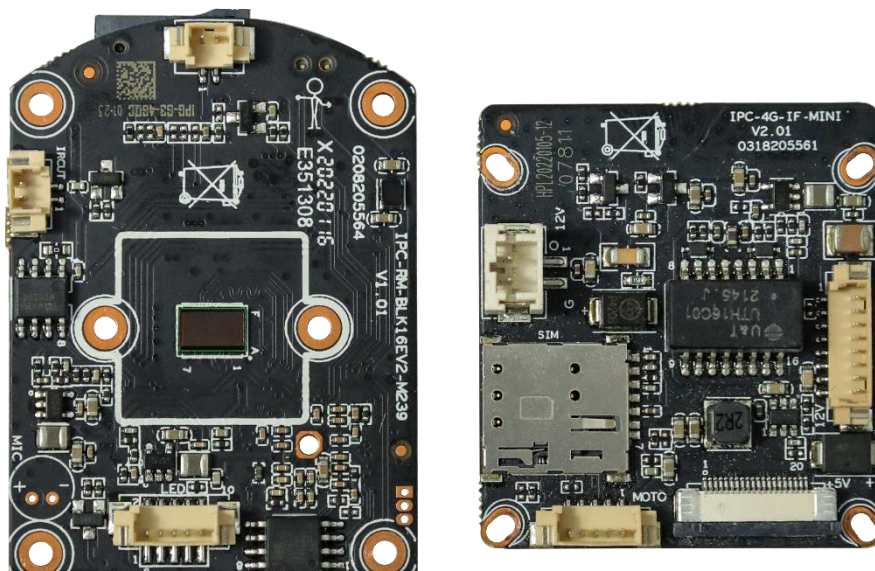


IPG-G3-4GQC Module Specification

Document Version : 20230603



Introduction

IPG-G3-4GQC is an 3MP 4G dome module developed by our company, built-in special monitoring 4G traffic card, which can be activated and networked after power-on, mainly used in high-definition video surveillance cameras.

Main Features

- | | | | |
|-----------------|--------------------|-----------------------|-----------------|
| 4G Connection | HD Picture Quality | PT Control | Human Detection |
| Two-way Talk | Mobile Remote | Infrared Night Vision | Regional Alert |
| TF Card Storage | Cloud Storage | H.265AI | |

Content

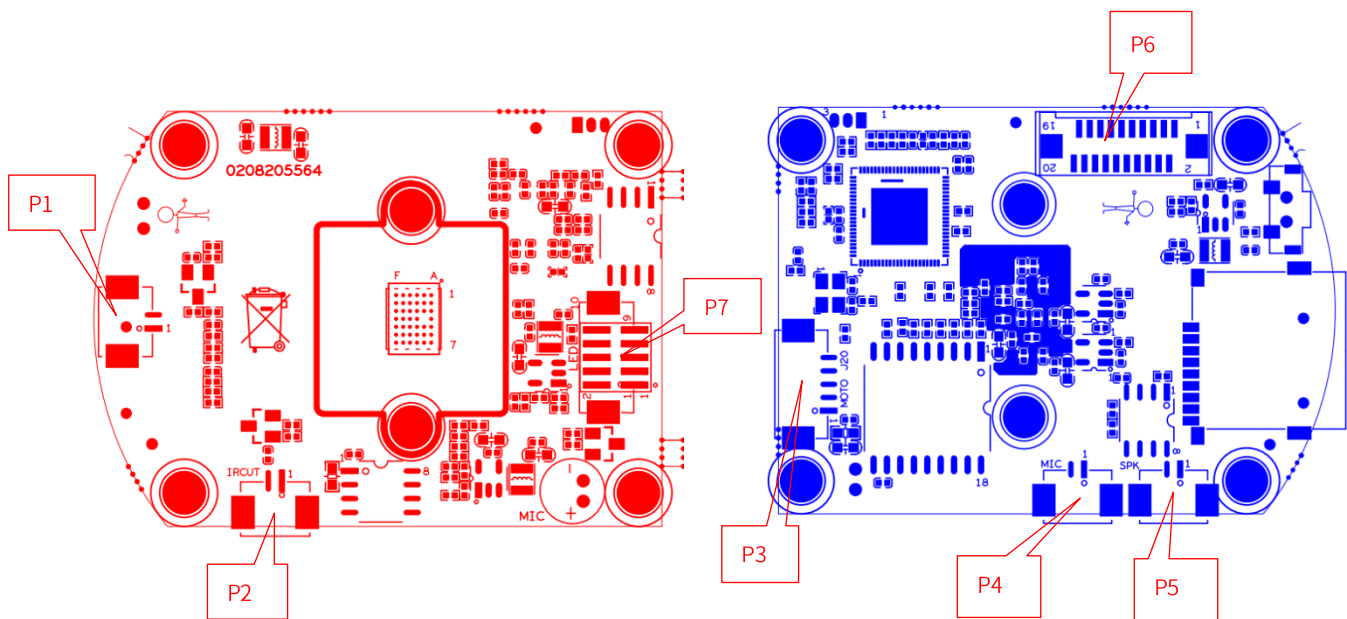
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1. Product Parameters

Model	IPG-G3-4GQC
System Structure	dual-core 32-bit DSP (GK7205V200) ,pure hard compression ,watch dog
Sensor	3MP 1/2.8"SC4239H 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: 2304*1296@12fps; sub-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 Process	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	Support 4G CAT1 network
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 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	Supporting 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	DC12V
Dimension	38mm*54mm+38mm*42mm

