



Pixart Product List

Optical Mouse Sensor

Gaming Mouse							
Part No.	Package Type	Operating Voltage	Run Current	Tracking Speed	Acceleration	Resolution	Integrated Infrared LED
		(V)	(mA)	(ips)	(g)	(dpi)	
PMW3389DM-T3QU	16-PDIP	1.8-2.1	≈21	400	50	16,000	Yes
PMW3360DM-T2QU	16-PDIP	1.8-2.1	23.4	>250	50	12,000	Yes
PAW3335DB-TZDU	8-PDIP	1.8-2.1	1.7	400	40	16,000	No
PMW3330DM-TZQU	16-PDIP	1.8-2.1	7.6	>150	30	7,200	Yes
PAW3327DB-TWQU	8-PDIP	3.0-3.6	14	220	30	6,200	Yes
PMW3325DB-TWV1	8-PDIP	1.8-2.1	6.7	100	20	5,000	No
PMW3325DB-TWMU	8-PDIP	1.8-2.1	5	100	20	5,000	No
PAW3309DH-TKSL	20-iDIP	4.25-5.5	30	150	30	6400	Yes

Wireless Mouse							
Part No.	Package Type	Operating Voltage	Run Current	Tracking Speed	Acceleration	Resolution	Frame Rate
		(V)	(mA)	(ips)	(g)	(dpi)	(fps)
PAW3702DL-TXNT	14-DIP	2.1-3.6	<4	30	10	2,000	2,400
PMW3610DM-SUDU	16-DIP	1.7-2.1	0.6	30	10	3,200	Self-adjusting
PAW3222LU-TJDU	8 Ball SMD	1.7-1.9 (VDD, VDDA Short) / 2.1-3.6 (VDD)	0.3	30	10	4,000	4,000
PAW3220LU-TJDU	8 Ball SMD	1.7-1.9 (VDD, VDDA Short) / 2.1-3.6 (VDD)	<1	30	10	1,800	4,000
PAW3212DB-TJDT	8-DIP	1.7-1.9 (VDD, VDDA Short) / 2.1-3.6 (VDD)	1	30	10	2,400	4,000

Wired Mouse							
Part No.	Package Type	Operating Voltage	Run Current	Tracking Speed	Acceleration	Resolution	Interface
		(V)	(mA)	(ips)	(g)	(dpi)	



PAW3552DB-VJXT	8-DIP	4.25-5.25	10	30	8	2,000	USB (Low speed) or PS2
PAW3519DL-TKST	14-DIP	4.25-5.25	10	48	10	4,200	USB1.1 (Full speed)
PAW3104DB-TXDT	8-DIP	2.1-3.6	0.38	45	15	4000	3-wire SPI

TOG (Track-On-Glass)							
Part No.	Package Type	Operating Voltage	Run Current	Tracking Speed	Acceleration	Resolution	Integrated Infrared LED
		(V)	(mA)	(ips)	(g)	(cpi)	
PAW3805EK-CJV1	12-LGA	1.7-1.9 (VDD, VDDA Short) / 2.1-3.6 (VDD)	2.5	40 on non-glass; 20 on glass	10 on non-glass; 5 on glass	3,000	Infrared LED (850nm wavelength)
PAW3805EK-CJV2	12-LGA	1.7-1.9 (VDD, VDDA Short) / 2.1-3.3 (VDD)	2.5	40 on non-glass; 20 on glass	10 on non-glass; 5 on glass	3,000	Blue LED (470nm wavelength)

Optical Finger Navigation

Optical Finger Navigation Products							
Part No.	Type	Package Type & Size	Supply Voltage	Operation Current	Sleep1 Current	Interface	Tracking Speed
		(mm)	(V)	(mA)	(μ A)		(ips)
PAW-A350	Module	8.2*8.2*4.3	VDD: 1.7~2.1; VDDIO: 1.65~3.6	Typ. 2.9	Typ. 350	I2C, 4-wire SPI	Up to 20
PAW3003QS-THQT	IC	QFN 28-pin; 6.0*6.0*1.45	VDDM: 2.5~3.6; VDDIO: 1.62~3.6	Typ. 2.5	Typ. 420	I2C, 4-wire SPI	Up to 30
PAW3007EH-THQT	IC	LGA 18-pin, 4.2*4.2*0.91	VDDM: 2.5~3.6; VDDIO: 1.62~3.6	Typ. 6	Typ. 420	I2C, 4-wire SPI	Up to 30
PAW3021J1 (Automotive Grade)	Module	8.2*8.2*3.8	VDDM: 3.0~3.6; VDDIO: 1.62~VDDM	Typ. 4.0	Typ. 2.0	I2C, 4-wire SPI	Up to 24

