Player One

PRODUCT CATALOG

2025

Player One Astronomy (Suzhou) Co., Ltd

Innovation in exploration

CONTENTS

» 01 Who we are

History of Player One

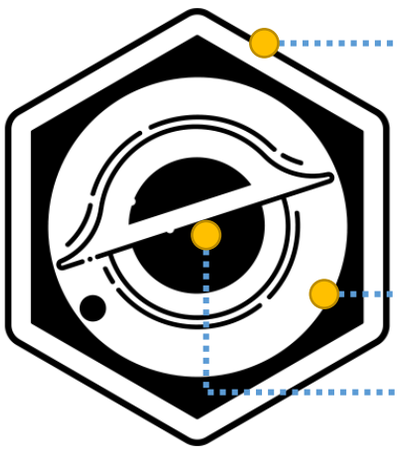
Who are we?

Player One Astronomy Co., Ltd is a high-tech enterprise specializing in R&D, production, sales, and service of astronomical cameras and supporting products. With a strong R&D team that moves forward in innovation, the company has successfully launched a series of astronomical cameras and supporting products with independent intellectual property rights, covering a wide range of needs from beginners to professionals. Our camera series are highly praised by users for their excellent image quality, stability, and ease of use. At the same time, we attach great importance to customer service, providing users with technical support in a timely manner, and find solutions quickly and accurately. We also actively participates in domestic and international astronomical exchanges and cooperation to jointly promote the progress and development of astronomical science and technology.

Looking ahead, Player One will continue to adhere to the concept of "innovation, quality, and service", constantly introduce new products, and contribute more to the development of the global astronomical field.

Why Player One?

Player One is not only the name of our company, it's also our core values. Be the top one player in astronomy market ! As a technologically innovative company, we are committed to make professional, sophisticated astronomy equipment with our cutting-edge technology.



The regular hexagon is a very technological shape, which is also the outer layer of the logo, and we also apply it to the appearance of our products.

Circle is an indispensable element in astronomical products. The lack of arc, just like the lack of wheels, the car can not move forward.

The core in our logo is a black hole and accretion disk. It is the most powerful gravitational object in the universe, so that the logo is full of power and attraction. Even if it is a static graphic, it will make people feel the curvature of space-time caused by gravitational effects.

Team structure

R&D

10 members

Marketing

5 members

PD

10 members

Camera Line

Cutting-edge Design

Scientific and technological, look luxurious and cool, highlighting the style of high-end players

Innovation

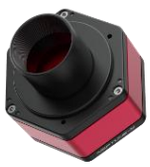
Focus on independent intellectual property rights and product innovation

High Quality

Use high quality electronic components

Various Product line

Covers all aspects of astrophotography



Planetary Camera

Mercury Series TBD

Venus Series TBD

Mars Series IMX290/462

Mars II Series IMX462/662

Jupiter Series TBD

Saturn Series IMX533

Uranus Series IMX585

Neptune Series IMX178

Neptune II Series IMX464

Neptune III Series IMX664

Solar Camera

Apollo MAX Series IMX432/428

Apollo Series IMX174

Apollo MINI Series IMX429

Guiding Camera

Xena Series IMX249

Sedna Series IMX178

Ceres Series AR0130/IMX224

Ceres II Series IMX462

AL DSO Camera

Zeus Series IMX455

Poseidon Series IMX571

Artemis Series IMX492/294

CF DSO Camera

Ares Series IMX533

Uranus Series IMX585

Apollo MAX Series IMX432/428

» 02 Cooled Cameras

For deep sky imaging

Design for deep sky imaging!

Player One cooled camera series name after gods in ancient Greek mythology.

This series using STARVIS technology BSI Sony sensors.

Innovative technology: Rear tilt plate, Deep Cooling, USB3.0 Type-C Port, BFL solutions

Model	Sensor	Format	Resolution	Pixel	Noise	QE	FW	Delta-T	ADC
Zeus 455M PRO	IMX455 mono	36×24mm (FF)	9576×6388	3.76μm	4.2-1.27e	≈91%	71.6ke	-35℃	16bit
Zeus 455C PRO	IMX455 color	36×24mm (FF)	9576×6388	3.76μm	4.2-1.27e	≈80%	71.6ke	-35℃	16bit
Poseidon-M PRO	IMX571 mono	23.5×15.7mm (APS-C)	6252×4176	3.76μm	3.9-1.0e	≈91%	71.7ke	-40℃	16bit
Poseidon-C PRO	IMX571 color	23.5×15.7mm (APS-C)	6252×4176	3.76μm	3.9-1.0e	≈80%	71.7ke	-40℃	16bit
Artemis-M PRO	IMX492 mono	19.2×13mm (4/3")	8288×5648	2.3μm	7.7-1.46e	≈90%	18.6ke	-40℃	12bit
Artemis-C PRO	IMX294 color	19.2×13mm (4/3")	4144×2824	4.63μm	7.8-1.2e	≈75%	65.8ke	-40℃	14bit
Ares-M PRO	IMX533 mono	11.31×11.31 mm (1")	3008×3008	3.76μm	4.46-1e	≈91%	73ke	-40℃	14bit
Ares-C PRO	IMX533 color	11.31×11.31 mm (1")	3008×3008	3.76μm	4.46-1e	≈80%	73ke	-40℃	14bit
Uranus-M PRO	IMX585 mono	11.2×6.3mm (1/1.2")	3856×2180	2.9μm	6.5-0.7e	≈91%	47ke	-40℃	12bit
Uranus-C PRO	IMX585 color	11.2×6.3mm (1/1.2")	3856×2180	2.9μm	6.5-0.7e	≈91%	47ke	-40℃	12bit
Apollo-M MAX PRO	IMX432 mono	14.5×9.9mm (1.1")	1608×1104	9μm	22.9~2.6e	≈79%	100ke	-40℃	12bit
Apollo 428M MAX PRO	IMX428 mono	14.5×9.9mm (1.1")	3216×2208	4.5μm	5.5~1.4e	≈79%	25.3ke	-40℃	12bit

VdB 141 The Ghost Nebula, Tony Hallas, Planewave CDK 14+Zeus 455M PRO camera

WR 134 RGB + H-a + OIII, Tony Hallas, Planewave CDK 14+Zeus 455M PRO camera

ZEUS Series FF

ZEUS 455M PRO

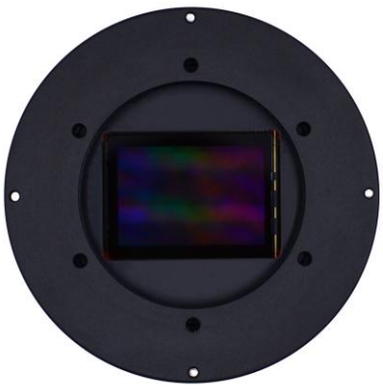
IMX455 Monochrome BSI CMOS sensor

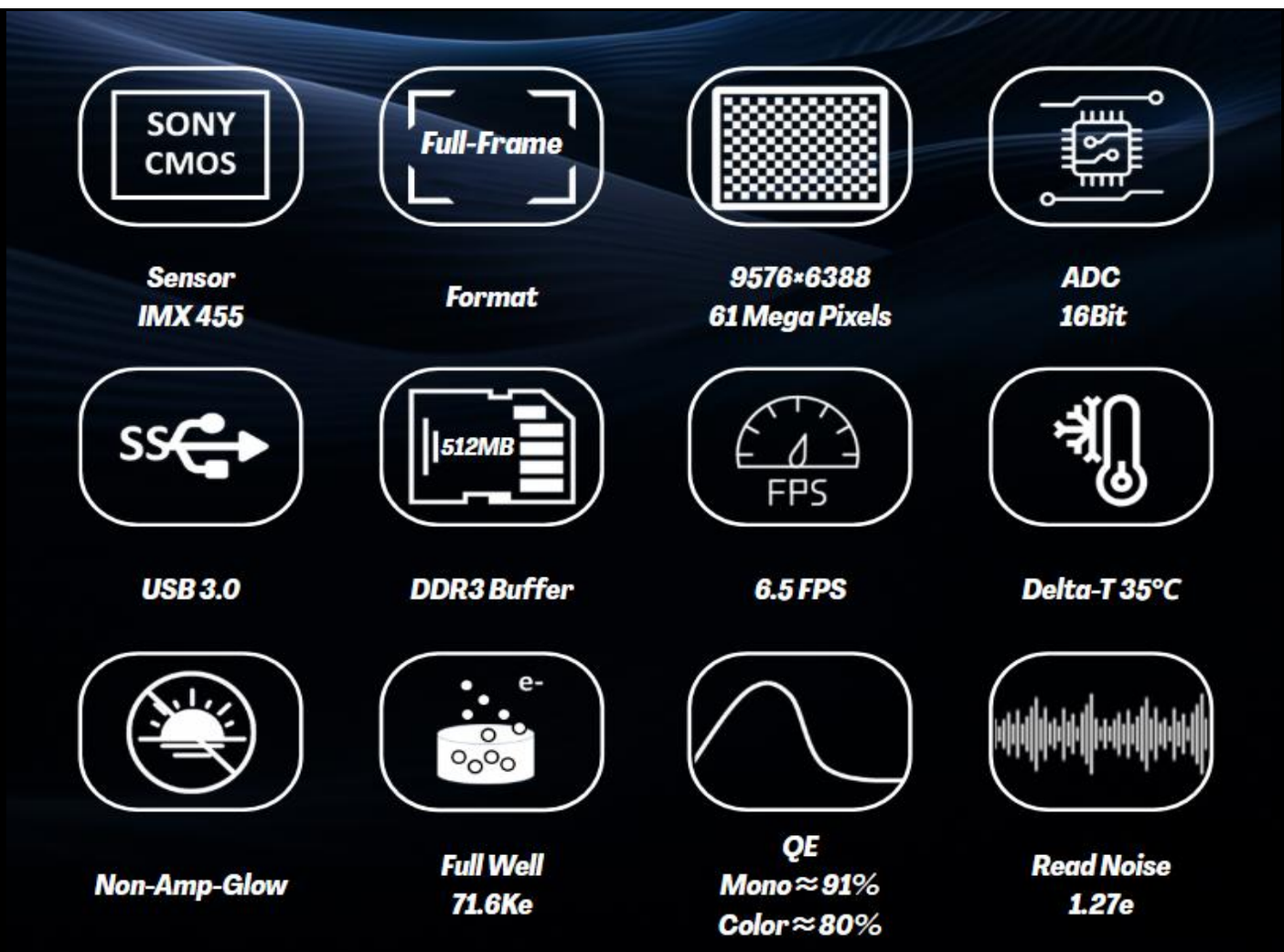
ZEUS 455C PRO

IMX455 Color BSI CMOS sensor

Ultimate dream for DSO imaging!

