LPG-G4-E-EA Module Specification

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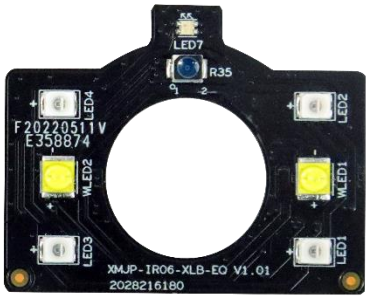

Introduction

LPG-G4-E-EA is an 4MP battery Camera module developed by our company, which is mainly used in high-definition video surveillance cameras.

Main Features

- Wi-Fi Connection
- HD Picture Quality
- PIR Detection
- Remote Wakeup
- Battery Powered
- Infrared Night Vision
- Two-way Audio
- TF Card Storage
- H.265AI
- Cloud Storage

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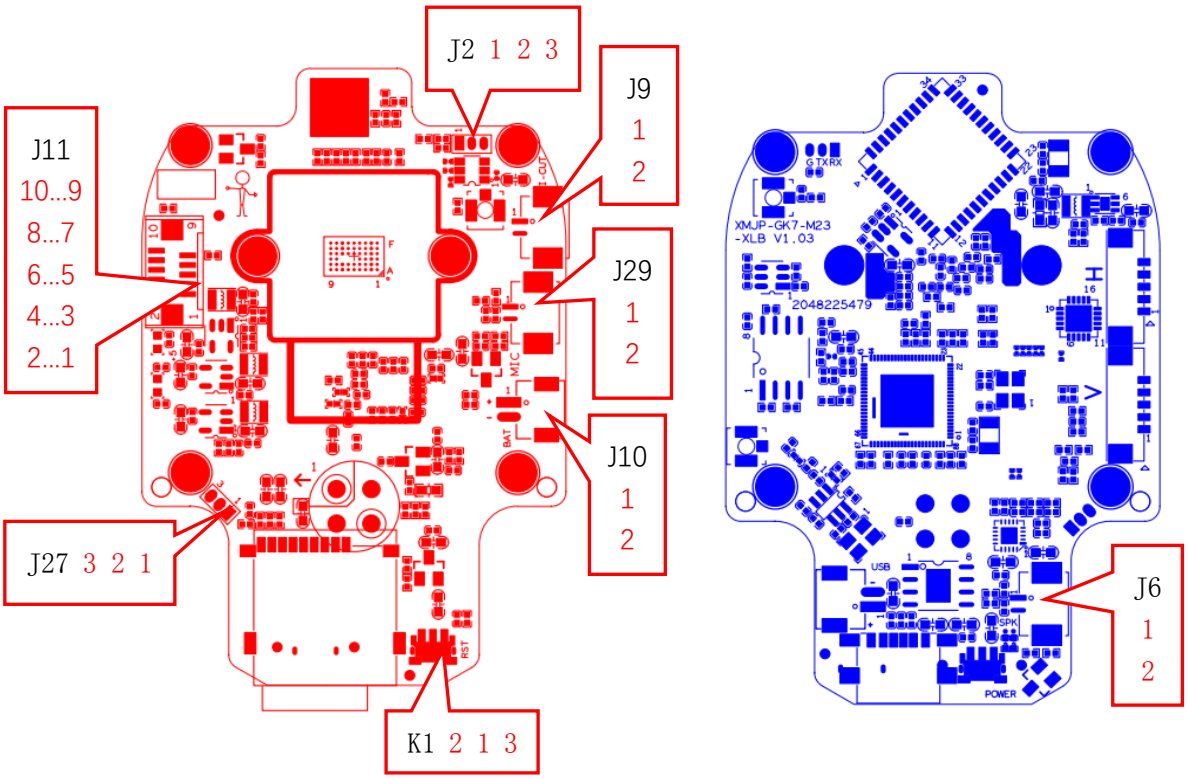
1. Product Parameters

Model	LPG-G4-E-EA
System Structure	dual-core 32-bit DSP（GK7202V300）,pure hard compression ,watch dog
Sensor	1/3" 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: 2560*1440@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*input interface, support microphone input (MIC: selection range -28dB~-36dB, -33dB specification recommended); 1*output interface, support speaker output playback (speaker: 8Ω 2W specification recommended)
Network Interface	1*Wi-Fi antenna interface，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	Supporting PIR 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;
Mobile Monitoring	Support（iOS，Android）
Power Supply	4.2V lithium battery power supply
Dimension	44mm*58mm

2. Interface Description



Silk Screen Number	Pin Number	Pin Definition	Function
J11	1	+5V_BQ	+5V power supply
	2	+5V_BQ	+5V power supply
	3	3.3V	3.3V power supply
	4	GND	GND
	5	GND	GND
	6	GPIO50	White light signal
	7	RLED_EN	Infrared signal
	8	ADC_IN	Light sensitive signal
	9	MCU_LED1	Blue light distribution indicator
	10	MCU_LED2	Red low battery indicator
J9	1	OUT1	IRCUT signal
	2	OUT2	IRCUT signal
J29	1	MIC_N	MIC signal
	2	MIC_P	MIC signal
J10	1	+5V_LI	+5V battery
	2	GND	GND
K1	1	SW_ON/OFF	Reset button
	2	GND	GND
	3	GND	GND
	4	GND	GND
	5	GND	GND
	6	GND	GND

	7	GND	GND
J6	1	Horn signal	Horn signal
	2	Horn signal	Horn signal
J2	1	UART_RXD	Serial Receive
	2	UART_TXD	Serial Send
	3	GND	GND
J27	1	UART_RXD	Serial Receive
	2	UART_TXD	Serial Send
	3	GND	GND

3. Electrical Parameters

3.1 Absolute Electrical Parameters

Parameter	Description	Min	Max	Unit
Ts	Storage temperature	-40	150	℃
VCC	Power supply voltage	3.3	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

3.3 RF Power Consumption

Mode	Power (mA)（VCC=3.3V）
Sleep Mode	5uA
TX Test mode (2.4G HT20@17dbm)	288
RX Test mode (2.4G HT20)	53

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
Number of Channels	2.4GHz：Ch1 ~ Ch13
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	16dBm±1.5dB	≤-10dB
802.11g	54Mbps	16dBm±1.5dB	≤-25dB
802.11n	MCS7	16dBm±1.5dB	≤-28dB

4.2.2 Wi-Fi RX Performance

Working State	Rate	RX Sensitivity (Test Value)	RX Sensitivity (Standard Value)
（802.11b，20MHz）@8% PER	1Mbps	－97dBm	≤-85dBm
	2Mbps	－95dBm	≤-85dBm
	5.5Mbps	－92dBm	≤-85dBm
	11Mbps	－90dBm	≤-85dBm
（802.11g，20MHz）@10% PER	6Mbps	－94dBm	≤-85dBm
	9Mbps	－92dBm	≤-85dBm
	12Mbps	－91dBm	≤-85dBm
	18Mbps	－88dBm	≤-85dBm
	24Mbps	－85dBm	≤-85dBm
	36Mbps	－82dBm	≤-85dBm
	48Mbps	－79dBm	≤-85dBm
	54Mbps	－77dBm	≤-85dBm
（802.11n，20MHz）@10% PER	MCS=0	－93dBm	≤-85dBm
	MCS=1	－90dBm	≤-85dBm
	MCS=2	－89dBm	≤-85dBm
	MCS=3	－85dBm	≤-85dBm
	MCS=4	－82dBm	≤-85dBm
	MCS=5	－78dBm	≤-85dBm
	MCS=6	－76dBm	≤-85dBm
	MCS=7	－73dBm	≤-85dBm