Optical Track Sensor

High Accuracy							
Part No.	Supply Voltage	Repeated Accuracy Error at Nominal Height	Communication	Resolution	Tracking Speed	Working Distance to Tracking Surface	Tracking Surfaces
	(V)			(cpi)	(ips)		



PAT9102DM-T4QU	VDD: 3.0~3.6	±0.0375mm for over 25mm	4-wire SPI	17,904	Typ. 20	2.4mm ± 0.3mm	Paper, semi-glossy paper, diffuse and aluminum surface
PMJ9100S1	VDD: 3.0~3.6	±0.015mm for over 25mm	4-wire SPI	17,904	Up to 15	9.00mm ± 0.15mm	Paper, diffuse surface

High Speed

Part No.	Supply Voltage	Repeated Accuracy Error at Nominal Height	Communication	Resolution	Tracking Speed	Working Distance to Tracking Surface	Tracking Surfaces
	(V)			(dpi)	(ips)		
PAT9130EW-TKMT	VDD: 2.1~3.3; VDD: 1.7~1.9	±0.5mm for over 25mm	3-wire SPI	Up to 6700	Glossy surface: ~90; White paper: 35	Glossy surface: 5~60mm; White paper: 20~40mm	Glossy, semi-glossy and diffuse surface
PMT9101DM-T2QU	VDD: 1.8~2.1	±0.25mm over 25mm	4-wire SPI	Up to 8200 (100dpi/step)	typ. 150	2.4mm ± 0.3mm	Diffuse, semi-glossy and glossy surface

Commercial Use

Part No.	Supply Voltage	Power Consumption	Repeated Accuracy Error at Nominal Height	Communication	Resolution	Tracking Speed	Package Size	Tracking Surfaces
	(V)	(mA)			(dpi)	(ips)	(mm)	
PAT9126JA-TKIT	VDD: 2.1~3.3; VDD: 1.7~1.9	Typ. 0.7 with VCSEL	~10% @ stainless steel	I2C	Flat surface: up to 1275; φ1.0mm shaft (rev/count): 630	10 (0.5~3mm); 30 (>3~30mm)	3.50*3.20*0.65	Glossy surface
PAT9125EL-TKIT / TKMT	VDD: 2.1~3.3; VDD: 1.7~1.9	Typ. 0.7 with VCSEL	~10% @ stainless steel	3-wire SPI / I2C	Flat surface: up to 1275; φ1.0mm shaft (rev/count): 630	10 (1~3mm); 30 (>3~30mm)	3.50*3.20*1.0	Glossy surface
PMT9123QS-TVIT	VDD: 1.7~2.0	Typ. 0.5 with LED	~10%	I2C	Up to 2000 (dpi/step from 80, 100, 200)	Up to 25	6.0*6.0*3.6	Diffuse, aluminum surface with surface roughness of Ra 1.6, 5, 10

Surface Tracking

Part No.	Supply Voltage	Repeated Accuracy Error at Nominal	Communication	Tracking Speed	Package Size	Working Distance to Tracking Surface	Tracking Surfaces
	(V)			(ips)	(mm)		



PAA5102E1-M	VDD: 2.7~3.6	~5%	3-wire SPI	Up to 45	4.6*4.4*1.0	40~60mm	Carpet, granite, tiles, wooden floors, highly glossy floors with dry surfaces
PAA5101EW-M	VDD: 2.7~3.6	~5%	3-wire SPI	Up to 45	4.6*4.4*1.0	40~60mm	Carpet, granite, tiles, wooden floors, highly glossy floors with dry surfaces
PAA5100JE-Q	VDD: 1.8~2.1	3% to 10% (3% on carpet & 6% on laminated wood)	4-wire SPI	Up to 45	6.0*6.0*2.8	15~35mm (extendable range)	Carpet, granite, tiles, wooden floors with dry or wet surfaces