- ZEUS 455M/C PRO cooled camera is a non-amp-glow camera, full frame format, 16bit on-chip ADC and 1.27e ultra low noise make this camera has incredible results on wide filed APO, and long focal length telescope like large RC and Newtonian in remote observatory.
- Compatible with Phoenix Wheel 5*2"/7*2"/7*50mm, FHD-OAG MAX, Filter Drawer MAX.





APS-C **Poseidon Series**

POSEIDON-M PRO

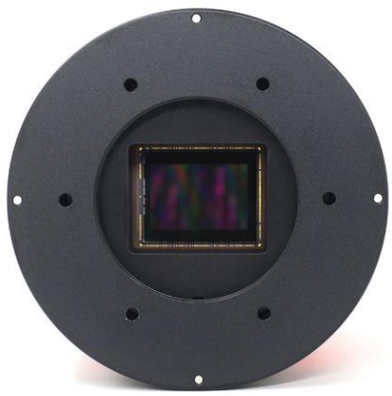
IMX571 Monochrome BSI CMOS sensor

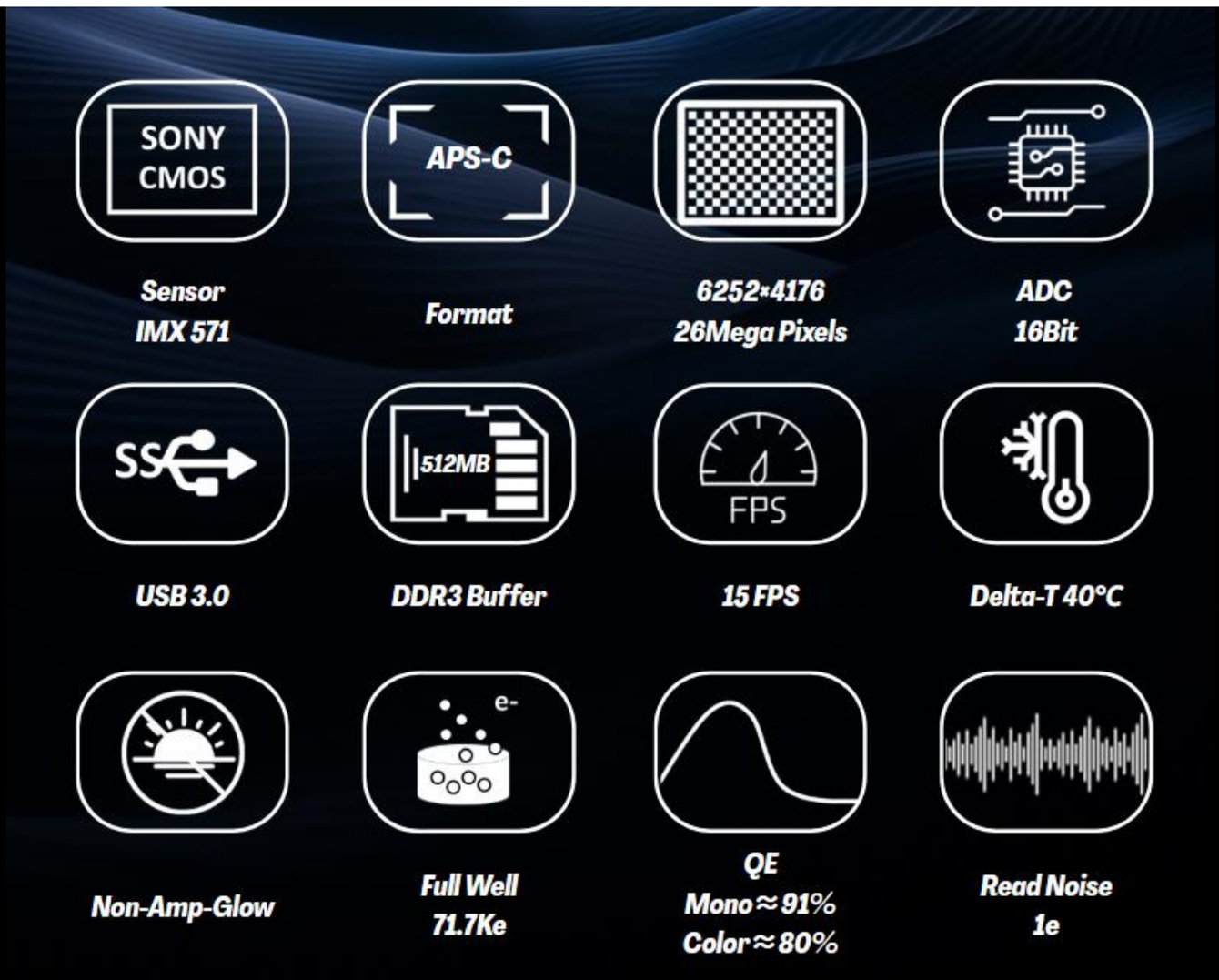
POSEIDON-C PRO

IMX571 Color BSI CMOS sensor

Master's choice for DSO imaging!

- **Poseidon-M/C PRO cooled camera is a non-amp-glow camera, APS-C format is supported by almost all photographic telescopes and flattener, 16bit on-chip ADC and 1e ultra low noise make this camera has perfect result in DSO imaging.**
- **Compatible with Phoenix Wheel 7*36mm/5*2"/7*2"/7*50mm, FHD-OAG MAX, Filter Drawer MAX.**



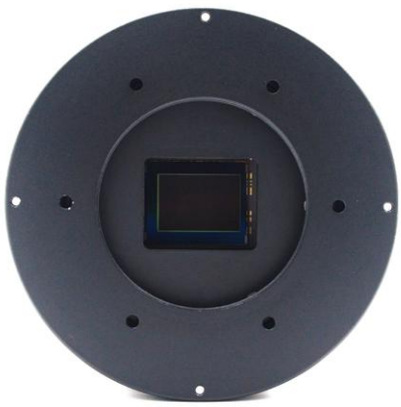


Artemis Series 4/3”

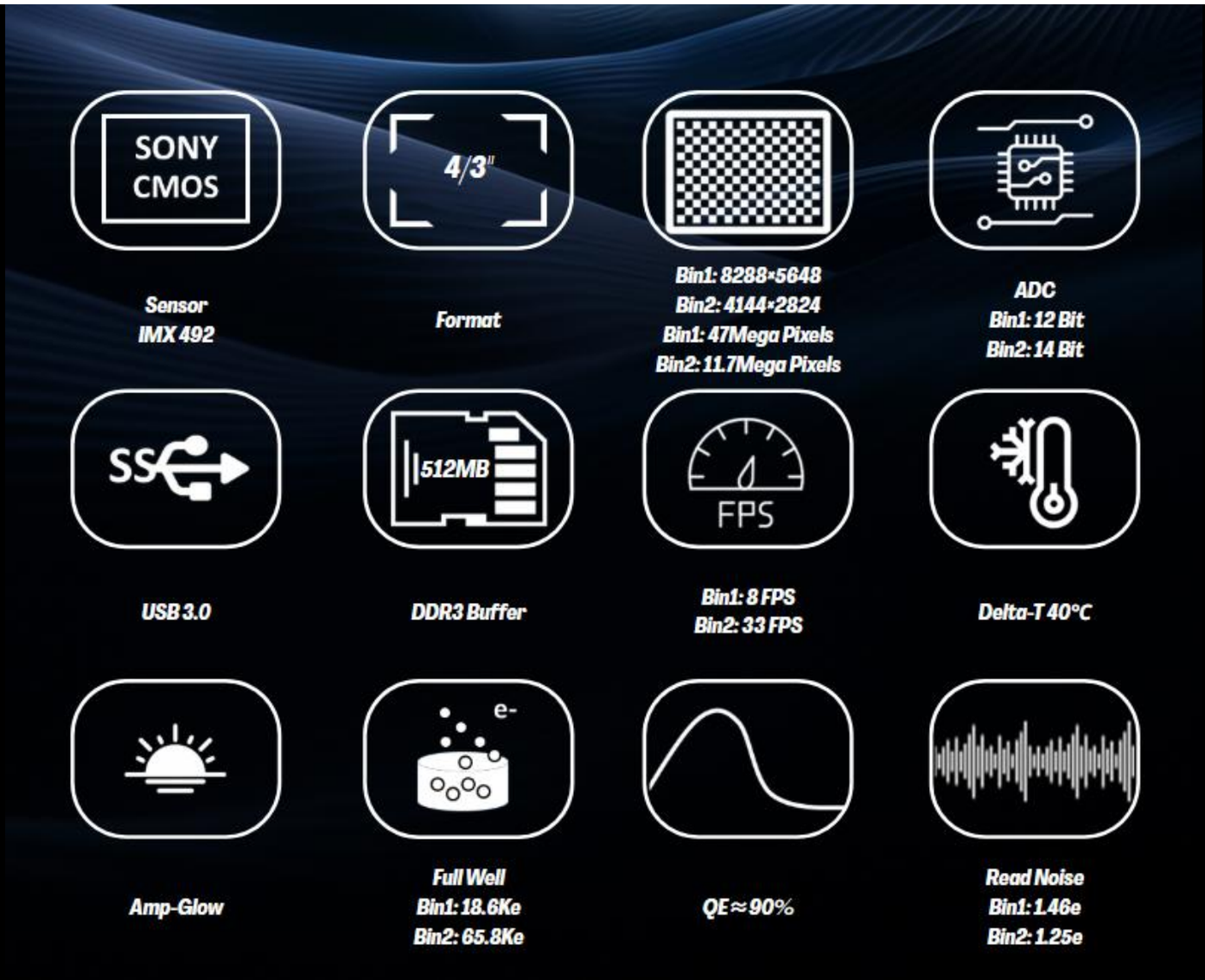
ARTEMIS-M PRO

IMX492 Monochrome BSI CMOS sensor

Enter professional level in DSO imaging!