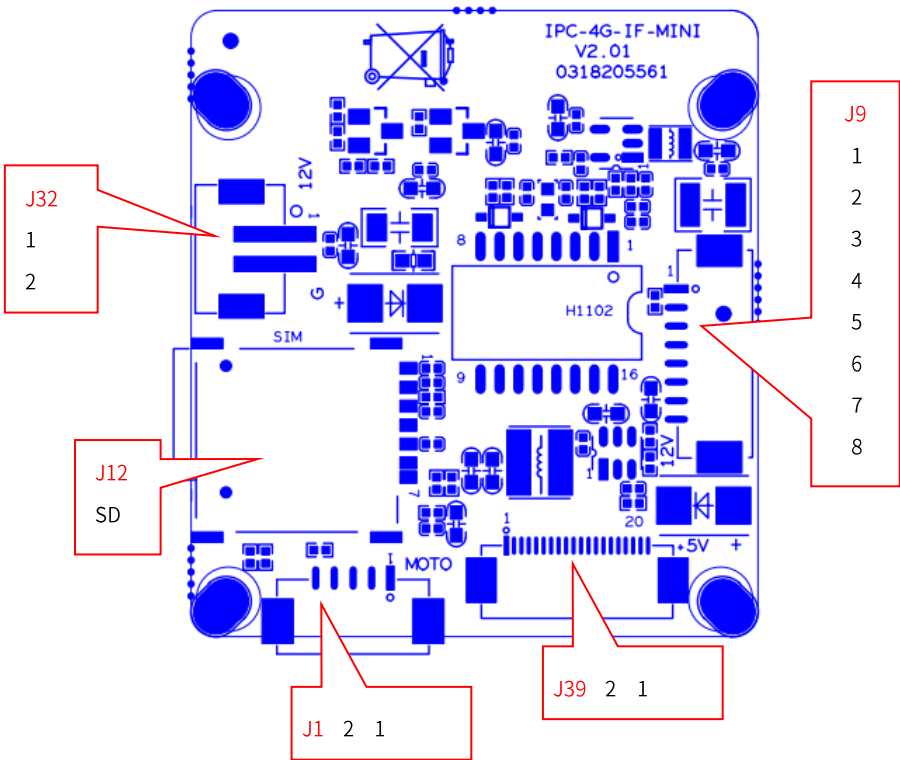
2. Interface Description

Main board Dimension: 38mm*54mm; Interface board Dimension: 38mm*42mm



Marking	Silk Screen Number	Pin Number	Pin Definition	Function
P2	CN1	1	IRCUT-CONTROL2	IC-CUT driver
		2	IRCUT-CONTROL1	
P3	J20	1	+5V_M1	power
		2	OUT5	Vertical motor control
		3	OUT6	
		4	OUT7	
		5	OUT8	
P1	J32	1	WLED	White light control
		2	RLED	Infrared lamp control
P5	J12	1	AC_OUTL	loudspeaker
		2	AC_OUTR	loudspeaker
P7	J24	1	5V	5V power
		2	RED	Infrared input
		3	STATE_GPIO6_7	GPIO
		4	GND	GND
		5	LED_GPIO1_6+	GPIO
P4	J11	1	GND	GND
		2	AC_IN	Audio input
	J31	1	OUT1	Motor output 1
		2	OUT2	Motor output 2
		3	OUT3	Motor output 3
		4	OUT4	Motor output 4
		5	GND	GND

P6	6	KED_SET	Reset key
	7	GND	GND
	8	WIFI_PDN	WIFI enabled
	9	WIFI_DN	WIFI data
	10	WIFI_DP	WIFIdata
	11	GND	GND
	12	MDI_AN	Network signal
	13	MDI_AP	Network signal
	14	GND	GND
	15	MDI_BP	Network signal
	16	MDI_BN	Network signal
	17	GND	GND
	18	NC	NC
	19	5V	5V power
	20	5V	5V power



Silk Screen Number	Pin Number	Pin Definition	Function
J32	1	12V	Lamp board interface
	2	GND	
J12	1	SDIO	SIM card slot
J1	1	+5V	motor drive
	2	OUT1	
	3	OUT2	
	4	OUT3	
	5	OUT4	
	1	KEY_SET	Reset

J9	2	LED	Network port indicator light (false) always on
	3	ETHTX+	Network port signal
	4	ETHTX-	
	5	ETHRX+	
	6	ETHRX-	
	7	GND	GND
	8	+12V	12V
J39	1...4	OUT1-OUT4	Horizontal motor control
	5,7,11,14,17	GND	GND
	6	KEY_SET	Reset
	8,9,10	Wifi	Wif data line
	12,13,15,16	ETH	ETH signal line
	18	1V8	1.8V
	19,20	+5V	5V

3. Electrical Parameters

3.1 Absolute Electrical Parameters

Parameter	Description	Min	Max	Unit
Ts	Storage temperature	-40	90	℃
VCC	Power supply voltage	-0.3	4.2	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	3.3	4.2	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	<-44dBm
LTE TDD B34/B38/B39/B40/B41	23dBm +-2dB	<-42dBm

4.2 RF Conduction Sensitivity

Frequency Band	RX Sensitivity
LTE FDD B1(10M)	< -99dBm
LTE FDD B3(10M)	< -99dBm

LTE FDD B5(10M)	< -99dBm
LTE FDD B8(10M)	< -99dBm
LTE TDD B34(10M)	< -100dBm
LTE TDD B38(10M)	< -99dBm
LTE TDD B39(10M)	< -100dBm
LTE TDD B40(10M)	< -99dBm
LTE TDD 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	2555~2655	2555~2655	MHz