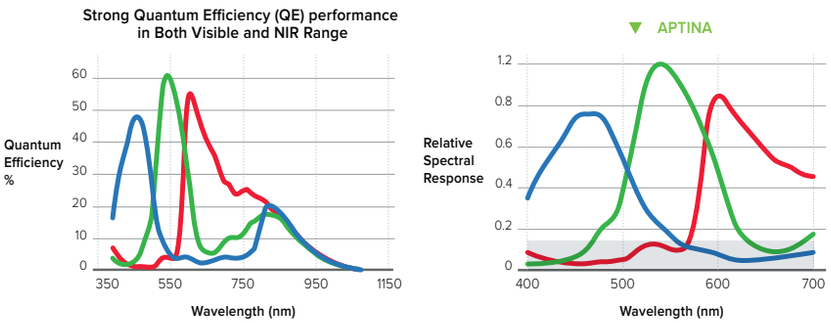
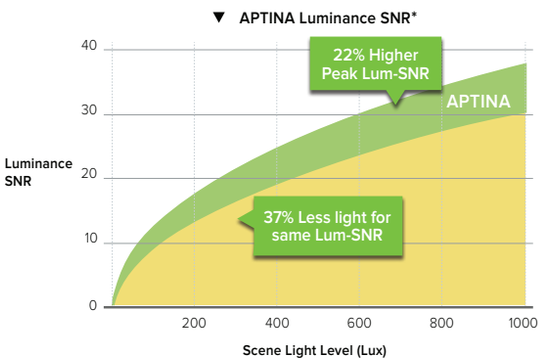
Aptina Medical Imaging Solutions

Aptina pixels provide a spectral response which produces higher color fidelity through lower cross talk.

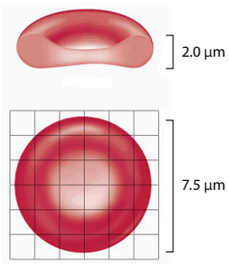


With the increased quantum efficiency, reduced average cross talk, and a large improvement to spatial noise Aptina Sensor performance has 22% higher peak luminance SNR and achieves the same luminance SNR with 37% less light



*Conditions: 18% grey target, 670 nm IRCF, 6500K, 0.9 lens trans, 15fps, f/2.8, 100 saturation

Aptina Pixel Size ranges from 1.1µm to 6.6µm allowing for extremely small size pixels in high resolution



MEDICAL IMAGING

Aptina's portfolio of CMOS medical imaging solutions combined with unparalleled customer service enable medical device manufacturers to develop advanced tools for the market's challenging growth areas, such as Point of Care (POC) devices, DNA sequencing, endoscopy, etc.

Aptina's advantages in extreme low light sensitivity, small package size, low power consumption and high speed sensing allow our OEMs to lower costs while increasing accuracy and performance.

Advances in DNA sequencing technologies during the past two decades have driven breathtaking break throughs in our understanding of biology and biomedicine. From human disease, to microbial ecology, to evolution, Aptina is excited to contribute powerful imaging tools to scientists and researchers bringing medical diagnostics to market.

Low Light Sensitivity | Low Power Consumption | High Noise Immunity | High Speed Sensing | Image Brightness and Clarity | Small Pixel Size

PRODUCT	MT9M114	MT9V115	MT9V124	AS0260	MT9V024/34	AR0140CS	AR0130
Sensor/SOC	SOC	SOC	SOC	SOC	Sensor	Sensor	Sensor
Resolution	1.2 MP	VGA	VGA	2.1 MP	VGA	1.2 MP	1.2 MP
Optical Format	1/6"	1/13"	1/13"	1/6"	1/3"	1/4"	1/3"
Frame Rate*	1.2 MP 30 fps, VGA 75 fps	30 fps	30 fps	30 fps	8 MP (4:3) 60 fps	1.2 MP 45 fps, 720p60	1.2 MP 45 fps, 720p60
Pixel Size	1.9 µm	1.75 µm	1.75 µm	1.4 µm	1.4 µm	3.0 µm	3.75 µm
Pixel Technology	–	–	–	A-Pix™ technology	A-PixHS™ technology	DR-Pix™ technology	DR-Pix™ technology
Shutter Type[2]	ERS	ERS	ERS	ERS	GS	ERS	ERS
CFA	Color	Color	Color	Color	Color and Mono	Color	Color and Mono
CRA (Degree)	27.7	24	24	28	11.4	0	0
Dynamic Range	70.8 dB	58 dB	58 dB	65 dB	100 dB iHDR	96 dB 2 exposure	83.5 dB Linear
Signal-to-Noise	37 dB	33.4 dB	33.4 dB	33 dB	36 dB	41 dB	44 dB
Responsivity	2.24 V/lux-sec	1.65 V/lux-sec	1.65 V/lux-sec	0.64 V/lux-sec	4.8 V/lux-sec	6.5 V/lux-sec	4.0 V/lux-sec
Input Clock	6 - 54 MHz	18 - 44 MHz	18 - 44 MHz	6-54 MHz	6 - 27 MHz	6-50 MHz	6-50 MHz
Output Clock	96 MHz	22 MHz	N/A	96 MHz	336 MP/s	74.25 MHz (parallel), 148.5 MP/s (HiSPi™)	74.25 MHz (parallel), 148.5 MP/s (HiSPi™)
Interface	1-lane MIPI, 8-bit parallel	8-bit parallel	12-bit LVDS	2-lane MIPI, 12-bit parallel	10-bit LVDS	4-lane HiSPI, 12-bit parallel	4-lane HiSPI, 12-bit parallel
Operating Temp.	–30°C to +70°C	–30°C to +70°C	–30°C to +70°C	–30°C to +70°C	–30°C to +70°C	–30°C to +85°C	–30°C to +85°C
Package(s)	4.65x3.85 mm^2 55-ball CSP	2.69x2.69 mm^2 25-ball CSP	2.69x2.69 mm^2 25-ball CSP	6.005 mm^2 4.158 mm^2 CSP	10x10 mm^2 48-pin CLCC	9x9 mm^2 63-ball iBGA, 10x10 mm^2 48-pin iLCC	9x9 mm^2 63-ball iBGA, 10x10 mm^2 48-pin iLCC