- Artemis-M/C PRO cooled camera with 4/3” format, it is big enough for most deep sky objects, high sensitivity and low noise make this camera doing great in DSO imaging.
- Hardware BIN2 makes Artemis-M has same advantages as Artemis-C.
- Compatible with Phoenix Wheel 7*36mm/5*2"/7*2"/7*50mm, FHD-OAG MAX, Filter Drawer MAX.



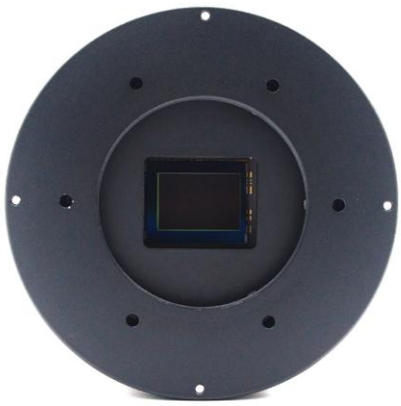
Artemis Series 4/3”

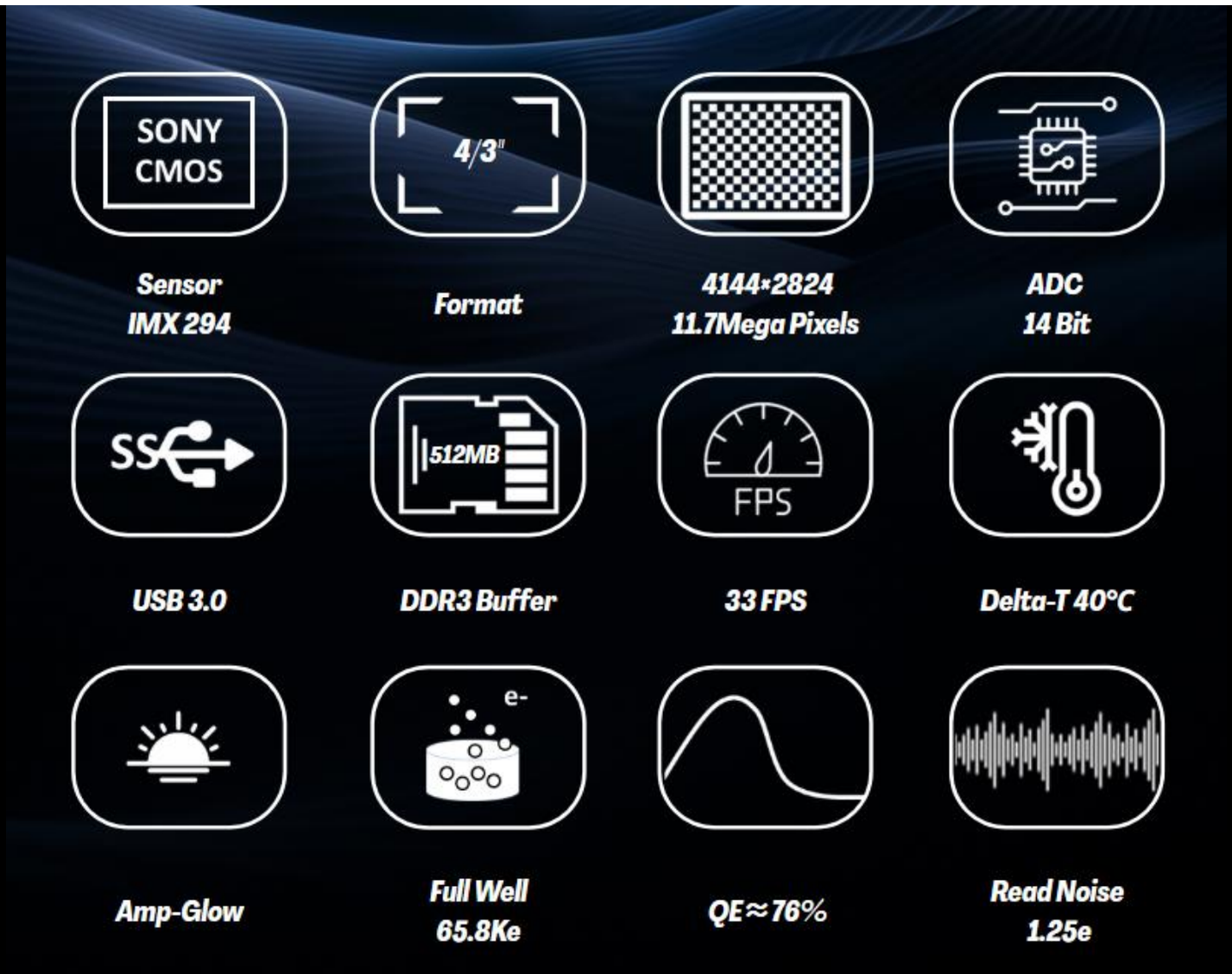
ARTEMIS-C PRO

IMX294 Color BSI CMOS sensor

Enter professional level in DSO imaging!

- Artemis-M/C PRO cooled camera with 4/3” format, it is big enough for most deep sky objects, high sensitivity and low noise make this camera doing great in DSO imaging.
- Hardware BIN2 makes Artemis-M has same advantages as Artemis-C.
- Compatible with Phoenix Wheel 7*36mm/5*2"/7*2"/7*50mm, FHD-OAG MAX, Filter Drawer MAX.





ARES-M PRO

IMX533 Monochrome BSI CMOS sensor

ARES-C PRO

IMX533 Color BSI CMOS sensor

Best entry-Level model in DSO imaging!

- Ares-M/C PRO cooled camera with 1” square non-amp-glow sensor, its high QE and low noise performance can bring beginners with very comfortable imaging experiences.
- Sensor Tilter Plate and Anti-Dew are integrated.
- Compatible with Phoenix Wheel 8*1.25”, FHD-OAG MINI, Filter Drawer MINI.

Uranus Series 1/1.2”

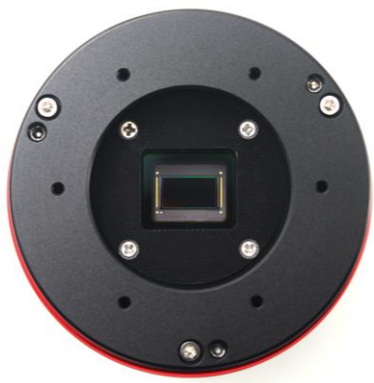
URANUS-C PRO

IMX585 Color BSI CMOS sensor

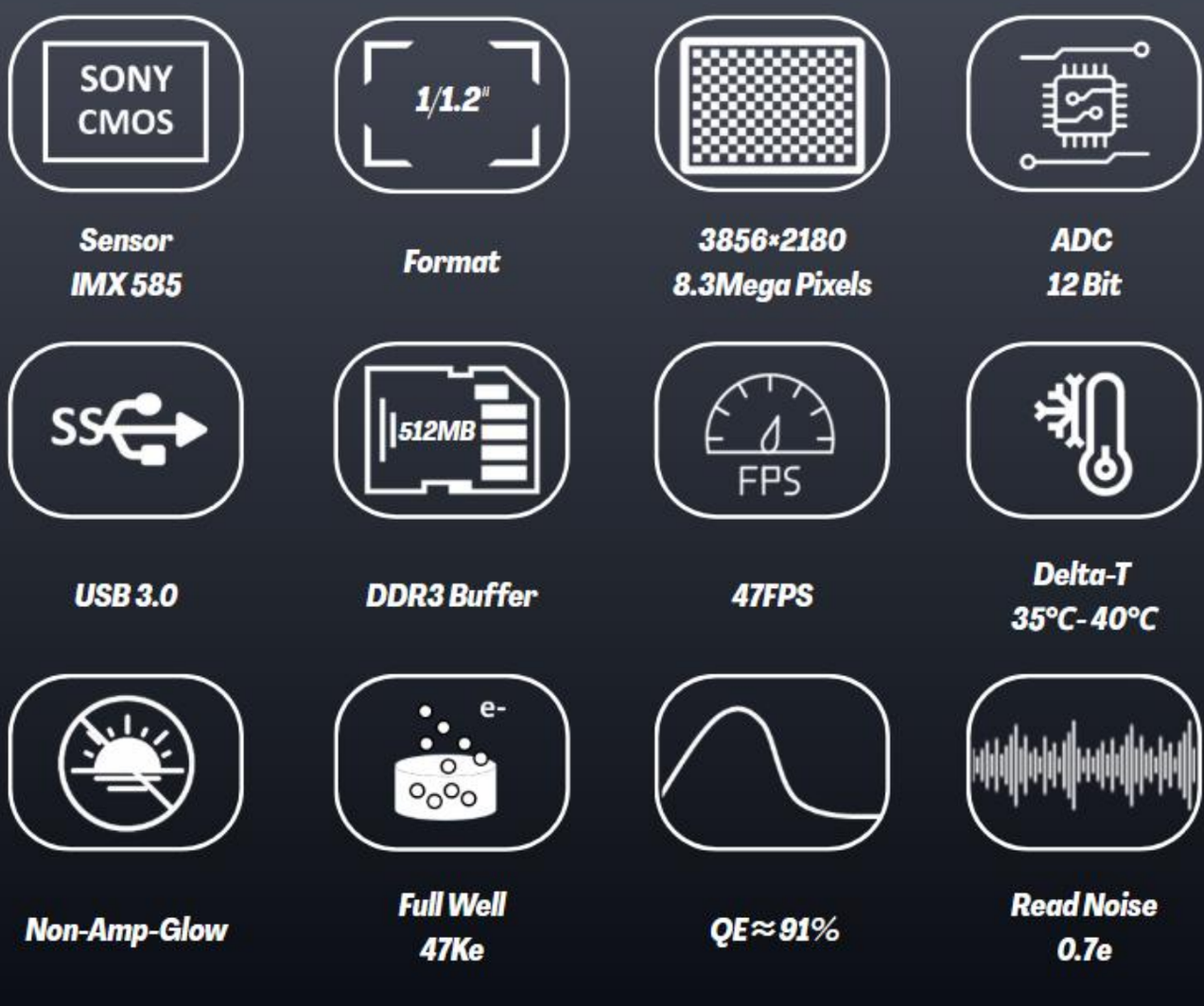
URANUS-M PRO

IMX585 Mono BSI CMOS sensor

New entry-Level model in DSO imaging!



