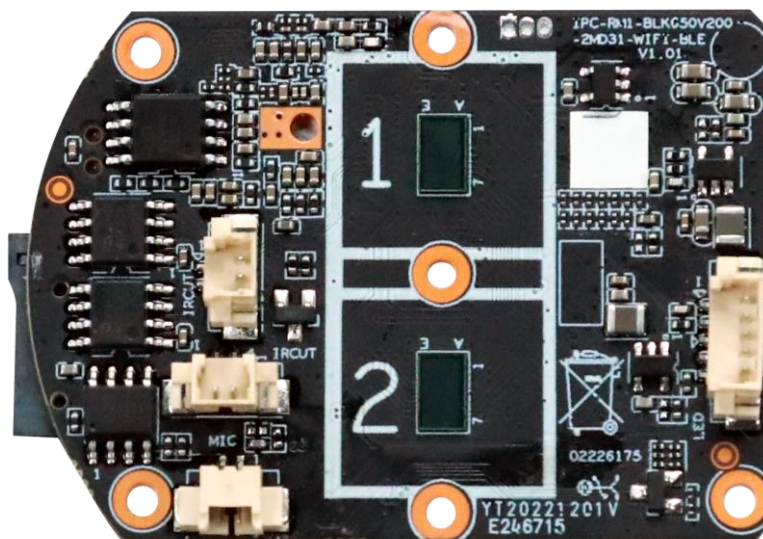


IPG-X2-WR2 Module Specification

Document Version : 20230718



Introduction

IPG-X2-WR2 is an 2MP Dual-lens zoom dome module developed by our company, which supports 5X hybrid zoom and is mainly applied to HD video surveillance cameras.

