



LEOPARD IMAGING INC

LI-NANO-CB-IMX219-xxxH-X

Data Sheet

Key Features

- Compatible with Nvidia® Jetson NANO™
- MIPI CSI-2 interface
- Supports up to four cameras
- Sony Diagonal 4.60 mm (Type 1/4) 8MP CMOS Image Sensor IMX219
- Active pixels: 3280 (H) x 2464 (V)
- Pixel size: 1.12 x 1.12 μm
- Color camera
- FOV H: 90° / 136°
- Supports 3264 x 2464 @ 21 fps, 3264 x 1848 @ 28 fps, 1920 x 1080 @ 30 fps and 1280 x 720 @ 60 fps
- Supports PoE (options)
- I-PEX cable part#: FAW-1233-01
- Length of the I-PEX cable: 100 mm
- Supports multiple length cables
- MIPI connector part#: 20525-030E-02C
- Provides driver binary and source code
- Allows customization
- Part#:

LI-NANO-CB-IMX219-xxxH-X

LI-NANO-CB-POE-IMX219-xxxH-X



BOM

#	Items	QTY
1	LI-NANO-CB V1.2 or LI-NANO-CB-POE V1.2	1
2	Nvidia Jetson Nano SOM	1
3	LI-IMX219-MIPI-FF-NANO	1,2,3 or 4
4	LI-PI-IPEX-1233-ADPT	1,2,3 or 4
5	DC 12V power supply	1
6	USB 2.0 Type A - Micro B cable	1



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Order Information

LI-NANO-CB-IMX219-xxxH / LI-NANO-CB-POE-IMX219-xxxH

BOM

#	Items	QTY
1	LI-NANO-CB or LI-NANO-CB-POE	1
2	Nvidia Jetson Nano SOM	1
3	LI-IMX219-MIPI-FF-NANO	1
4	LI-PI-IPEX-1233-ADPT	1
5	DC 12V power supply	1
6	USB 2.0 Micro B cable	1



LI-NANO-CB-IMX219-xxxH-D / LI-NANO-CB-POE-IMX219-xxxH-D

BOM

#	Items	QTY
1	LI-NANO-CB or LI-NANO-CB-POE	1
2	Nvidia Jetson Nano SOM	1
3	LI-IMX219-MIPI-FF-NANO	2
4	LI-PI-IPEX-1233-ADPT	2
5	DC 12V power supply	1
6	USB 2.0 Micro B cable	1



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LI-NANO-CB-IMX219-xxxH-T / LI-NANO-CB-POE-IMX219-xxxH-T

BOM

#	Items	QTY
1	LI-NANO-CB or LI-NANO-CB-POE	1
2	Nvidia Jetson Nano SOM	1
3	LI-IMX219-MIPI-FF-NANO	3
4	LI-PI-IPEX-1233-ADPT	3
5	DC 12V power supply	1
6	USB 2.0 Micro B cable	1



LI-NANO-CB-IMX219-xxxH-Q / LI-NANO-CB-POE-IMX219-xxxH-Q

BOM

#	Items	QTY
1	LI-NANO-CB or LI-NANO-CB-POE	1
2	Nvidia Jetson Nano SOM	1
3	LI-IMX219-MIPI-FF-NANO	4
4	LI-PI-IPEX-1233-ADPT	4
5	DC 12V power supply	1
6	USB 2.0 Micro B cable	1



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Register Information

Device (on LI-NANO-CB)	I2C Address (7-bit)
tca9548 (I2C switcher)	0x70
J13 (CAM1)	0x00
J3 (CAM2)	0x01
J25 (CAM3)	0x02
J26 (CAM4)	0x03

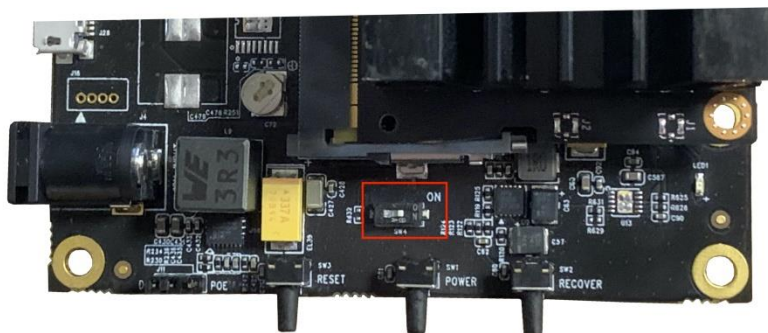
Device (on LI-IMX219-MIPI-FF-NANO)	I2C Address (7-bit)
IMX219 sensor	0x10