- Uranus-M/C PRO cooled camera with 1/1.2” non-amp-glow sensor, its high QE, low noise performance and reasonable price is best for beginner who want to try DSO imaging. It also can be used for planetary imaging or special celestial events.
- Sensor Tilter Plate and Anti-Dew are integrated.
- Compatible with Phoenix Wheel 8*1.25”, FHD-OAG MINI, Filter Drawer MINI.

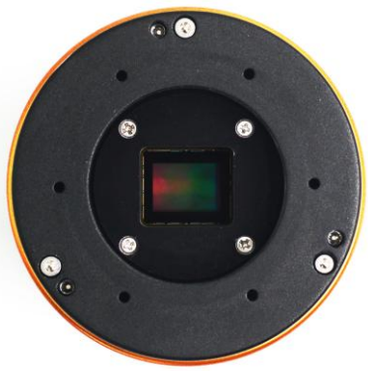


1.1" Apollo Series

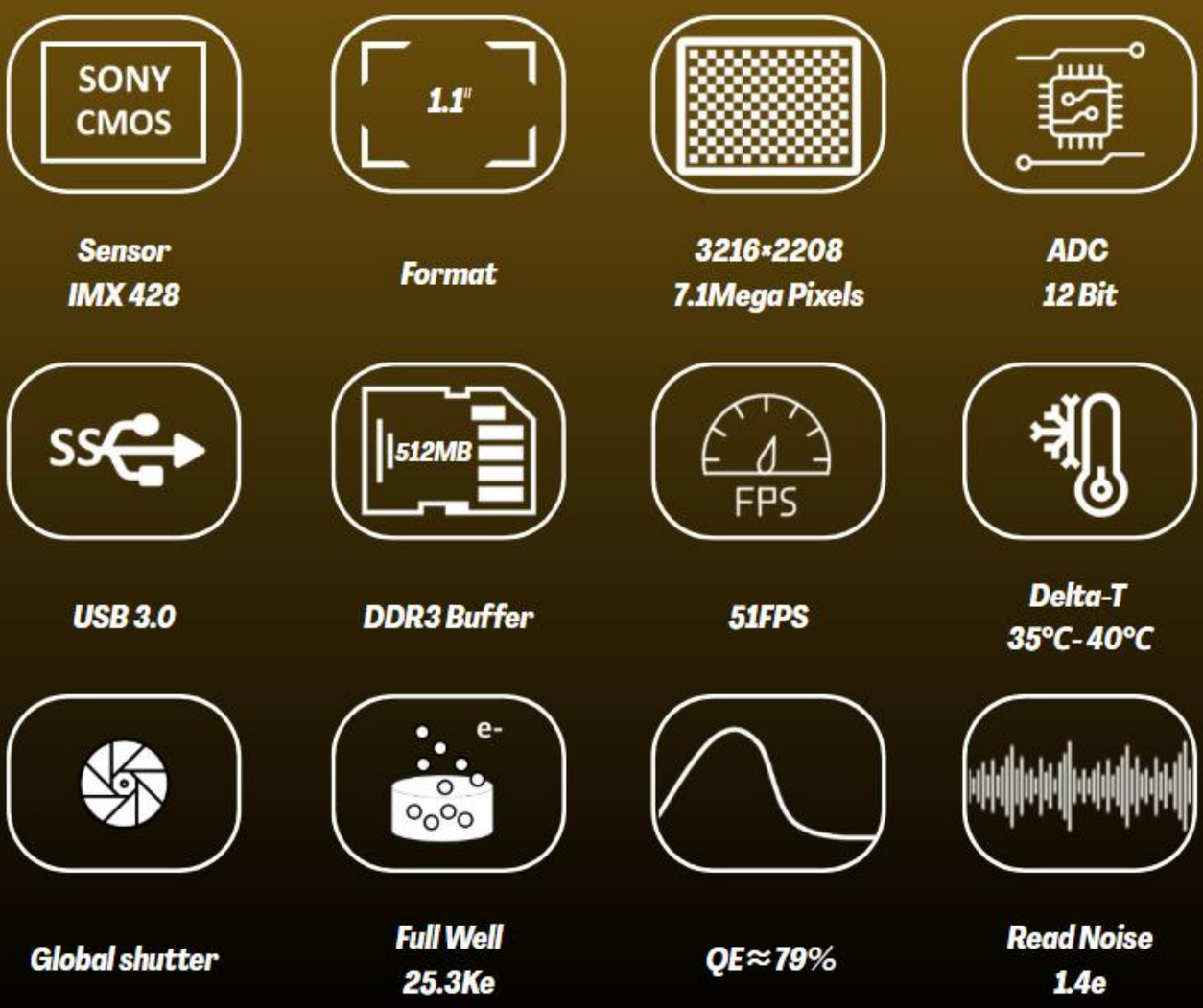
APOLLO 428M MAX PRO

IMX428 Monochrome Global shutter CMOS Sensor

Design for professional solar imaging



- Apollo 428M MAX PRO cooled camera with 1.1” non-amp-glow sensor, It is cooled version of famous Apollo 428M MAX camera. Cooled version can cooling down about 35-40 degrees, keep sensor at same temperature to make perfect calibration and noise control, it also can be used in scientific research.
- Sensor Tilter Plate and Anti-Dew are integrated.
- Compatible with Phoenix Wheel 8*1.25”, FHD-OAG MINI, Filter Drawer

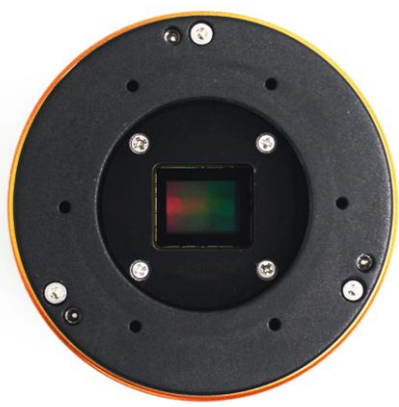


1.1" Apollo Series

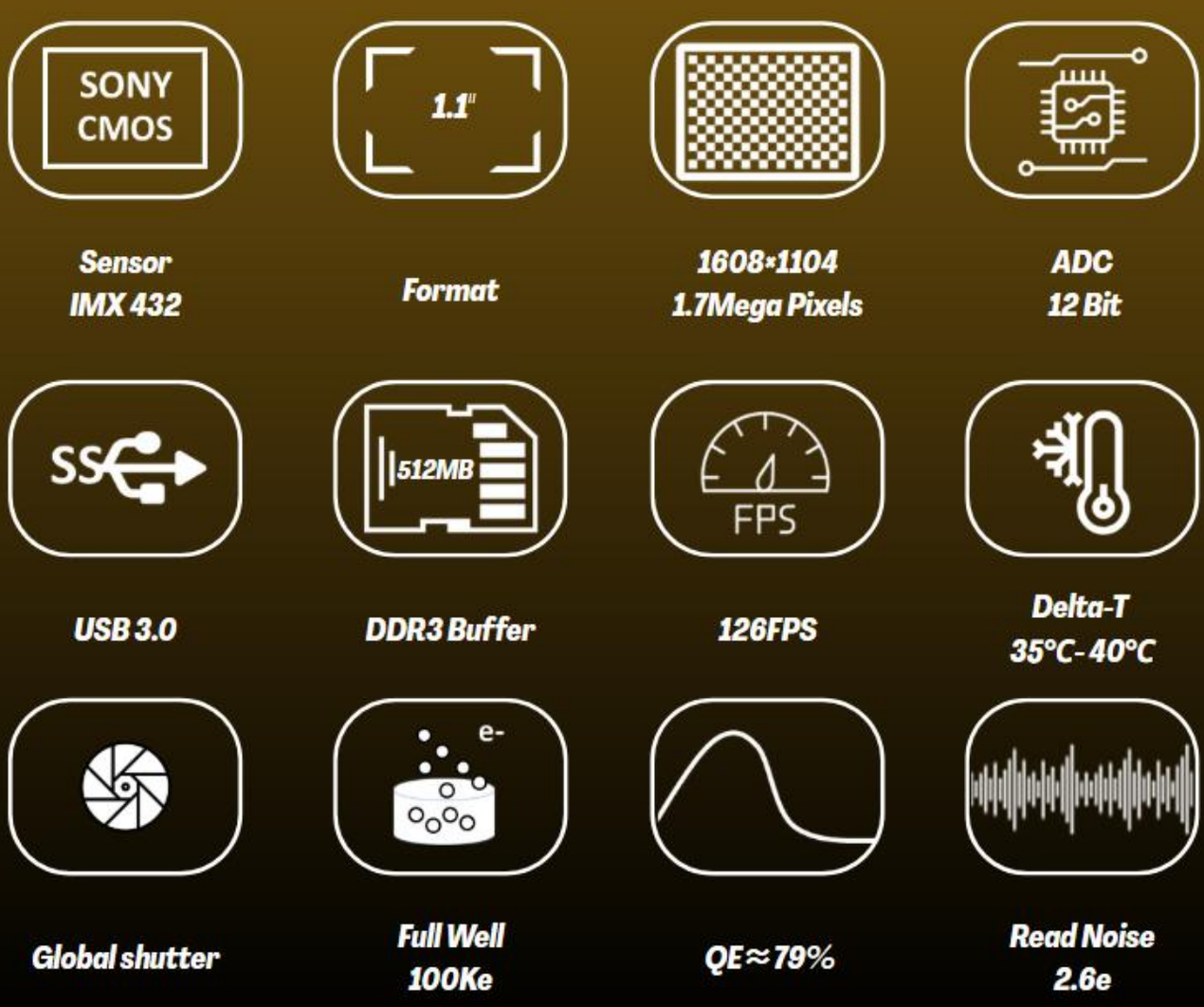
APOLLO-M MAX PRO

IMX432 Monochrome Global shutter CMOS Sensor

Design for professional solar imaging



- Apollo-M MAX PRO cooled camera with 1.1" non-amp-glow sensor, It is cooled version of famous Apollo-M MAX camera. Cooled version can cooling down about 35-40 degrees, keep sensor at same temperature to make perfect calibration and noise control, it also can be used in scientific research.
- Sensor Tilter Plate and Anti-Dew are integrated.
- Compatible with Phoenix Wheel 8*1.25", FHD-OAG MINI, Filter Drawer MINI.