Main Features



5X Zoom



Dual-screen
Preview



Human Detection



Human Tracking



PT Control



Point and See



Two-way Talk



H.265AI



Mobile Remote



Cloud Storage



TF Card Storage

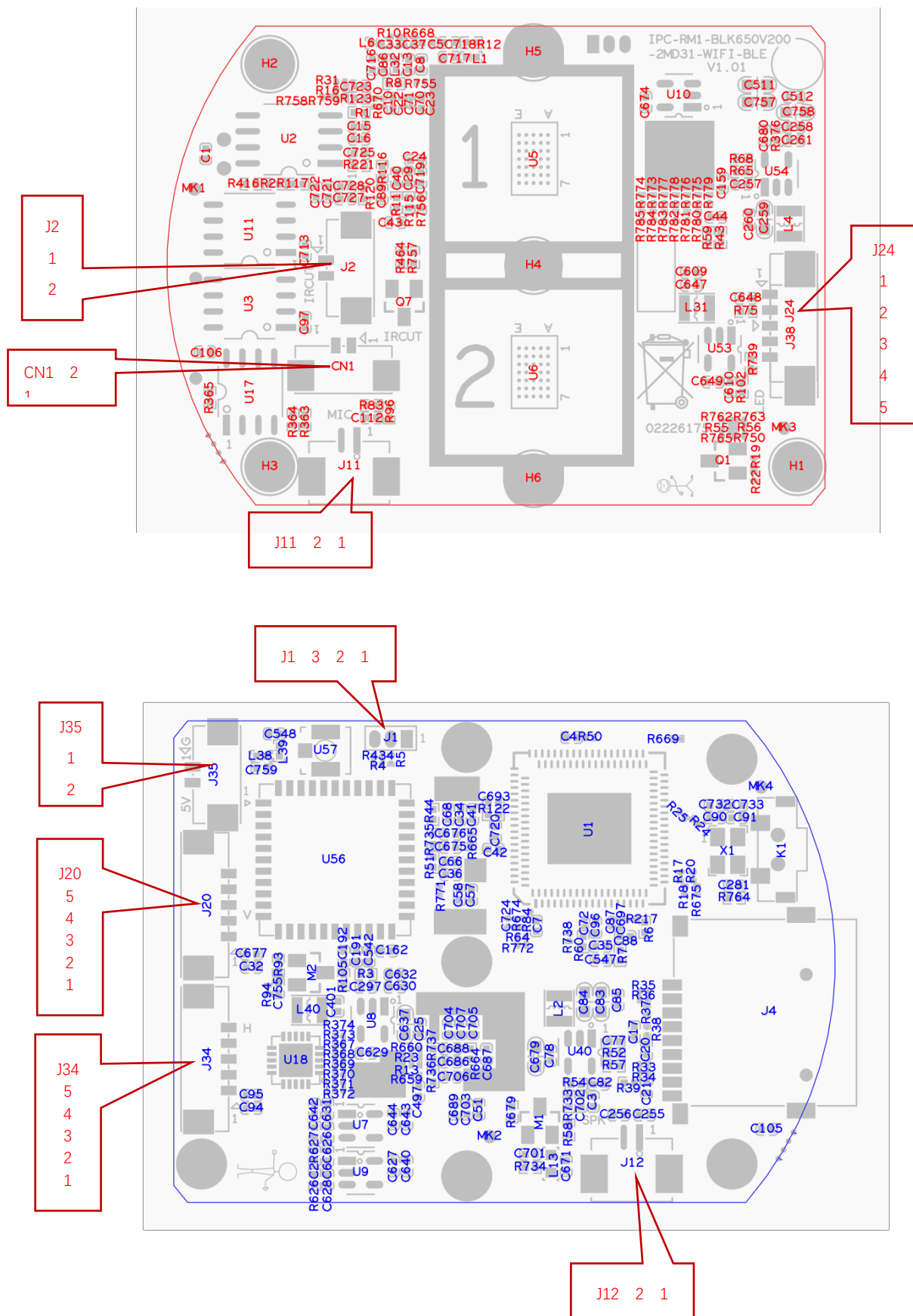
Content

1. Product Parameters	3
2. Interface Description	4
3. Electrical Parameters	4
3.1 Absolute Electrical Parameters	5
3.2 Working Conditions	5
4. RF Parameters	6
4.1 Basic Wi-Fi Performance	6
4.2 Wi-Fi RF Performance	6
4.2.1 Wi-Fi TX Performance	6
4.2.2 Wi-Fi RX Performance	6

1. Product Parameters

Model	IPG-X2-WR2
System Structure	dual-core 32-bit DSP (XM650V200) ,pure hard compression ,watch dog
Sensor	2 pcs 1080P 1/3.2" high performance 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-stream: 640*360@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
Network Interface	1*Wi-Fi 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
Reset Interface	1*reset interface
Storage Mode	Local TF card(up to 128G); cloud storage
Reliability	Comprehensive lightning protection, in line with national and international standards; 3*24 hours high-temperature test stability and reliability
Smart Alarm	Support human detection, support to customizing other intelligent functions
Functions	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
J2	1	IR-CUTA	Lens 1 IR-CUT interface
	2	IR-CUTB	
CN1	1	IR-CUTA	Lens 2 IR-CUT interface
	2	IR-CUTB	
J11	1	MIC_G	Microphone interface
	2	MIC_IN	
J24	1	5V	5V power supply
	2	GND	GND
	3	ADC1_IN	Hard photosensitive signal acquisition
	4	RLED	Infrared light control signal
	5	WLED	White light control signal
J35	1	GND	Power supply interface
	2	5V	
J20	1	5V	Vertical motor interface
	2	OUT1	
	3	OUT2	
	4	OUT3	
	5	OUT4	
J34	1	5V	Horizontal motor interface
	2	OUT8	
	3	OUT7	
	4	OUT6	
	5	OUT5	
J12	1	SPKN	Speaker Interface

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 Wi-Fi Performance

Parameter	Description
Wi-Fi standard	IEEE 802.11 b/g/n
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 Wi-Fi RF Performance

4.2.1 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

4.2.2 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