Power Consumption

Opened Cameras	Power Consumption
No camera	Around 200mA @ 12V
1 camera (3264x2464@21fps)	TBD
2 cameras (3264x2464@21fps)	TBD
3 cameras (3264x2464@21fps)	TBD
4 cameras (3264x2464@21fps)	TBD

Auto Boot

SW4	Boot Mode
ON	Manual boot
OFF	Auto boot

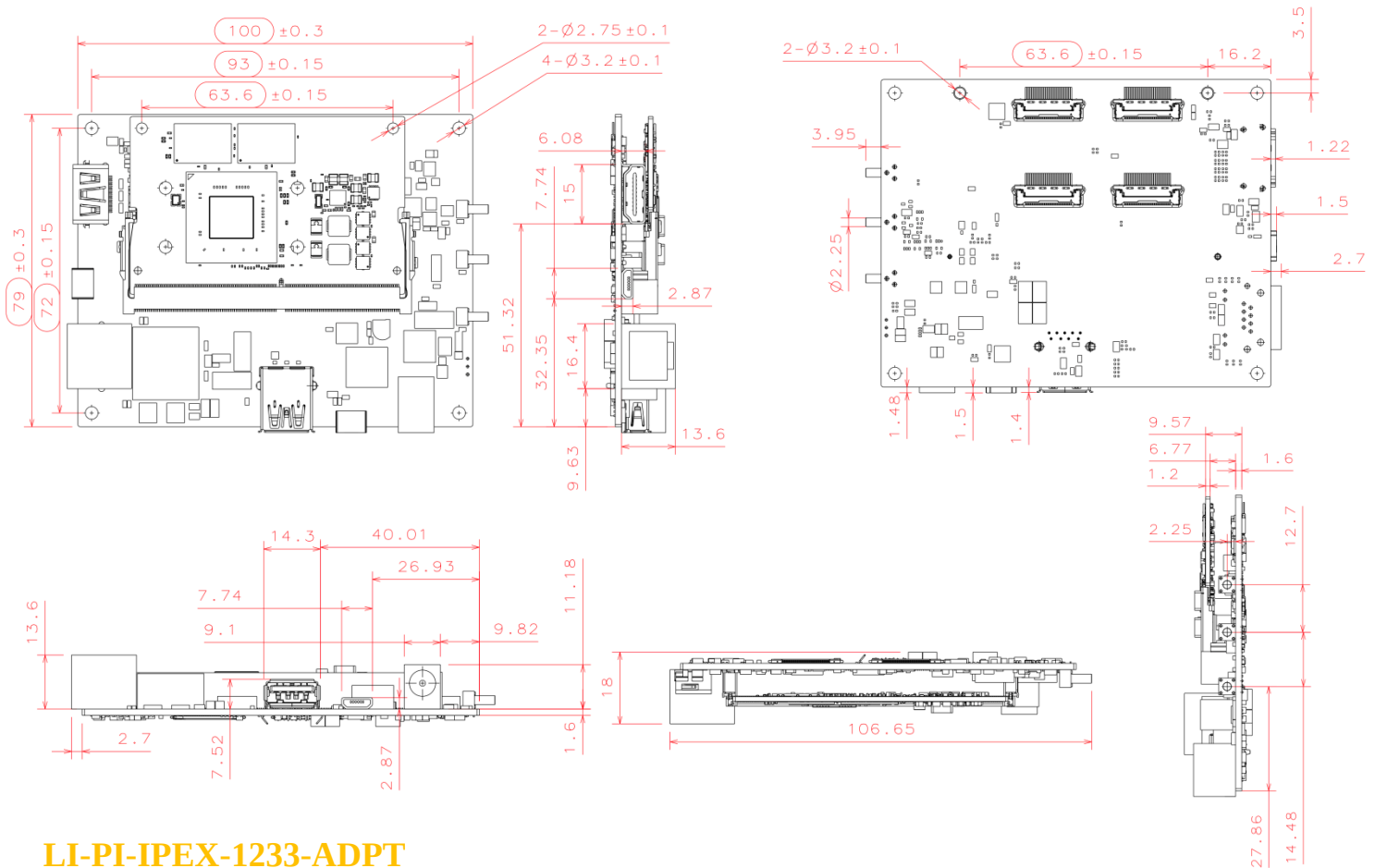