» 03 Solar Cameras

For Solar imaging

Focus on Solar imaging!

Apollo series is the world's first camera line designed specifically for solar imaging, named after Apollo.

This series using monochrome and global shutter Sony sensors.

5 innovative technologies: DDR3 256MB buffer, DPS Tech, Passive Cooling, Nova Boosting, Sensor tilt plate

Model	Sensor	Format	Resolution	Pixel	Noise	QE	FW	FPS	ADC
Apollo 428M MAX	IMX428 mono	14.5×9.9mm (1.1")	3216×2208	4.5μm	5.5~1.4e	≈79%	25.3ke	51FPS	12bit
Apollo-M MAX	IMX432 mono	14.5×9.9mm (1.1")	1608×1104	9μm	22.9~2.6e	≈79%	100ke	126FPS	12bit
Apollo-M MINI	IMX429 mono	8.75×6.6mm (2/3")	1944×1472	4.5μm	5.6-1.45e	≈79%	25ke	84FPS	12bit
Apollo-M	IMX174 mono	11.3×7.1mm (1/1.2")	1936×1216	5.86μm	6.3-3.5e	≈77%	24.8ke	164FPS	12bit
Apollo-C	IMX174	11.3×7.1mm	1936×1216	5.86μm	4.46-1e	≈77%	24.8ke	164FPS	12bit

Solar Eclipse **Mehmet Ergün**, Lunt60 + Neptune-M

Chromosphere **Akihiro Yamazaki**, Takahashi TOA150 + Quark + Saturn-M SQR camera

Apollo Series

2/3”-1.1”

New flagship camera for solar imaging!

- Apollo 428M MAX camera adopts 1.1” Sony IMX428 global shutter mono sensor, The 4.5um pixel size accommodates a well depth of 25.3ke with a total of 7.1MP (the resolution is 3216×2208), and the diagonal is 17.5mm.
- Passive Cooling System is integrated.
- 135FPS in RAW8 format, based on Nova Boosting technology.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate | Nova Boosting

Most popular camera for Ha solar imaging!

- Apollo-M MAX camera adopts 1.1” Sony IMX432 global shutter mono sensor, The 9um pixel size accommodates a well depth of 100ke with a total of 1.7MP (the resolution is 1608*1104), and the diagonal is 17.5mm.
- Passive Cooling System is integrated.
- 126FPS in RAW8 format, based on Nova Boosting technology.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate | Nova Boosting

High resolution solar and space station imaging!

- Apollo-M MINI camera adopts 2/3” format Sony IMX429 global shutter monochrome sensor. The 4.5um pixel size accommodates a well depth of 24.8Ke with a total of 2.8MP (the resolution is 1944*1472), and the diagonal is 11mm.
- Passive Cooling System is integrated.
- 84FPS in RAW8 format.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate

Apollo Series

2/3”-1.1”

Classic camera for solar imaging!

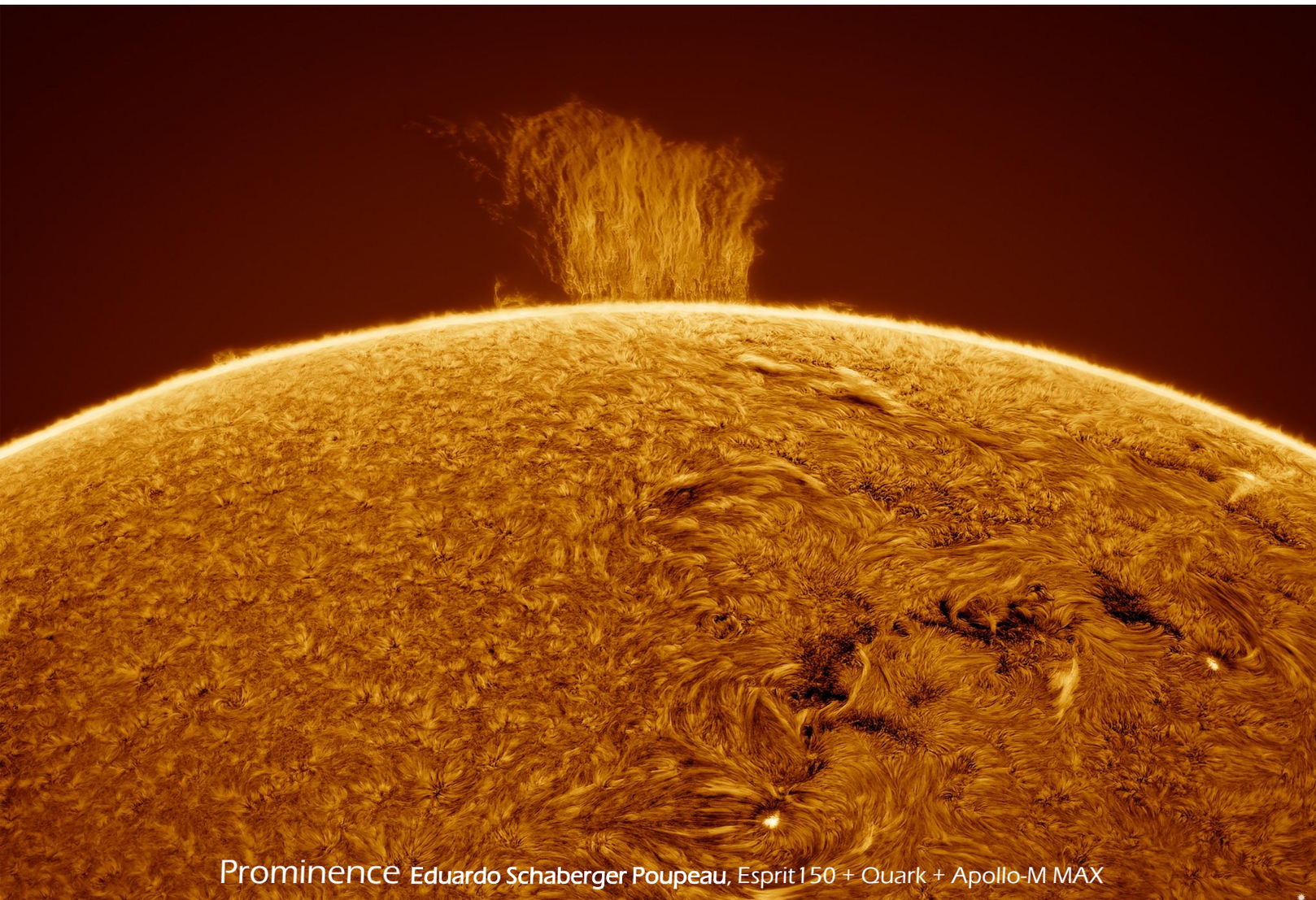
- Apollo-M camera adopts the Sony IMX174 1/1.2” format monochrome sensor. The 5.86um pixel size accommodates a well depth of 32Ke with a total of 2.3MP (the resolution is 1944*1216), and the diagonal is 13.3mm.
- Passive Cooling System is integrated.
- 164FPS in RAW8 format.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate

Color camera for special usage!

- Apollo-C camera adopts the Sony IMX174 1/1.2” format color sensor. The 5.86um pixel size accommodates a well depth of 32Ke with a total of 2.3MP (the resolution is 1944*1216), and the diagonal is 13.3mm.
- Passive Cooling System is integrated.
- 164FPS in RAW8 format.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate



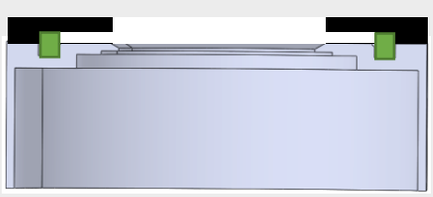
Prominence **Eduardo Schaberger Poupeau**, Esprit150 + Quark + Apollo-M MAX

