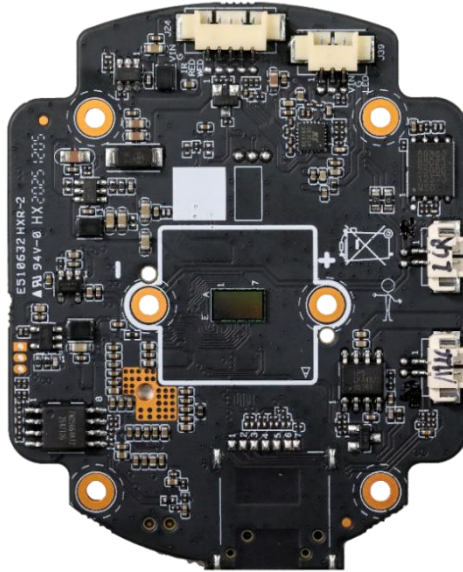


IPG-S4-4GQ Module Specification

Version: 20260202



Introduction

IPG-S4-4GQ 4MP 4G Bullet-PT Camera Module. 4MP ultra-low-light full-color, enhanced night vision, H.265 AI encoding. Supports human/vehicle detection and tracking. Ideal for HD surveillance.

Main Features



4G connection



Facial clarity



Digital Tracking Zoom



4G card*2



AI Blacklight



Human
Detection



Human Tracking



Vehicle inspection



H.265AI



two-way
intercom



TF Card Storage



Cloud Storage

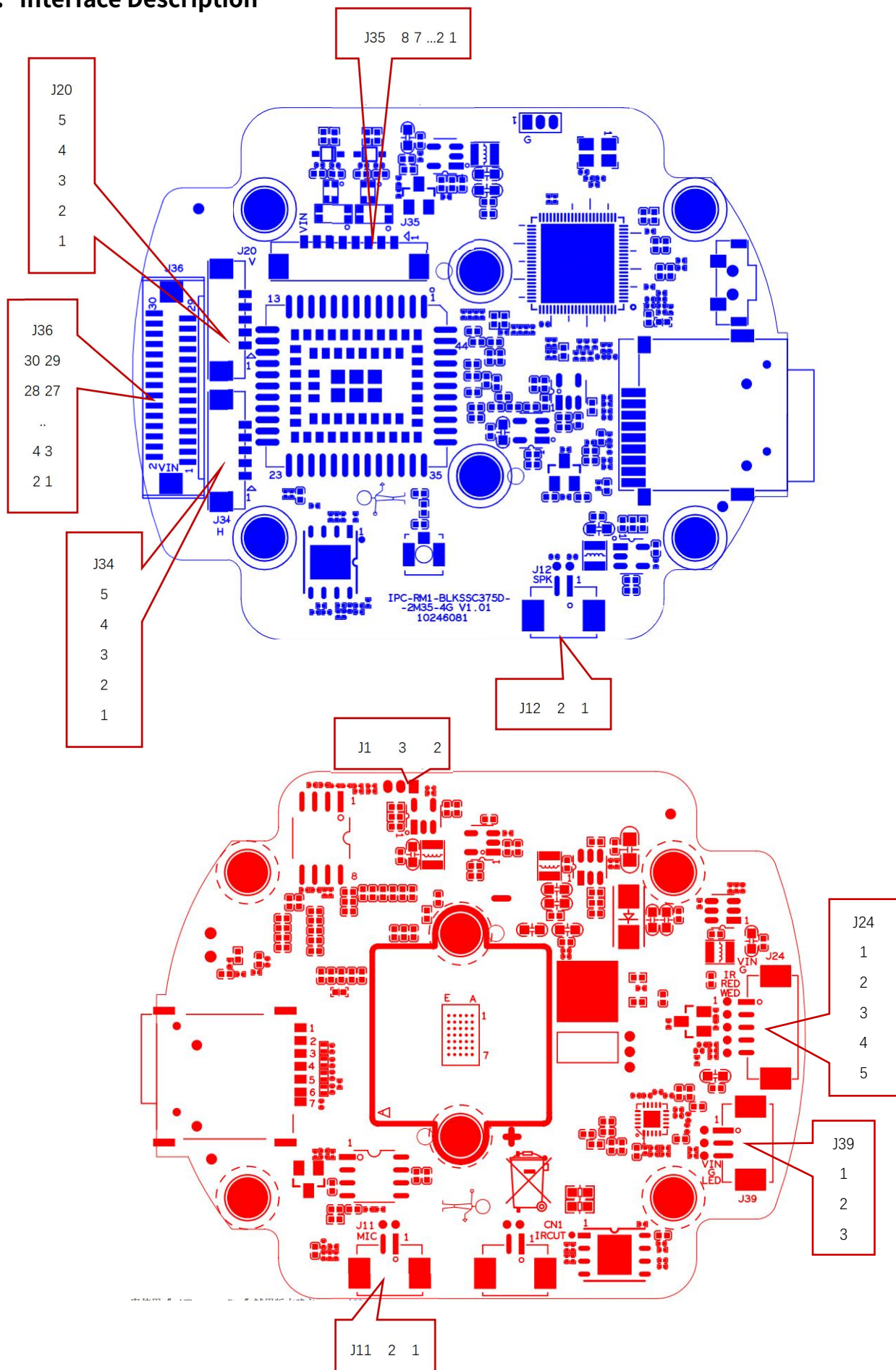
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1. Product Parameters