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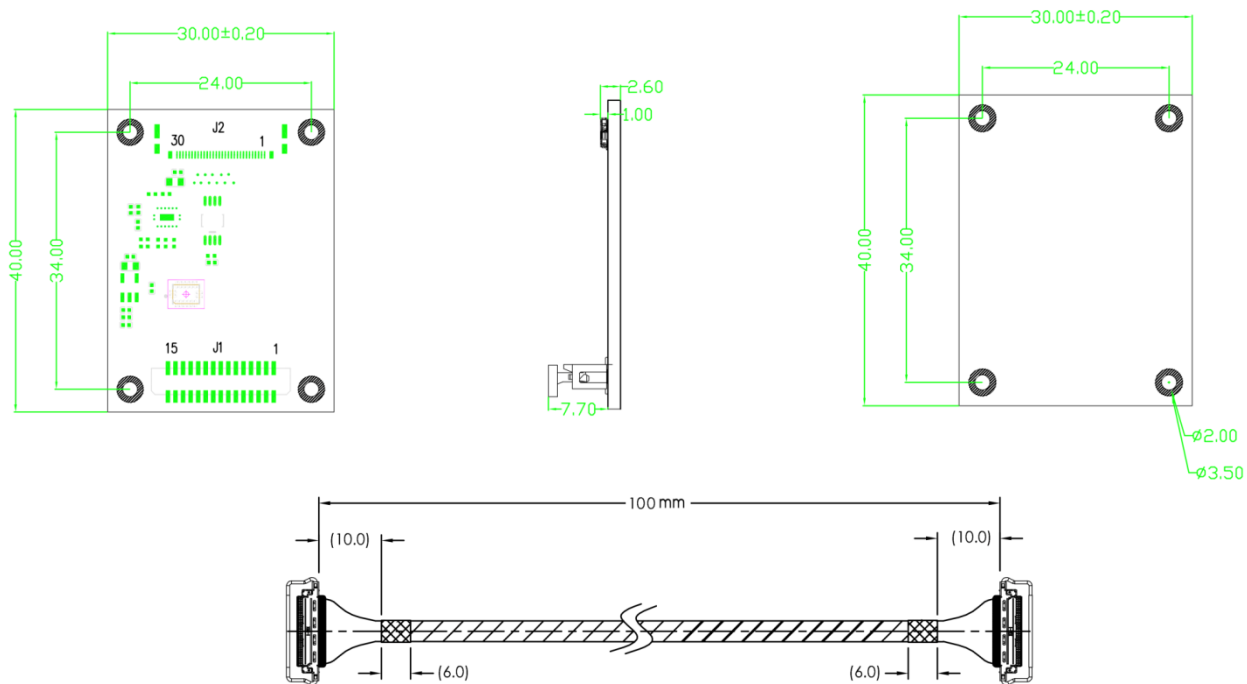
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Dimensions

LI-NANO-CB / LI-NANO-CB-POE



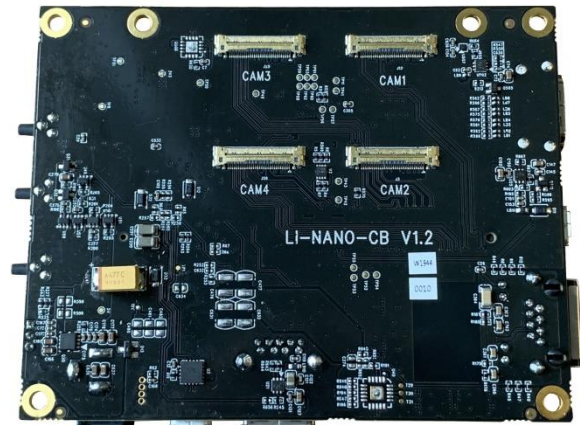
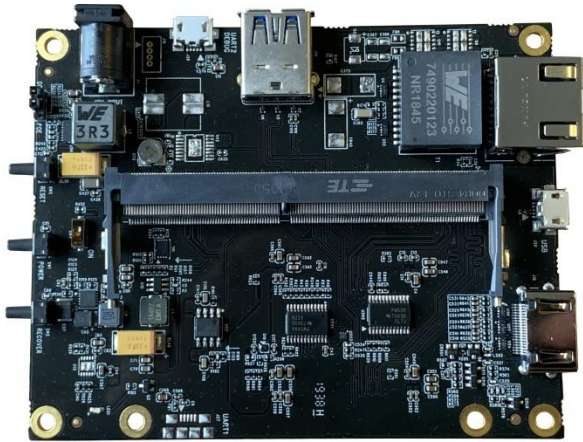
LI-PI-IPEX-1233-ADPT