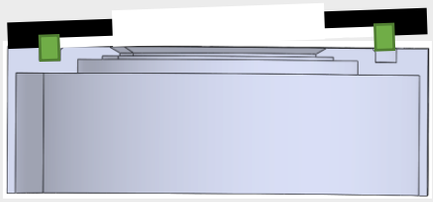
Solar and Planetary Camera Design

2nd Gen Sensor Tilt Plate

2nd Gen can provide larger tilt angle and against light leak

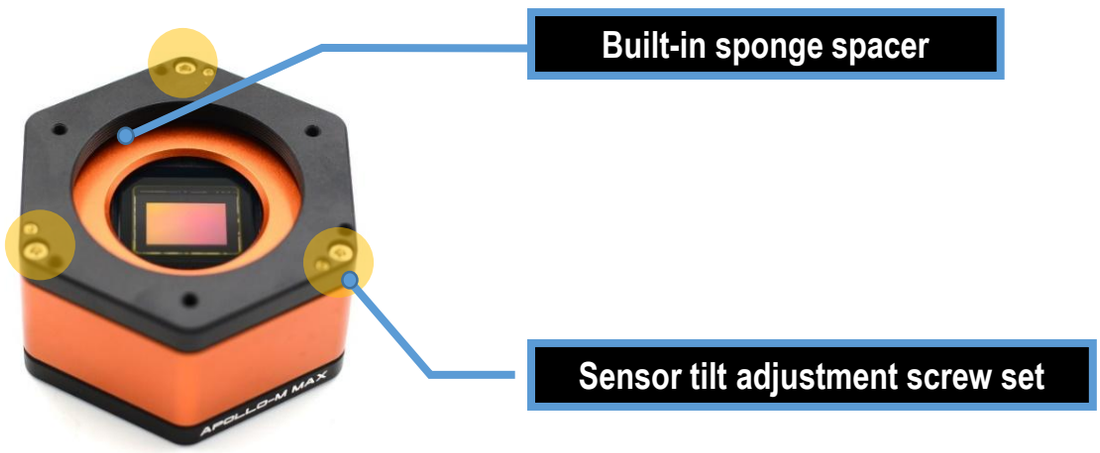
5mm sponge spacer
2mm deep groove





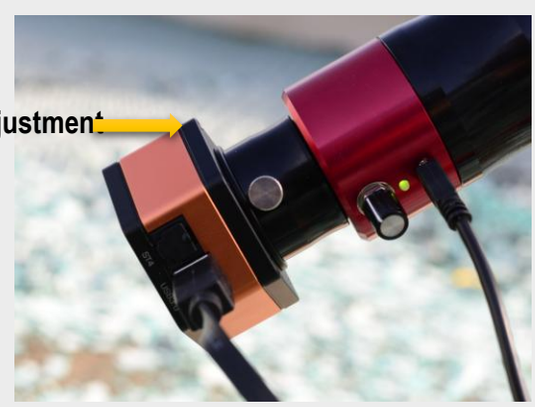
1st Gen Tilt plate

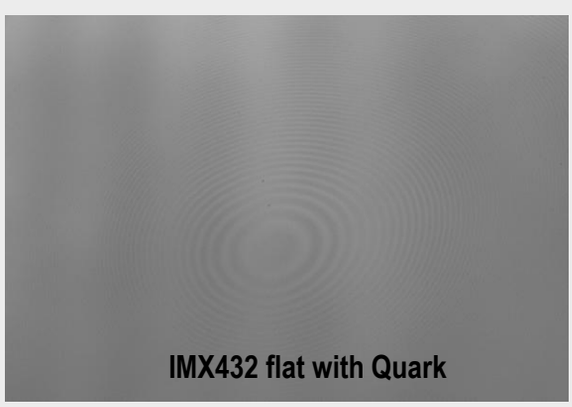
3.5mm sponge spacer
No groove



Newton Ring is a common thing in Ha Solar imaging, use build-in or extra tilt plate can perfectly remove it.

Without tilt adjustment





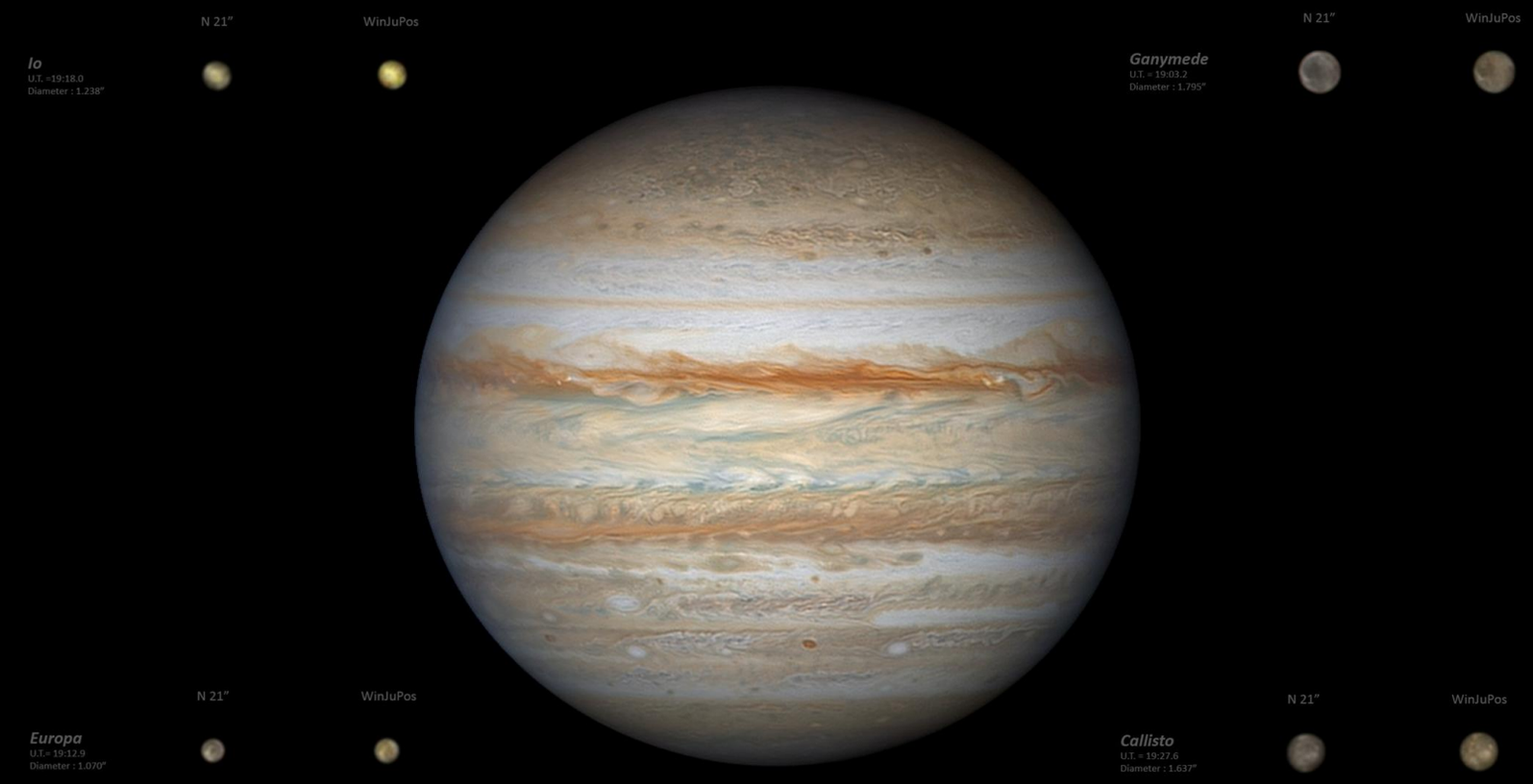
1.5-3mm tilt adjustment

» 04 Planetary Cameras

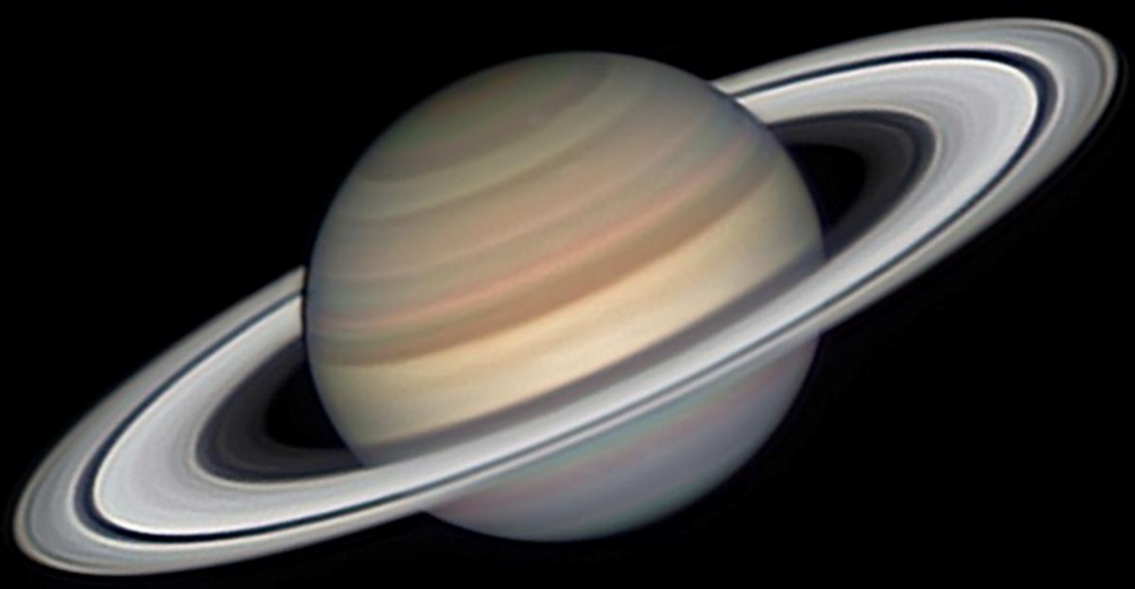
For Lunar and Planetary imaging

The naming of Player One Astronomy cameras is unique. We name the planetary cameras after planets (Mercury, Venus, Mars, Jupiter, Saturn, Uranus, and Neptune. Earth is not included). The size of each planet to a certain extent represents the size of camera sensors.

