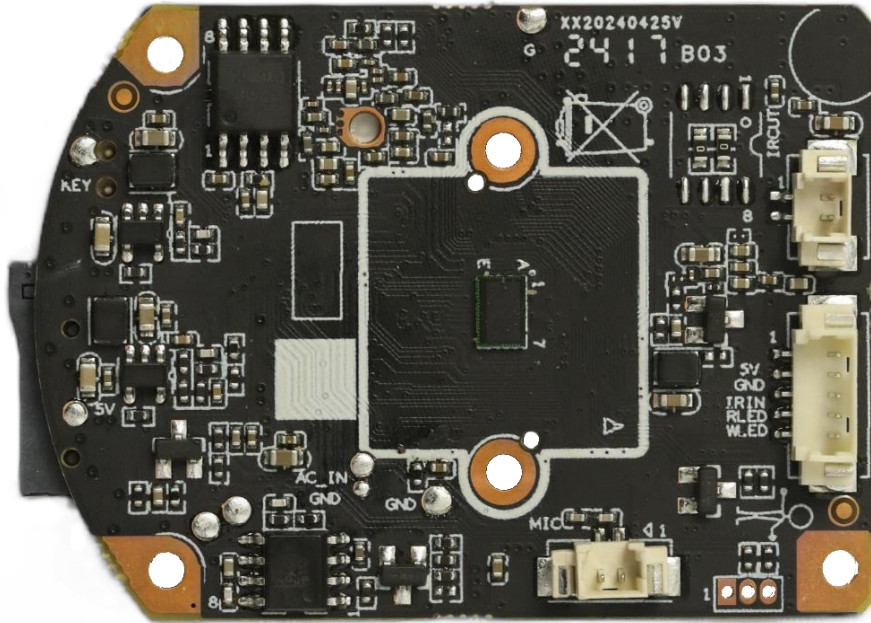


IPG-G2-WR-V Module Specification

Document Version : 20240523



Introduction

IPG-G2-WR-V is a 2MP low-illumination Wi-Fi PT camera module developed by our company, which supports docking with video s Bluetooth fast network configuration, and is mainly used in high-definition video surveillance cameras.