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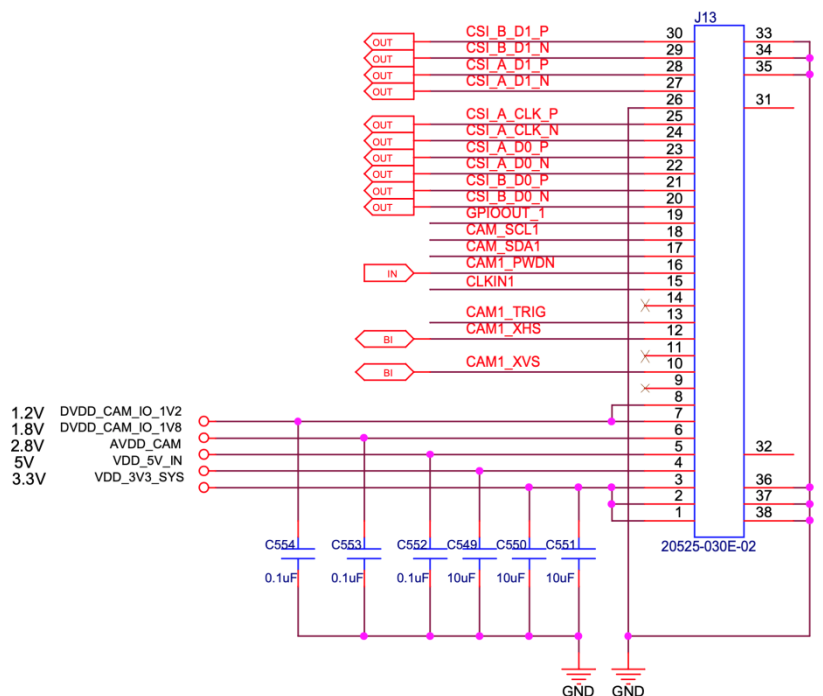
LI-NANO-CB / LI-NANO-CB-POE



Camera Interfaces

Interface J13 (CAM1)

- Part#: 20525-030E-02C
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: FAW-1233-xx