Model	Sensor	Format	Resolution	Pixel	Noise	QE	FW	FPS	ADC
Saturn-M SQR	IMX533 mono	11.31×11.31mm (1")	3008×3008	3.76μm	4.46-1e	≈91%	73ke	43FPS	14bit
Saturn-C SQR	IMX533 color	11.31×11.31mm (1")	3008×3008	3.76μm	4.46-1e	≈80%	73ke	43FPS	14bit
Uranus-M	IMX585 mono	11.2×6.3mm (1/1.2")	3856×2180	2.9μm	6.5-0.7e	≈91%	47ke	47FPS	12bit
Uranus-C	IMX585 color	11.2×6.3mm (1/1.2")	3856×2180	2.9μm	6.5-0.7e	≈91%	47ke	47FPS	12bit
Neptune 664C	IMX664 color	7.8×4.5mm (1/1.8")	2704×1540	2.9μm	6.1-0.67e	≈91%	38.5ke	93FPS	12bit
Neptune-C II	IMX464 color	7.9×4.5mm (1/1.8")	2712×1538	2.9μm	2.9-0.7e	≈90%	12ke	93FPS	12bit
Neptune-M	IMX178 mono	7.4×5.0mm (1/1.8")	3096×2078	2.4μm	2.2-1.3e	≈80%	15ke	60FPS	14bit
Neptune-C	IMX178 color	7.4×5.0mm (1/1.8")	3096×2078	2.4μm	2.2-1.3e	≈80%	15ke	60FPS	14bit
Mars-M II	IMX462 mono	5.6×3.2mm (1/2.8")	1944×1096	2.9μm	2.6-0.7e	≈91%	12ke	136FPS	12bit
Mars 662M	IMX662 color	5.6×3.2mm (1/2.8")	1936×1100	2.9μm	6.7-0.7e	≈91%	54ke	108FPS	12bit
Mars-C II	IMX662 color	5.6×3.2mm (1/2.8")	1936×1100	2.9μm	6.7-0.7e	≈91%	54ke	108FPS	12bit



Jupiter Marco Lorenzi, Navris 21″ F3.8@f/19 + Saturn-M SQR camera



Saturn Marco Lorenzi, Navris 21″ F3.8@f/19 + Saturn-M SQR camera

Most powerful camera for Lunar, Solar mosaic and DSO lucky imaging!

- Saturn-M/C SQR camera adopts 1” Sony IMX533 mono/color sensor,
- The 3.76um pixel size accommodates a well depth of 73ke with a total of 8.3MP (the resolution is 3008*3008), and the diagonal is 17.5mm.
- Passive Cooling System is integrated.
- 43FPS in RAW8, based on Nova Boosting technology.

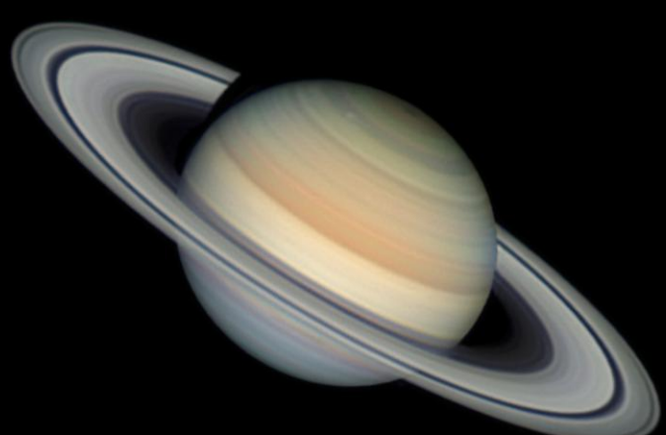
DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate | Nova Boosting

Most popular camera for planetary and DSO lucky imaging!

- Uranus-M/C camera adopts the Sony IMX585 1/1.2” format color sensor. The 2.9um pixel size accommodates a well depth of 47Ke with a total of 8.3MP (the resolution is 3856*2180), and the diagonal is 12.85mm.
- Passive Cooling System is integrated.
- 47FPS in RAW8, based on Nova Boosting technology.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate | Nova Boosting

Jupiter Damian Peach, C14HD + Uranus-C camera



Saturn Damian Peach, C14HD + Saturn-M SQR camera

Planetary Series

1/3-1”

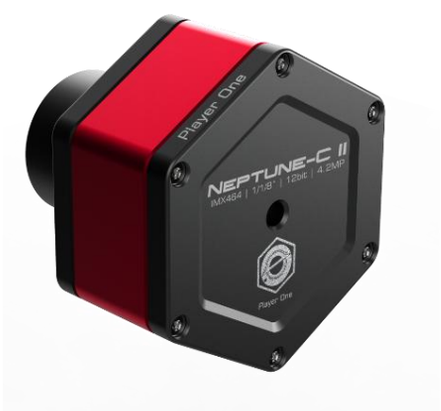
Neptune 664C

- 3rd Gen Neptune664C camera adopts the Sony IMX664 1/1.8” format sensor, no amp-glow make this camera to be successor of 2nd Gen IMX464 camera.
- The 2.9um pixel size accommodates a well depth of 38.5ke with a total of 4.2MP (the resolution is 2704*1540), and the diagonal is 9mm.
- 93FPS in RAW8 format.

DDR3 256MB | DPS | Passive Cooling | Sensor Tilt Plate

Best NIR camera for Lunar and planetary imaging!

- Neptune-C II camera adopts the Sony IMX464 1/1.8” format sensor. The 2.9um pixel size accommodates a well depth of 12ke with a total of 4.2MP (the resolution is 2712*1538), and the diagonal is 9mm.
- 93FPS in RAW8 format.



DDR3 256MB | DPS | Sensor Tilt Plate

Classic 1/2" camera for Lunar and planetary imaging!

- Neptune-M/C camera adopts the Sony IMX178 1/1.8” format sensor. The 2.4um pixel size accommodates a well depth of 15ke with a total of 6.4MP (the resolution is 3096*2078), and the diagonal is 9mm.
- 60FPS in RAW8 format.

DDR3 256MB | DPS | Sensor Tilt Plate

The Latest Addition to the Mars Series—Mars 662M

- Mars 662M adopts the newest 1/2.8” Sony IMX662 mono sensor, full well is 54Ke.
- 2.9um pixel size with a total of 2.1MP, diagonal is 6.44 mm.
- Mars-662M run 108FPS in RAW8 format.

DDR3 256MB DPS Sensor Tilt Plate

New entry-level standard!

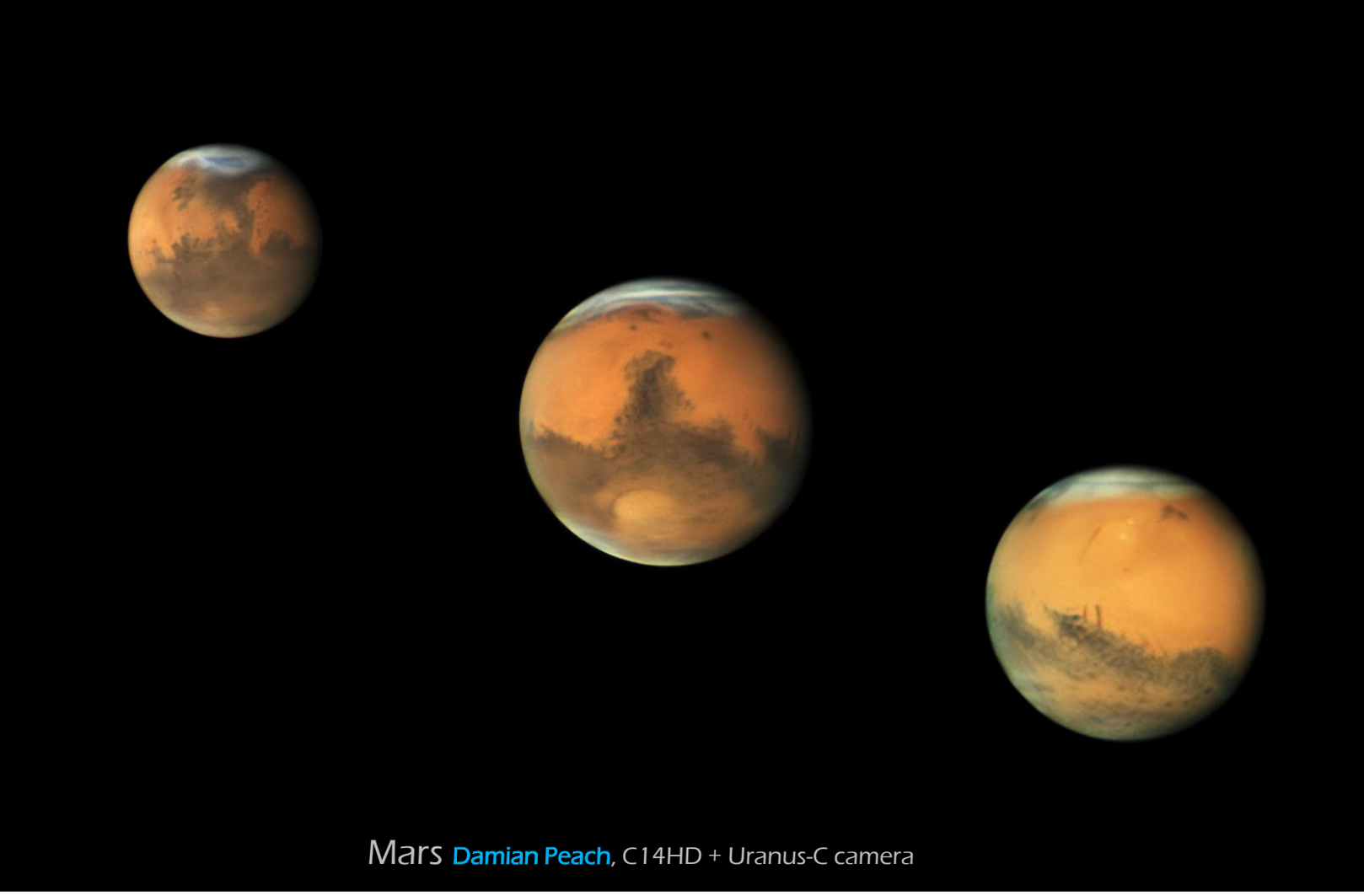
- Mars-M II adopts the newest 1/2.8” Sony IMX462 mono sensor, full well is 12Ke.
- Mars-C II adopts the newest 1/2.8” Sony IMX662 color sensor, full well is 54Ke.
- 2.9um pixel size with a total of 2.1MP, diagonal is 6.44 mm.
- Mars-M II run 136FPS in RAW8 format, Mars-C II run 108FPS in RAW8 format.

