own expense in the APP terminal.
	ONVIF	Support
	Mobile monitoring	Support multiple mobile monitoring (iOS, Android)
General	Reliability	Comprehensive lightning protection, 7 * 24 hours -10℃ ~ 65℃high temperature stable and reliable testing
	Power	DC12V/2A input, power consumption: ≤3W
	Dimension	39mm*46mm*2
	Other	Support POE power supply

2. Interface Description



printing number	Pin number	pin assignment	Function
J1	1	+5V	5V
	2	+5V	
	3	+3.3V	3.3V
	4	+3.3V	
	5	GND	GND
	6	GND	
	7	GND	
	8	WIFI_DN	WIFI communication signal
	9	WIFI_DP	
	10	GND	GND
	11	IRCUT_A	IR-CUT driver signal
	12	IRCUT_B	
	13	KEY_SET	Reset button
	14	WIFI_PDN	WIFI power control
	15	SD_PDN	TF power control
	16	SD_CDTCT	TF card detection
	17	SD_DATA3	TF card communication signal
	18	SD_DATA2	TF card communication signal
	19	SD_DATA1	TF card communication signal
	20	SD_DATA0	TF card communication signal
	21	SD_CMD	TF card communication signal
	22	GND	GND
	23	SD_CLK	TF card communication signal
	24	GND	GND
	25	SDA	I2C signal
	26	SCL	I2C signal
	27	SENSOR_RST	Sensnor reset signal

	28	GND	GND
	29	SENSOR_MCLK	Sensnor master clock signal
	30	GND	GND
	31	MIPI_DATA3P	MIPI signal
	32	MIPI_DATA3N	
	33	MIPI_DATA1P	
	34	MIPI_DATA1N	
	35	MIPI_CLKP	
	36	MIPI_CLKN	
	37	MIPI_DATA0N	
	38	MIPI_DATA0P	
	39	MIPI_DATA2N	
	40	MIPI_DATA2P	
J6	1	WLED	White light control
	2	RLED	Infrared light control
	3	STA_LED	Alarm output/indicator light
	4	GND	GND
	5	IRIN	Hard photosensitive input signal
	6	KEY_SET	Reset button
J3	1	SPKN	SPK(-)
	2	SPKP	SPK(+)
J2	1	MIC_N	MIC(-)
	2	MIC_P	MIC(+)
J20	1	+5V	5V
	2	OUT1	Vertical motor drive interface
	3	OUT2	
	4	OUT3	
	5	OUT4	
J34	1	+5V	5V
	2	OUT1	Horizontal motor drive interface
	3	OUT2	
	4	OUT3	
	5	OUT4	
J7	1	ETH_LINK_STA_LED	/
	2	ETH_LINK_ACT_LED	Network light
	3	ETHTX+	Network port data transmission
	4	ETHTX-	Network port data transmission
	5	ETHRX+	Network port data reception
	6	ETHRX-	Network port data reception
	7	GND	GND
	8	12V	12V



printing number	Pin number	pin assignment	Function
J1	1	+5V	5V
	2	+5V	
	3	+3.3V	3.3V
	4	+3.3V	
	5	GND	GND
	6	GND	
	7	GND	
	8	WIFI_DN	WIFI communication signal
	9	WIFI_DP	
	10	GND	GND
	11	IRCUT_A	IR-CUT driver signal
	12	IRCUT_B	
	13	KEY_SET	Reset button
	14	WIFI_PDN	WIFI power control
	15	SD_PDN	TF power control
	16	SD_CDTCT	TF card detection
	17	SD_DATA3	TF card communication signal
	18	SD_DATA2	TF card communication signal
	19	SD_DATA1	TF card communication signal
	20	SD_DATA0	TF card communication signal
	21	SD_CMD	TF card communication signal
	22	GND	GND
	23	SD_CLK	TF card communication signal
	24	GND	GND
	25	SDA	I2C signal
	26	SCL	I2C signal
	27	SENSOR_RST	Sensnor reset signal
	28	GND	GND
	29	SENSOR_MCLK	Sensnor master clock signal

	30	GND	GND
	31	MIPI_DATA3P	MIPI signal
	32	MIPI_DATA3N	
	33	MIPI_DATA1P	
	34	MIPI_DATA1N	
	35	MIPI_CLKP	
	36	MIPI_CLKN	
	37	MIPI_DATA0N	
	38	MIPI_DATA0P	
	39	MIPI_DATA2N	
	40	MIPI_DATA2P	
J3	1	IRCUTA	IRCUT driver
	2	IRCUTB	

3. Electrical Parameters

3.1 Absolute Electrical Parameters

Parameter	Description	Min	Max	Unit
Ts	Storage temperature	-40	150	℃
VCC	Power supply voltage	9.6	14.4	V
Static electricity discharge voltage (Air)	TAMB-25℃	-4	4	KV
Static electricity discharge voltage (Contact)	TAMB-25℃	-4	4	KV

3.2 Working Conditions

Parameter	Description	Min	Max	Unit
Ta	Working temperature	-20	65	℃
VCC	Power supply voltage	10.8	13.2	V