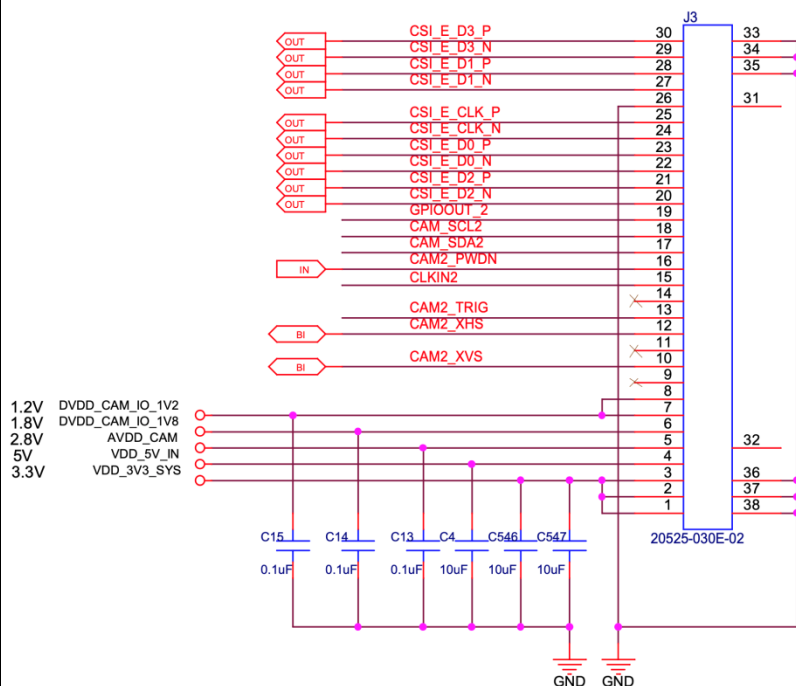


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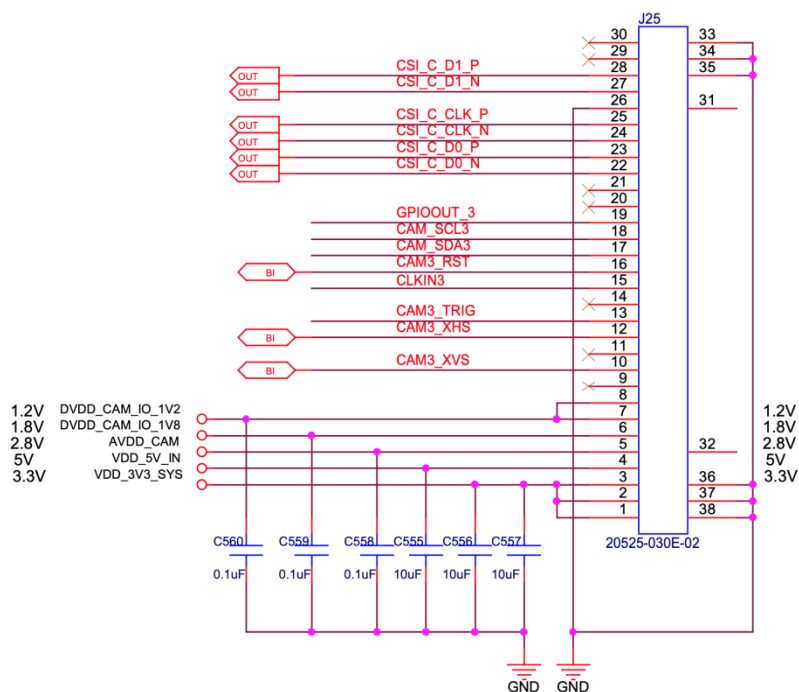
Interface J3 (CAM2)

- Part#: 20525-030E-02C
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: FAW-1233-xx



Interface J25 (CAM3)

- Part#: 20525-030E-02C
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: FAW-1233-xx

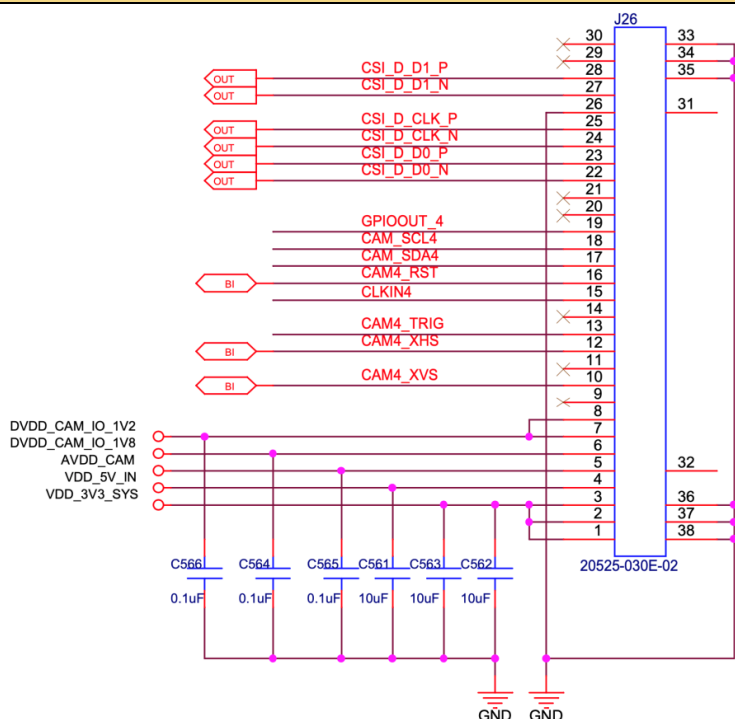


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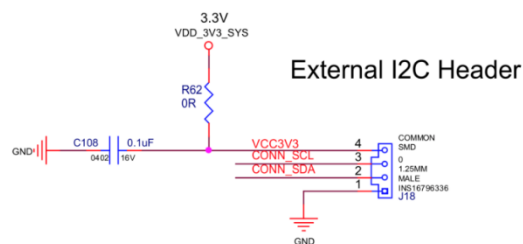
Interface J26 (CAM4)

- Part#: 20525-030E-02C
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: FAW-1233-xx



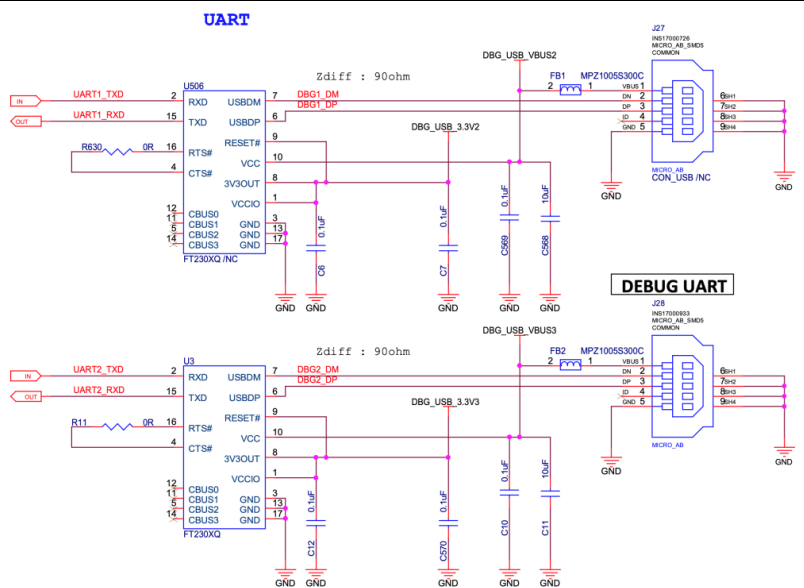
Interface J18 (I2C Header)