	Model	IPG-S4-4GQ
Module	System structure	dual-core 32-bit DSP, pure hard compression ,watch dog
	Sensor	1/2.9" High-performance CMOS sensor
	Min. Illumination	Color: 0.001Lux @(F1.0, AGC ON), 0 Lux with light
	Video compression	H.265
	Image output	Main stream:2560*1440@12fps;sub-stream:800*448@12fps;
	Shutter	1/50(1/60) s to 1/10,000s
	Day and night	Full color at night
Image	Noise reduction	Support 2D/3D noise reduction
	Wide dynamic	Support digital
Interface	Audio compression	G.711, support bidirectional talk,audio&video synchronization
	Audio interface	1 input, MIC: Selection range -28dB~-36dB, -33dB is recommended. 1 Output, Speaker: 8Ω2W is recommended.
	Network interface	Support 4G CAT1 network
	Singal interface	1*photoresistor interface
	Motor interface	1* horizontal motor interface, 1*vertical motor interface
	Reset interface	1*reset interface
	SD Card	Local TF card, up to 512G; cloud storage
Other function	Value-added Services	It supports value-added services such as cloud storage and scene AI (outdoor security), which need to be activated at your own expense on the APP side
	Mobile monitoring	Support multiple mobile monitoring (iOS, Android)
Intelligence	Intelligence analysis	Supports humanoid detection, vehicle shape detection, humanoid centering, and customization of other intelligent functions
General	Reliability	It supports value-added services such as cloud storage and scene AI (outdoor security), which need to be activated at your own expense on the APP side
	Power	DC12V
	Dimension	52mm*67mm

2. Interface Description



Silk Screen Number	Pin Number	Pin Definition	Function
J36	1	VCC	12V power supply
	2		
	3	/	/
	4	3V3	3.3V power supply
	5	LED	LED
	6	GND	GND
	7	/	/
	8	/	
	9	GND	GND
	10	WLED	Infrared light control signal
	11	RLED	White light control signal
	12	GND	GND
	13	MOTOR_CLK	Motor signal
	14	MOTOR_SDA	
	15	GND	GND
	16	IRCUTA	IRCUT drive
	17	IRCUTB	
	18	SCL	SENSOR-related signals
	19	SDA	
	20	VS	
	21	GND	
	22	SENSOR_MCLK	
	23	RST	
	24	SEN1_CLK0N	
	25	SEN1_CLK0P	
	26	SEN1_D0N	
	27	SEN1_D0P	
	28	SEN1_D1N	
	29	SEN1_D1P	
	30	GND	
J20	1	5V	Vertical motor interface
	2	OUT8	
	3	OUT7	
	4	OUT6	
	5	OUT5	
J34	1	5V	Horizontal motor interface
	2	OUT4	
	3	OUT3	
	4	OUT2	
	5	OUT1	
J12	1	SPKN-	Spaker
	2	SPKP+	
J35	1	KEY_SET	reset button

	2	NET_ACT	Network port indicator
	3	ETHTX+	Wired network
	4	ETHTX-	
	5	ETHRX+	
	6	ETHRX-	
	7	GND	GND
	8	VCC_IN	12V power supply
J11	1	MIC_N-	MIC
	2	MIC_P+	
J24	1	VCC	12V power supply
	2	GND	GND
	3	IR	Hard photosensitive input signal
	4	RLED	Infrared light control signal
	5	WLED	White light control signal
J39	1	VCC	12V power supply
	2	GND	GND
	3	LED	Light
J1	1	GND	serial port
	2	UART0_TXD	
	3	UART0_RXD	

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℃	-6	6	KV
Static electricity discharge voltage (Contact)	TAMB-25℃	-3	3	KV

3.2 Working Conditions

Parameter	Description	Min	Max	Unit
Ta	Working temperature	-20	65	℃
VCC	Power supply voltage	9.6	14.4	V
VOL	I/O low-level output	0	0.7	V
VOH	I/O high-level output	2.6	3.3	V

4. RF parameters

4.1 RF Output Power

Frequency Band	Max	Min
LTE FDD B1/B3/B5/B8	23dBm +2dB	<-39dBm

LTE FDD B34/B38/B39/B40/B41	23dBm +-2dB	<-39dBm
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4.2 RF Conduction Sensitivity

Frequency Band	RX Sensitivity
LTE FDD B1(10M)	< -98.5dBm
LTE FDD B3(10M)	< -98.7dBm
LTE FDD B5(10M)	< -98.5dBm
LTE FDD B8(10M)	< -97.5dBm
LTE FDD B34(10M)	< -100.2dBm
LTE FDD B38(10M)	< -100dBm
LTE FDD B39(10M)	< -99.3dBm
LTE FDD B40(10M)	< -100dBm
LTE FDD B41(10M)	< -99dBm

4.3 Working Frequency

3GPP Band	TX	RX	Unit
LTE FDD B1	1920~1980	2110~2170	MHz
LTE FDD B3	1710~1785	1805~1880	MHz
LTE FDD B5	824~849	869~894	MHz
LTE FDD B8	880~915	925~960	MHz
LTE TDD B34	2010~2025	2010~2025	MHz
LTE TDD B38	2570~2620	2570~2620	MHz
LTE TDD B39	1880~1920	1880~1920	MHz
LTE TDD B40	2300~2400	2300~2400	MHz
LTE TDD B41	2596~2690	2596~2690	MHz