Object Motion Sensing

Single-Axis Distance Sensor							
Part No.	View Angle	Sensing Distance	Report Rate	Interface	Distance Resolution	Surrounding Feature Detetion	Direction of Light Plane Axis
			(Hz)				
PAC7088J1	100°	400mm, with 10% tolerance	60	I2C/SPI	320P/100°	Cliff/Step/Overhang/ Ground Object	Vertical or Horizontal
PAC7088J2	100°	200mm, with 10% tolerance	60	I2C	320P/100°	Cliff/Step/Overhang	Vertical

Multi-Object Tracking Products							
Part No.	Working Distance	Package Size	Sensor Array	Field of View	Objects	Coordinate Resolution	Pixel Size
	(m)	(mm)	(pixel)				(µm)
PAJ7025R2	7	12.2 * 4.0 * 9.85	98 * 98	52.2 degrees	16	4095*4095	11 * 11
PAJ7025R3	3	11.15 * 5.36 * 10.85	98 * 98	140 degrees	16	4095*4095	11 * 11

Gesture Recognition Products							
Part No.	Type	Function	Package Size	Report Rate	Max. Distance	Supported Gestures	Thickness Tolerance of Cover
			(mm)	(Hz)	(cm)	(No. of Types)	(mm)
PAG7645LT + PAG7660QN (Automotive Grade)	Sensor + ISP SoC	Multi-Object Gesture	Sensor: CSP; ISP SoC: QFN 6x6	90	40	Over 20	1.8 (ref. design)



PAC7640LT + PAG7661QN	Sensor + ISP SoC	Multi-Object Gesture	Sensor: CSP; ISP SoC: QFN 6x6	60	40	Over 20	1.8 (ref. design)
PAJ7635U2 (Automotive Grade)	Module	Gesture/PS/LED	9.7*4.7*2.75 cubic (reflowable)	360	30	10	1.8
PAG7631J2	Module	Gesture/PS/LED	9.7*4.7*2.75 cubic (reflowable)	360	30	10	1.8
PAC7640LT	Sensor Only	Global Shutter Image Sensor	3.45*3.45*0.76 (CSP)	400*400: 120fps	-	-	-
PAJ7620U2	Module	Gesture/PS/LED	5.2*3*1.88 Cubic (reflowable)	240	20	9	0.7

Optical Motion Tracking Products

Part No.	Package Type	Package Size	Power Consumption	Working Range	Low Light Performance	View Angle
		(mm)	@run mode	(mm)	(lux)	
PAW3903E1-TXQT	28-pin QFN	6*6*3.08	6mA	80 up to infinity	>9	42 degrees
PAW3902JF-TXQT	14-pin QFN	5*5*3.08	6mA	80 up to infinity	>9	42 degrees
PMW3901MB-TXQT	28-pin QFN	6*6*3.08	6mA	80 up to infinity	>60	42 degrees
PAA3905E1-Q	12-pin LGA	4*5*3	3.5mA	80 up to infinity	>5	42 degrees

Ambient Light & Proximity Sensing Products

Part No.	Function	Package Size	IR LED built-in	Proximity Detection Distance	Operation Power	Sleep Mode Power	More Information
		(mm)		(mm)	(µA)	(µA)	
PAC7673EE	ALS/PS/LED	3.94*2.36*1.35	Yes	200 (90% white card)	90	<0.5	Not recommended for new design. Please contact PixArt for details.
PAC7672OM	ALS/PS	1.59*2.1*1.0 OPLGA	No	Depend on LED add-on	82	<0.5	Not recommended for new design. Please contact PixArt for details.