- Number of Positions: 4
- Pitch: 1.25 mm



J27, J28 (UART)

- USB 2.0 micro-B interface
- Note: R27 is not populated.



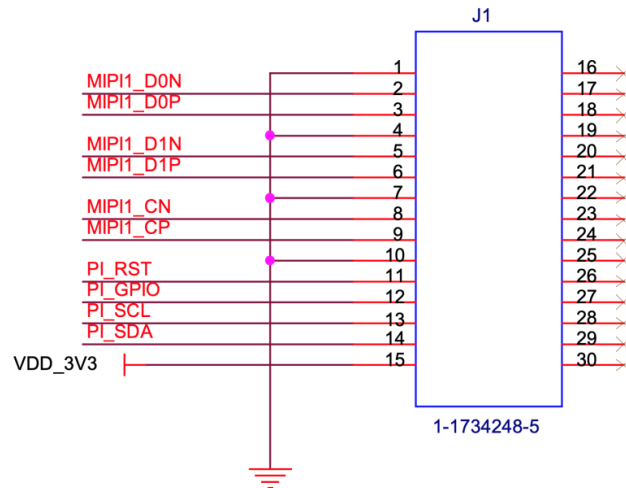
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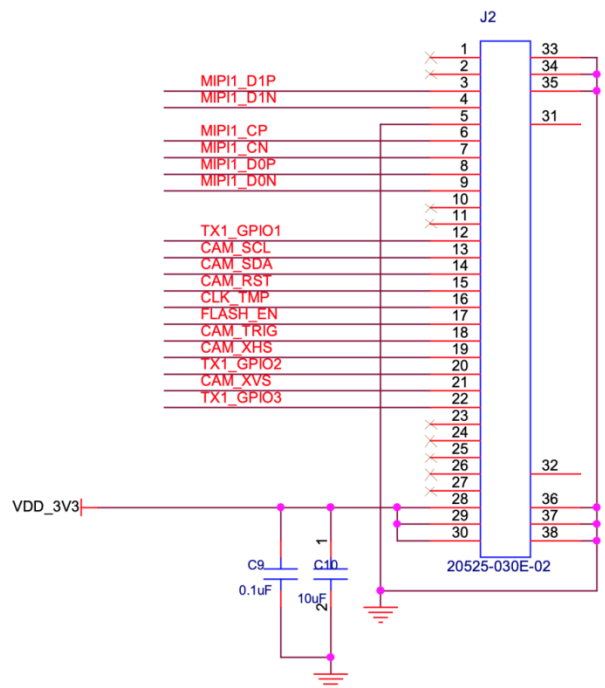
Interface J1 (To Camera Module)

- Part#: 1-1734248-5
- Number of Positions: 15
- Pitch: 1 mm
- FFC, FCB Thickness: 0.30 mm



Interface J2 (To FAW-1233 Cable)

- Part#: 20525-030E-02C
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: FAW-1233-xx