[2] **ERS:** Rolling Shutter **GS:** Global Shutter **GRR:** Global Reset Release

PRODUCT	AR0134	AR0331	AR0330	MT9P004	MT9P006	MT9J003
Sensor/SOC	Sensor	Sensor	Sensor	Sensor	Sensor	Sensor
Resolution	1.2 MP	3.1 MP	3.5 MP	5 MP	5 MP	10 MP
Optical Format	1/3"	1/3"	1/3"	1/3.2"	1/2.5"	1/2.3"
Frame Rate*	1.2 MP 54 fps, 720p60	1080p60	1080p60	5 MP 15 fps, 1080p30	5MP 15 fps, 720p60	10 MP 15 fps 1080p60,
Pixel Size	3.75 µm	2.2 µm	2.2 µm	1.75 µm	2.2 µm	1.67 µm
Pixel Technology	DR-Pix™ technology	A-Pix™ technology	A-Pix™ technology	A-Pix™ technology	–	–
Shutter Type	GS	ERS, GRR	ERS, GRR	ERS, GRR	ERS, GRR	ERS, GRR
CFA	Color, Mono	Color	Color	Color	Color	Color, Mono
CRA (Degree)	0.25	0	0, 12, 21	11.4, 25	7, 27	0, 13.4
Dynamic Range	64 dB	100 dB 2 exp. ALTM	69.5 dB	65.4 dB	67.74 dB	65.2 dB
Signal-to-Noise	38 dB	39 dB	39.6 dB	38 dB	38.5 dB	34 dB
Responsivity	6.1 V/lux-sec	1.9 V/lux-sec	2.0 V/lux-sec	0.85 V/lux-sec	1.8 V/lux-sec	0.31V/lux-sec
Input Clock	6-50 MHz	6-48 MHz	6-27 MHz	2-64 MHz	6-96 MHz	6-48 MHz
Output Clock	74.25 MHz (parallel), 148.5 MP/s (HiSPi™)	74.25 MHz (parallel), 148.5 MP/s (HiSPi™)	96 MP/s (parallel), 196 MP/s (HiSPi™)	96 MHz	96 MP/s	80 MP/s
Interface	12-bit parallel	4-lane HiSPi, 12-bit parallel	2-lane MIPI, 12-bit parallel	2-lane MIPI, 12-bit parallel	12-bit parallel	4-lane HiSPi, 12-bit parallel
Operating Temp.	–30°C to +70°C	–30°C to +85°C	–30°C to +70°C	–30°C to +70°C	–30°C to +70°C	–30C to +70C
Package(s)	10x10 mm^2 48-pin iLCC, 11.43x11.43 mm^2 48-pin PLCC	9.5x9.5 mm^2 iBGA, 10x10 mm^2 48-pin iLCC	11.43x11.43 mm^2 48-pin CLCC, 6.3x6.6 mm^2 CSP	6.63 mm^2 6.22 mm^2 CSP	10x10 mm^2 48-pin iLCC	10x10 mm^2 48-pin iLCC, 12x12 mm^2 48-pin PLCC

*Frame rate is at full resolution, unless otherwise noted.

Please contact **medical@aptina.com** for additional product information.

GETTING STARTED WITH APTINA

1. Register on www.aptina.com.
   a. To register, visit our site, click on the top right button that states “Register”.
   b. Submit your contact information. If you have an NDA please note this.
   c. Shortly, an Aptina representative will grant you access to Aptina website collateral.
2. If the sensor you are interested in is not on the website:
   a. Contact your local Aptina sales representative or distributor for information.
   b. Our distributors and sales representatives are listed on our main webpage under the section “How to Buy”.
3. To evaluate, purchase an Aptina “Demo Kit” or “Headboard” from your distributor.
4. Please contact **medical@aptina.com** for more information.

Demo Kit

Demo Kit Contents Include:

1. Aptina headboard
2. Demo camera board with USB 3.0 connector
3. USB 3.0 cable
4. Tripod stand and camera tripod

Headboard

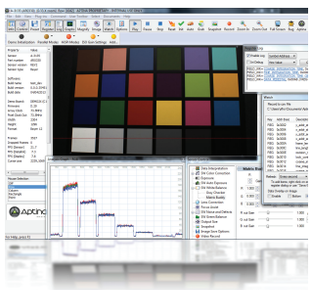
Headboard Contents Include:

1. Aptina sensor
2. Lens mount and lens

DevSuite

DevSuite includes the tools for

1. Live image tuning
2. Real-Time register access
3. Image and video capture
4. Image analysis



About Aptina

Aptina is a global provider of intelligent imaging solutions. Aptina has created unique innovations with image sensor technologies such as Aptina Clarity+™ to deliver high-quality, rich images in challenging environments. Aptina patented imaging solutions are in leading consumer electronics devices like smartphones, tablets, laptops and digital cameras, as well as industry-specific solutions for automotive, surveillance, video conferencing, scanning, medical and gaming. Learn more at www.aptina.com.

Aptina™ IMAGING

3080 North 1st Street
San Jose, CA 95134
medical@aptina.com
www.aptina.com

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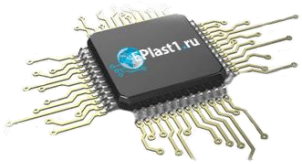
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.