CMOS Image Sensor



CMOS Image Sensor Products							
Part No.	Optical Format	Pixel Size	Resolution	Max. Frame Rate	Output Format	Interface	Package
		(μm)	(pixel)				
PS5520LT-AA	1/2.5"	2.2*2.2	2592*1944	2592*1944(HDR) @30fps	RAW10, HDR-RAW14, HDR-LTM-RAW12	MIPI	CSP-39
PS5510LT	1/2.5"	2.25*2.25	2592*1944	5MP: 30fps	RAW10	MIPI	CSP-52
PS5280LT	1/2"	4.0*4.0	1920*1080	1080p@60fps; 1080p(HDR)@30fps	RAW12, HDR-CRAW12	DVP(Parallel), MIPI	CSP-54
PS5270LT	1/2.4"	3.4*3.4	1536*1536	1536*1536@30fps; 1536*1536(HDR) @25fps	RAW10, HDR-RAW14	DVP(Parallel), MIPI	CSP-60
PS5268LT	1/2.7"	3.0*3.0	1920*1080	1080p@60fps; 1080p(HDR)@30fps	RAW10, HDR-RAW14, HDR-LTM-RAW12	DVP(Parallel), MIPI	CSP-47
PS5260LT-AA	1/2.7"	3.0*3.0	1920*1080	1080p@60fps; 1080p(HDR)@30fps	RAW10, HDR-CRAW12, HDR-RAW14	DVP(Parallel), MIPI	CSP-48
PS5258LT	1/2.9"	2.8*2.8	1920*1080	1080p@30fps	10-bit Linear RAW RGB	DVP(Parallel), MIPI	CSP-41
PS5250LT-AA	1/2.7"	3.0*3.0	1920*1080	1080p@30fps	RAW10	DVP(Parallel), MIPI	CSP-54
PS5262LT	1/2.7"	3.0*3.0	1920*1080	1928x1088 Linear@60fps; 1928x1088 HDR@30fps; 1928x1088 DOL@30fps	14-bit Linear HDR-RAW RGB (12-bit/10-bit Companded HDR-RAW RGB); 10-bit Linear DOL-RAW RGB; 10-bit Linear RAW RGB	DVP(Parallel), MIPI	CSP-50

CMOS SoC Sensor Products							
Part No.	Optical Format	Size	Resolution	Max. Frame Rate	Output Format	Interface	Package
		(pixel)	(pixel)				
PC7385LV	1/4"	5.6*5.6	640*480	NTSC/PAL: 60/50fps; VGA@60fps	NTSC/PAL	N/A	TSV-58
PAC7365PJ-AA	1/4"	5.6*5.6	640*480	VGA: 60fps; CVBS: 30fps	NTSC/PAL	CVBS	PLCC-48



PAS6376LT	1/5"	4.2*4.2	640*480	VGA: 60fps	RAW10, YUV422, RGB565/555/444	DVP (Parallel)	CSP-35
PAS6329LT	1/7"	3.2*3.2	640*480	VGA: 30fps	RAW10, YUV422, RGB565/555/444	DVP (Parallel)	CSP-22

Health Management & Thermal Sensing

PPG Sensors for Health Management							
Part No.	Application	Package Size	Typical Current	No. of LED Drivers	PPG Wavelength Supported	Built-in LED for PPG	IR Touch Sensing Function
		(mm)	@PPG Mode, 20Hz				
PAH8133HU-IN	Hearables	3.3 x 3.3 x 0.68	160µA	3	Red , IR	No	Yes, by IR light
PAH8132HU-IN	Wearables	3.3 x 3.3 x 0.68	200µA	3	Green	No	Yes, by IR light
PAH8131HU-IN (PAH8136HU-IN)	Wearables	3.3 x 3.3 x 0.68	85µA	4	Green, Red, IR	No	Yes, by IR light
PAH8112ET-IT	Portable	3.6 x 6.36 x 1.0	60µA	3	Green, Red, IR	Yes	Yes, Built-in IR LED
PAH8011ET-IP	Wearable	3.6 x 6.36 x 1.0	65µA	3	Green	Yes	Yes, Built-in IR LED
PAH8011ES-IN	Wearable	4.0 x 4.0 x 1.0	100µA	3	Green	No	Yes, requires External IR LED

Far Infrared Sensor Products							
Part No.	Application Type	Package Type & Size	Interface	Operating Current	Object Temperature Sensing Range	Object Temperature Sensing Accuracy	Operating Temperature
		(mm)					
PAM9611CE	Single point	CLCC 16-pin; 6x6x1.75	I2C	160µA@3.3V	-20 to 150°C	±0.5°C @ To: 10 to 45°C/Ta: 10 to 45°C	-20 to 85°C
PAF9701C1	64-pixel array	CLCC 32-pins; 8x8x3.85	I2C	2.5mA@3.3V	-20 to 380°C	±1°C @ To: 30 to 40°C (Ta: 15 to 40°C)	-20 to 85 °C