RoHS

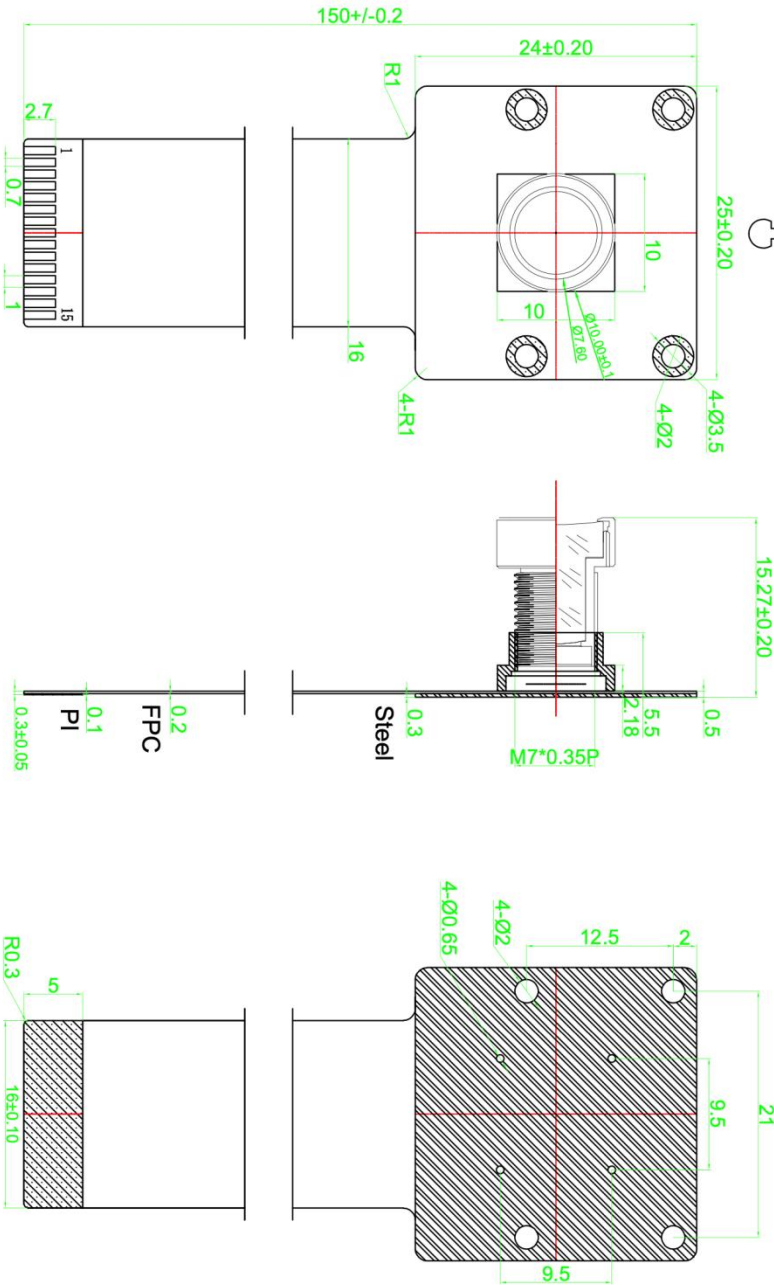
LI-IMX219-MIPI-FF-NANO-H90

QR-RD-F002 Rev-A



advert:
basic tolerance: $\pm 0.1\text{mm}$
label have ""is emphasis dimension

Optical Lens Specification:
Focusing Range 30cm to Infinity
Focal Length 2.3mm
F Number 2.6
Fov(H) 90°
TV Distortion <10%



TOP VIEW

SIDE VIEW

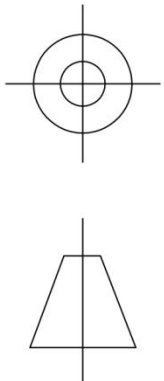
BOTTOM VIEW

Note: # Image direction register use default settings.
Output format: RGB output

NO	变更资料	版本	时间	制作: Brown	时间: 2019-03-20	项目名称: LI-IMX219-MIPI-FF-NANO-H90 V1.2	补强: 10F1	版本: 1.2
	Original	V1.0	2019-02-28	制作: Brown	时间: 2019-03-20		比例: 1:1	单位: MM
	Change the FPC from 2 layers to 4layers	V1.1	2019-03-09	检查: Brown	时间: 2019-03-20			
	Change Lens and Holder	V1.2	2019-03-21	批准: Andy	时间: 2019-03-20			



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NO.	ITEM	QTY	DESCRIPTION
1	Steel	1	
2	FPC	1	
3	TAKING LENS	1	IMX219
4	Sensor	1	
5		1	
6	Test connector	1	1-1734248-5