Main Features



Bluetooth Network Configuration



Support Screens



Two-way video talk



Human Detection



PT Control



Mobile Remote



Infrared Night Vision



Regional Alert



TF Card Storage



Cloud Storage



H.265AI

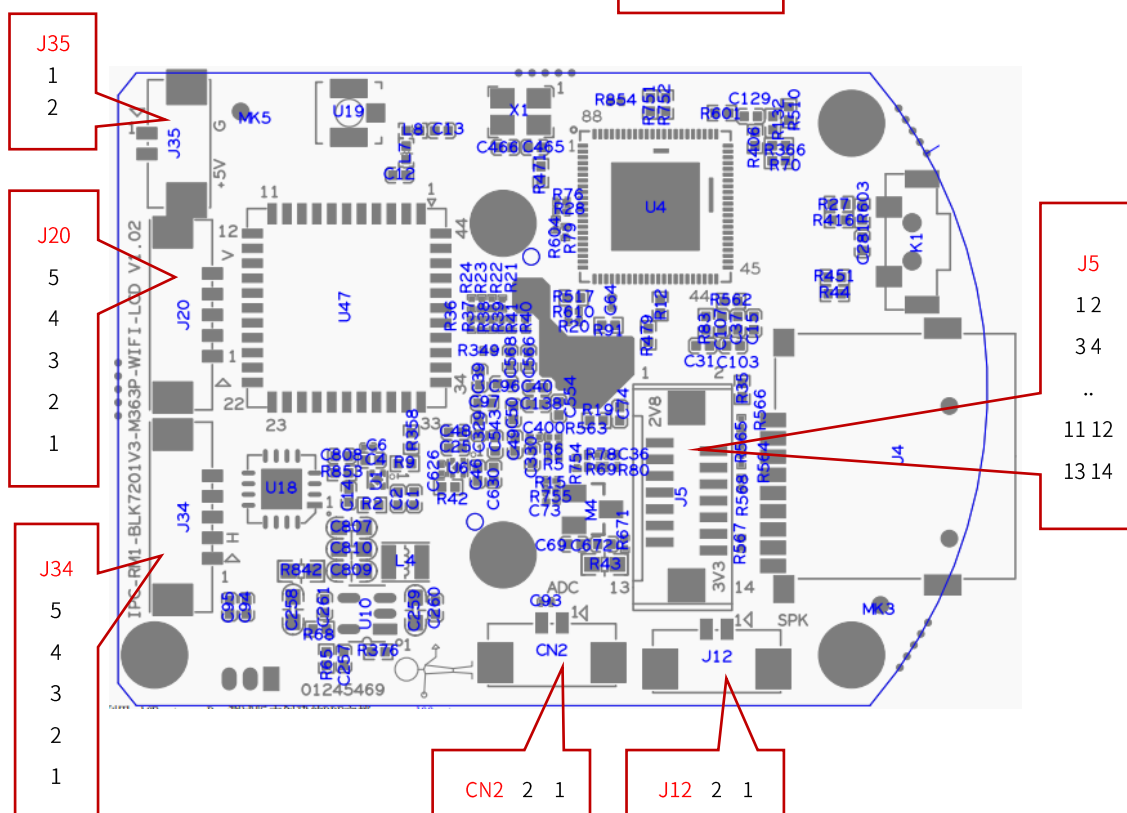
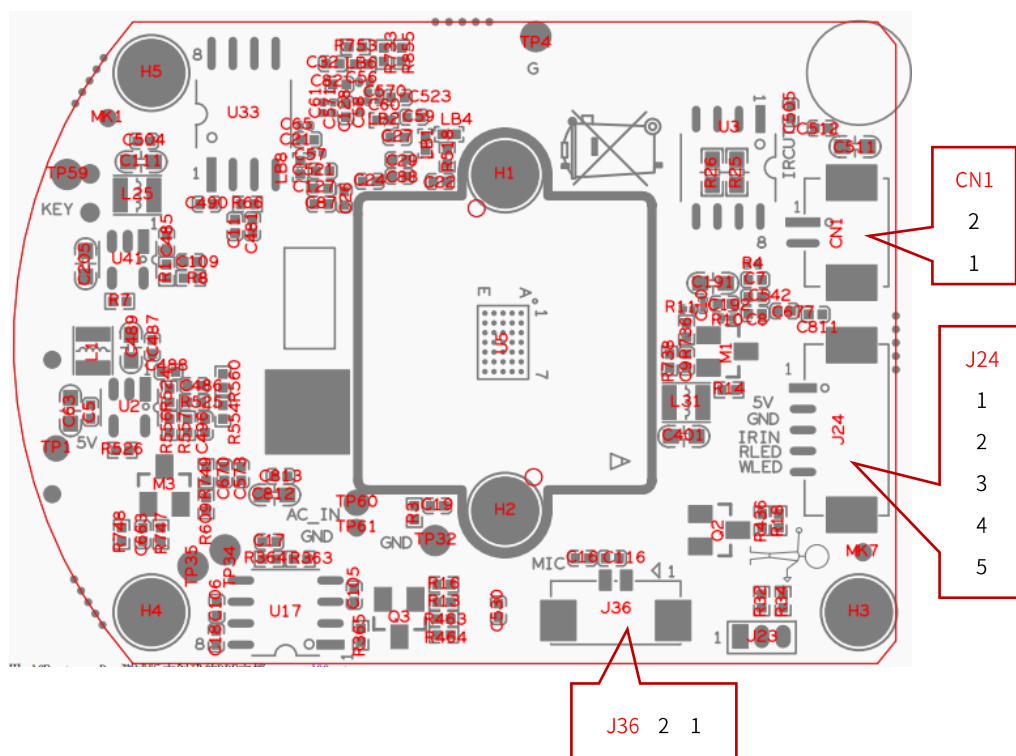
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1. Product Parameters

Model	IPG-G2-WR-V
System Structure	dual-core 32-bit DSP (GK7201V300) ,pure hard compression ,watch dog
Sensor	1/4" Low illumination CMOS Sensor
Min. Illumination	Color : 0.01Lux @(F1.2,AGC ON); 0 Lux with IR Black/White: 0.001 Lux @ (F1.2,AGC ON),0 Lux with IR
Video Compression	H.265AI
Image Output	Main stream: 1920*1080@12fps; Sub-code stream:800*448@12fps
Shutter	1/50(1/60)s to 1/10,000s
Day&Night	Support IR-CUT
DNR	Support 2D/3D noise reduction
WDR	Support
Audio Compression	G.711A codec standard, support dual voice talkback, audio and video synchronization
Audio Interface	1 channel input, support microphone input; 1 channel output, support speaker output playback
Screen interface	support 2.8/2.4 inch SPI interface RGB screen, resolution is 240*320, vertical screen, other sizes need to be customized
Network Interface	1*WiFi antenna interface to support wireless network connection
Signal Interface	1*photoresistor interface, 1*IR-CUT driver interface, support photoresistor input signal and IR-CUT, IR lamp linkage
Motor Interface	1* horizontal motor interface, 1*vertical motor interface
Reset Interface	1*reset interface
Storage Mode	Local TF card, up to 256G; cloud storage
Reliability	Comprehensive lightning protection, in line with national and international standards; 3*24 hours high-temperature test stability and reliability
Smart Alarm	Supporting human detection support to customizing other intelligent functions
Functions	Support two-way video intercom; It supports remote monitoring of mobile client, push message after alarm of human detection, and supports MJPEG capture;
ONVIF	support
Mobile Monitoring	Support (iOS, Android)
Power Supply	DC5V
Dimension	38mm*54mm