RF Connectivity

2.4GHz Proprietary with Mouse Sensor							
Part No.	CPU Type	Memory	Tracking Speed	RX Sensitivity	TX Output Power	Operating Voltage	Package
			(ips)	(dBm)	(dBm)	(V)	
PAW3712EG-TXNU	8051 Microprocessor	OTP 16kB	34	-91	+4/0	0.9~3.6	LGA-36; 6mm*6.5mm



PAW3702DL-TXNT	8051 Microprocessor	OTP 16kB	30	-91	+4/0	2.1~3.6	iDIP-14
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2.4GHz Proprietary						
Part No.	CPU Type	Memory	RX Sensitivity	TX Output Power	Operating Voltage	Package
			(dBm)	(dBm)	(V)	
PAR2460QM-TN	8051 Microprocessor	OTP 16kB	-92	+4/0	1.9~3.6	QFN-48; 7mm*7mm
PAR2402QK-RBZZ	8051 Microprocessor	OTP 16kB / MTP 64B	-91	+4/0	4~5.25	QFN-32; 5mm*5mm

Bluetooth Low Energy							
Part No.	Wireless Protocol	CPU Type	Memory	System Clock	Peripherals	Operating Voltage	Package
				(MHz)		(V)	
PAR2801QN-GHVC	Bluetooth Low Energy 5.0	ARM Cortex-M0	Flash: 128kB / SRAM: 80kB	32	UART, SPI Master, I2C Master, PWM, AES, RNG, ADC, Quad. Decoder	Buck: 1.9~3.6 / Boost: 0.9~1.65	QFN-48; 6mm*6mm

Global Shutter Image Sensor

Ultra-Low-Power Module							
Part No.	Package Dimension	Lens FOV	Resolution	Shutter Type	Max. Frame Rate	Avg. Operating Power Consumption	Interface
	(μ m)		(Array Size)				
PAJ6100U6	4100*3900*210 0	90 degrees	QVGA (320x240)	Global Shutter	30fps	1,400 μ W@30fps QGA; 500 μ W@30fps QQVGA	Pixel Data: Parallel 8-bit; Register Control: 4-wire SPI

Ultra-Low-Power Sensor							
Part No.	Package Type	Package Dimension	Resolution	Shutter Type	Max. Frame Rate	Avg. Operating Power Consumption	Interface
		(μ m)	(Array Size)				
PAG7920LT	CSP	2240*2740*748	QVGA (320 x 240)	Global Shutter	180fps	0.79mW@15fps; 0.288mW@5fps; 0.072mW@1fps	Pixel Data: Parallel & SPI; Register Control: I2C



Ultra-Low-Power Sensor							
Part No.	Package Type	Package Dimension	Resolution	Shutter Type	Max. Frame Rate	Avg. Operating Power Consumption	Interface
		(μm)					
PAG7930LT	CSP	5.1*5.0*0.75	1280*800	Global Shutter	120fps	110mW@120fps; 70mW@60fps	Pixel Data: MIPI & Parallel; Register Control: I2C

Touch

Ultra-Low-Power Sensor							
Part No.	Package Type	Package Dimension	Resolution	Shutter Type	Max. Frame Rate	Avg. Operating Power Consumption	Interface
		(μm)					
PAG7930LT	CSP	5.1*5.0*0.75	1280*800	Global Shutter	120fps	110mW@120fps; 70mW@60fps	Pixel Data: MIPI & Parallel; Register Control: I2C

Low-Power Intelligent Object Detection

Low-Power Intelligent Object Detection								
Part No.	Type	Function	Package Size	Report Rate	Control Interface	Image Output	Power Consumption under Human Sensing Mode	Power Consumption under Human Detection Mode
			(mm)	(Hz)			(Typ.)	(Typ.)
PAG7681LS	ISP SoC	Motion detection, human/face detection	WLCSP: 4.58*4.58	15	I2C, SPI	Parallel 8-bit, JPEG	<1mW/fps	<6mW/fp