NO.	SYMBOL
1	GND
2	MDN0
3	MDP0
4	GND
5	MDN1
6	MDP1
7	GND
8	MCN
9	MCP
10	GND
11	RESET
12	FSTROBE
13	SCL
14	SDA
15	VCC3.3V



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RoHS

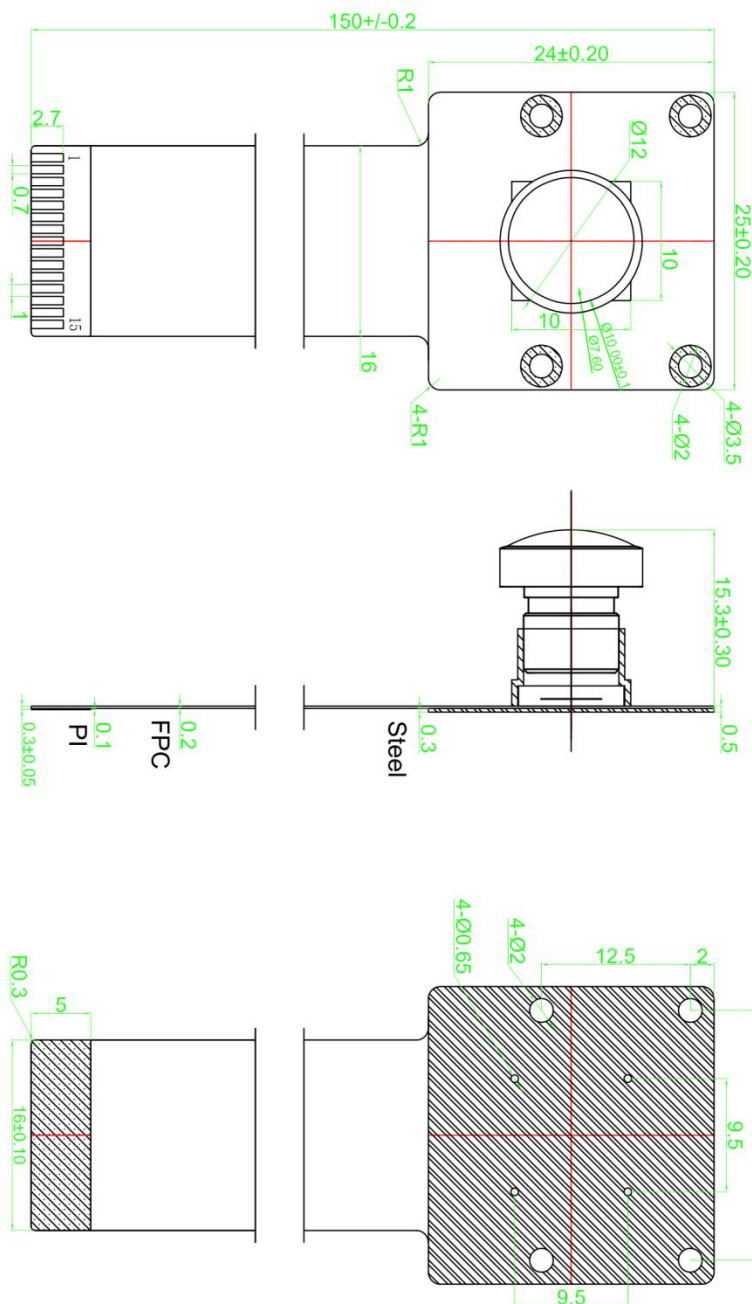
LI-IMX219-MIPI-FF-NANO-H136

QR-RD-F002 Rev-A



advert:
basic tolerance: $\pm 0.1\text{mm}$
label have "" is emphasis dimension

Optical Lens Specification:
Focusing Range 30cm to Infinity
Focal Length 1.56mm
F Number 2.0
Fov(H) 136°
TV Distortion $\leq 15\%$

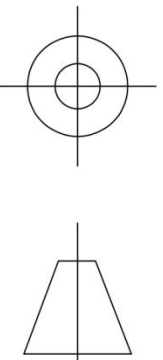


TOP VIEW

SIDE VIEW

BOTTOM VIEW

Note: # Image direction register use default settings.
Output format: RGB output

NO	变更资料	版本	时间	Leopard Imaging Inc.			补强:	10F1	版本:	1.2
	Original	V1.0	2019-02-28				比例:	1:1	单位:	MM
	Change the FPC from 2 layers to 4layers	V1.1	2019-03-09							
	Change FOV and TTL	V1.2	2019-03-21							
	Change FPC and Holder	V1.3	2019-10-17							
				制作:	Brown	时间:	2019-08-02	项目名称:		
				核查:	Brown	时间:	2019-10-17	LI-IMX219-MIPI-FF-NANO-H136		
				批准:	Andy	时间:	2019-10-17			

NO.	SYMBOL
1	GND
2	MDNO
3	MDPO
4	GND
5	MDN1
6	MDP1
7	GND
8	MCN
9	MCP
10	GND
11	RESET
12	FSTR0BE
13	SCL
14	SDA
15	VCC3.3V

NO.	ITEM	QTY	DESCRIPTION
1	Steel	1	
2	FPC	1	
3	TAKING LENS	1	
4	Sensor	1	IMX219
5		1	
6	Test connector	1	1-1734248-5



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Revision History

Revision	Description	Release Date
1.0	First release.	03. Feb. 2020
1.1	Deleted info quoted from sensor spec.	25. May. 2022



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