2. Interface Description



Silk Screen Number	Pin Number	Pin Definition	Function
J35	1	GND	GND
	2	5V	5V Power Supply
J20	1	5V	Vertical Motor Interface
	2	OUT8	
	3	OUT7	
	4	OUT6	
	5	OUT5	
J34	1	5V	Horizontal Motor Interface
	2	OUT1	
	3	OUT2	
	4	OUT3	
	5	OUT4	
J12	1	SPKN	Speaker Interface
	2	SPKP	
CN2	1	GND	Screen Button Interface
	2	ADC_KEY	
J5	1	2V8	Screen Interface
	2	GND	
	3	LCD_RST	
	4	LCD_CS	
	5	GND	
	6	LCD_SCL	
	7	GND	
	8	LCD_SDA	
	9	GND	
	10	LCD_TE	
	11	LCD_RS	
	12	LEDK-	
	13	LEDA+	
	14	3V3	
J36	1	GND	MIC
	2	MIC_IN	
CN1	1	OUTA	IRCUT
	2	OUTB	
J24	1	5V	Lamp Board Power Supply
	2	GND	GND
	3	IR	Hard photosensitive input signal
	4	RLED	Infrared Lamp Control Signal
	5	WLED	White light control signal

3. Electrical Parameters

3.1 Absolute Electrical Parameters

Parameter	Description	Min	Max	Unit
Ts	Storage temperature	-40	150	℃
VCC	Power supply voltage	4.5	5.5	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	4.5	5.5	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 Basic RF Performance

Parameter	Description
Wi-Fi standard	IEEE 802.11 b/g/n Wi-Fi compliant
Frequency Range	2.400 GHz ~ 2.4835 GHz (2.4 GHz ISM Band)
Number of Channels	2.4GHz: Ch1 ~ Ch14
Antenna Type	External IPEX interface

4.2 Basic Bluetooth Performance

4.2.1 General Performance

Parameter	Description
Bluetooth standard	BLE 5.0 of 1Mbps
Frequency Range	2402 MHz ~ 2480 MHz
Number of Channels	39 channels

4.2.2 RF Performance

Parameter	Min(dBm)	Typical(dBm)	Max(dBm)
Transmit power (Class 1)	2	5	8
Sensitivity @ BER=0.1% for GFSK (1Mbps)	/	-90	-70
Maximum Input Level	GFSK (1Mbps): -20dBm		

4.3 Wi-Fi RF Performance

4.3.1 Wi-Fi TX Performance

Mode	Rate	Power	EVM
802.11b	11Mbps	18dBm±2dB	≤-10dB
802.11g	54Mbps	15dBm±2dB	≤-25dB
802.11n	MCS7	15dBm±2dB	≤-28dB

4.3.2 Wi-Fi RX Performance

Working State	Rate	RX Sensitivity (Test Value)	RX Sensitivity (Standard Value)
(802.11b, 20MHz) @8%PER	1M	-94dBm	≤-83dBm
	2M	-92dBm	≤-80dBm
	5.5M	-91dBm	≤-79dBm
	11M	-88dBm	≤-76dBm
802.11g, 20MHz) @10% PER	6M	-89dBm	≤-85dBm
	9M	-88dBm	≤-84dBm
	12M	-87dBm	≤-82dBm
	18M	-84dBm	≤-80dBm
	24M	-81dBm	≤-77dBm
	36M	-78dBm	≤-73dBm
	48M	-73dBm	≤-69dBm
	54M	-71dBm	≤-68dBm
802.11n, 20MHz) @10% PER	MCS0	-89dBm	≤-85dBm
	MCS1	-86dBm	≤-82dBm
	MCS2	-84dBm	≤-80dBm
	MCS3	-80dBm	≤-77dBm
	MCS4	-77dBm	≤-73dBm
	MCS5	-72dBm	≤-69dBm
	MCS6	-71dBm	≤-68dBm
	MCS7	-70dBm	≤-67dBm
802.11n, 40MHz) @10% PER	MCS0	-89dBm	≤-82dBm
	MCS1	-85dBm	≤-79dBm
	MCS2	-83dBm	≤-77dBm
	MCS3	-80dBm	≤-74dBm
	MCS4	-76dBm	≤-70dBm
	MCS5	-71dBm	≤-66dBm
	MCS6	-70dBm	≤-65dBm
	MCS7	-68dBm	≤-64dBm