DDR3 256MB DPS Sensor Tilt Plate

Classic entry-level planetary camera!

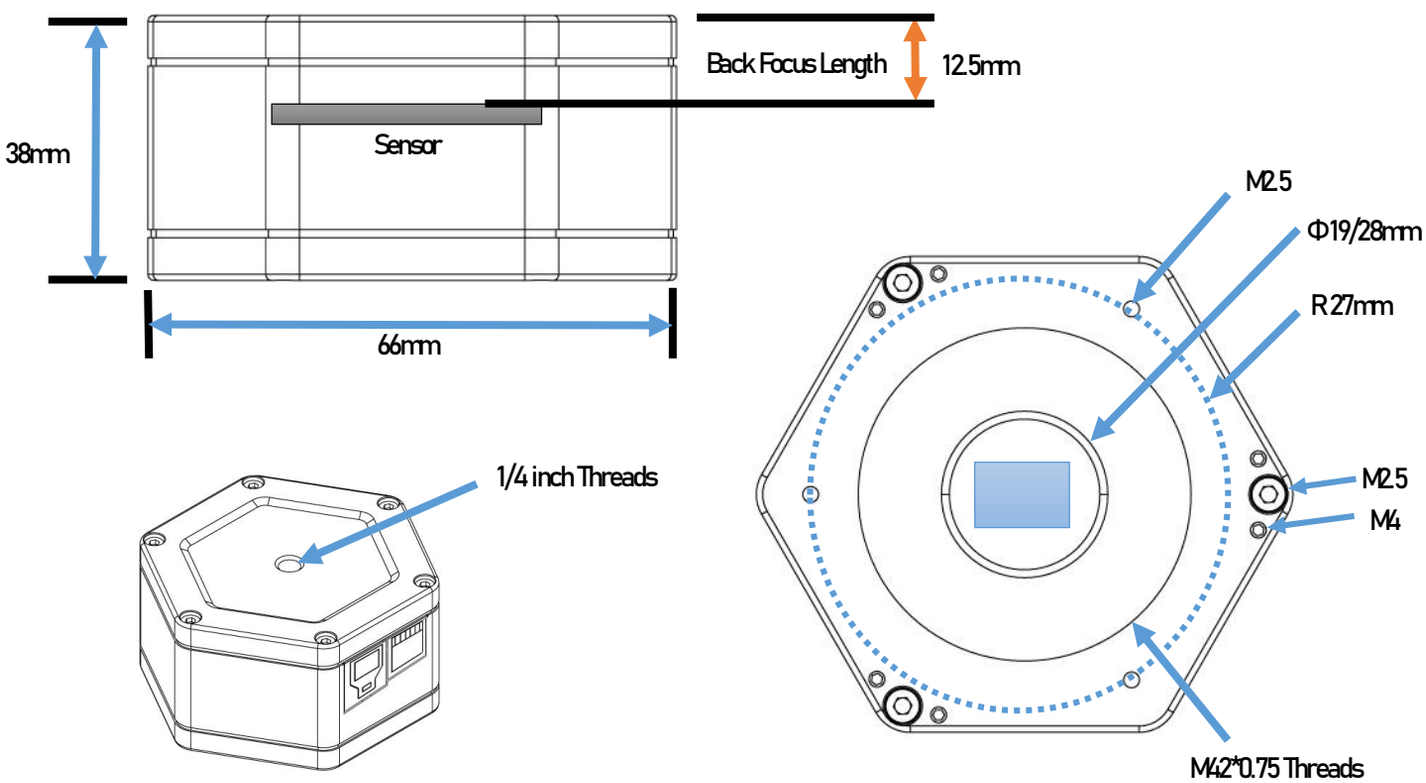
- Mars-M adopts the classic 1/2.8” Sony IMX290 mono sensor, full well is 14.6Ke.
- Mars-C adopts the newest 1/2.8” Sony IMX462 color sensor, full well is 12Ke.
- 2.9um pixel size with a total of 2.1MP (1944*1096), diagonal is 6.44 mm.
- 136FPS in RAW8 format.

DDR3 256MB DPS Sensor Tilt Plate



Mars Damian Peach, C14HD + Uranus-C camera

Solar camera and Planetary camera structure



Player One Technology

DPS technology

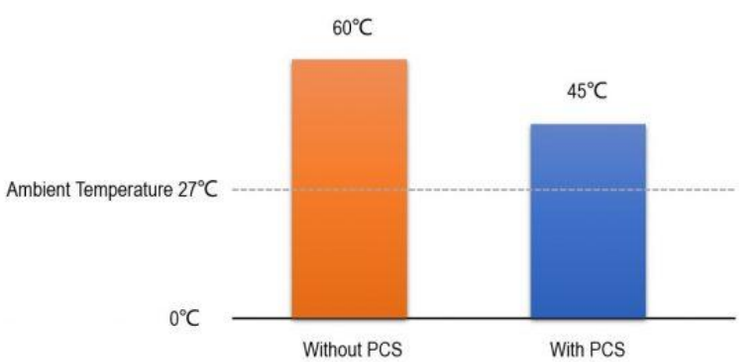
Dead Pixel Suppression

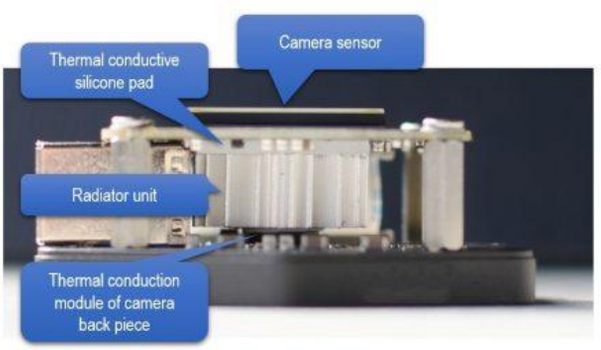
New sensor still have some dead pixels, it's “dead” not really mean it totally white or black, just because it's brightness is out of 3 sigma range, and it's position fixed (not random hot pixels).
This technology according to analyze many dark frames to find out fixed abnormal pixels and record the map in camera memory. In imaging, those position of dead pixels will be given a median value according to the active pixels around that abnormal pixel.

PCS technology

Passive Cooling System

Player One add a new feature called Passive Cooling System to conduct the heat from the sensor out. PCS designed for 2/3” or bigger format uncooled cameras.
PCS integrated Models : Apollo series, Uranus series, Saturn series.





Nova boosting

Increase the frame rate

This technology improves the frame rate of the sensor to a certain extent through secure hardware technology.

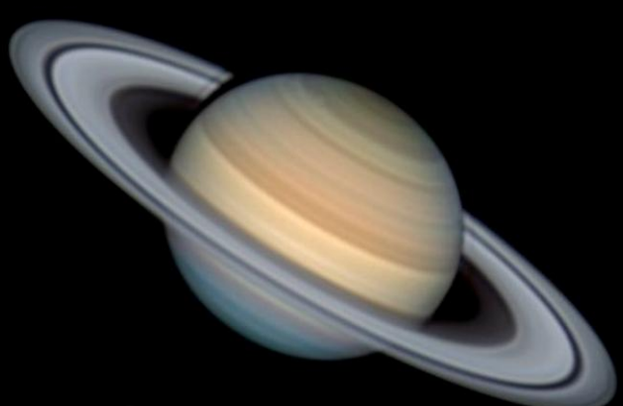
Overvoltage and overcurrent protection mechanism

Camera hardware protection

Ensures the safety of your camera and other equipment through overvoltage and overcurrent protection mechanisms.

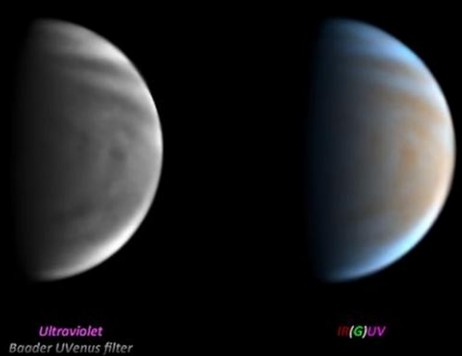
Half Moon **气氖氙Star**, C8 + Neptune-C II camera

Tulip Nebula **Luke Newbould**, RASA8 + Uranus-C camera



Saturn **Ecleido Azevedo**

C11 + Uranus-C camera



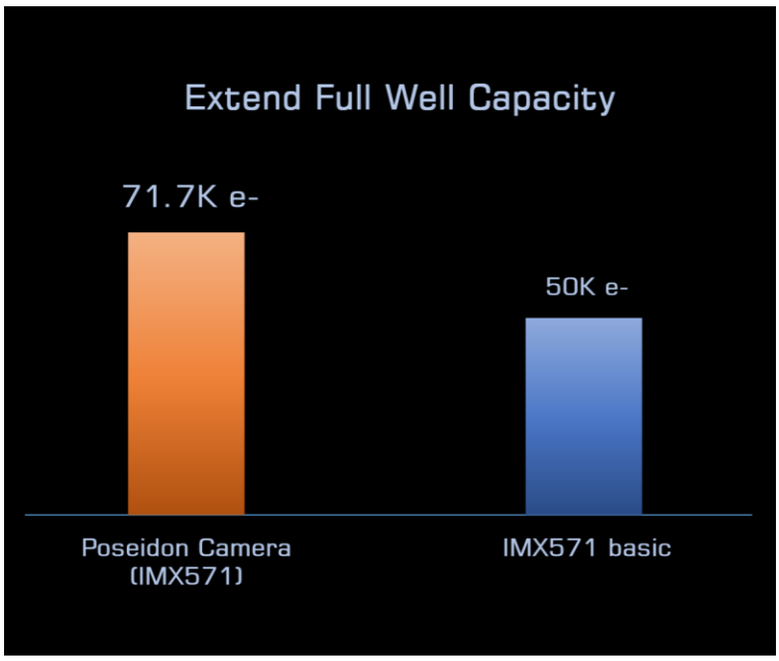
Venus **Fabio and Gabriela**

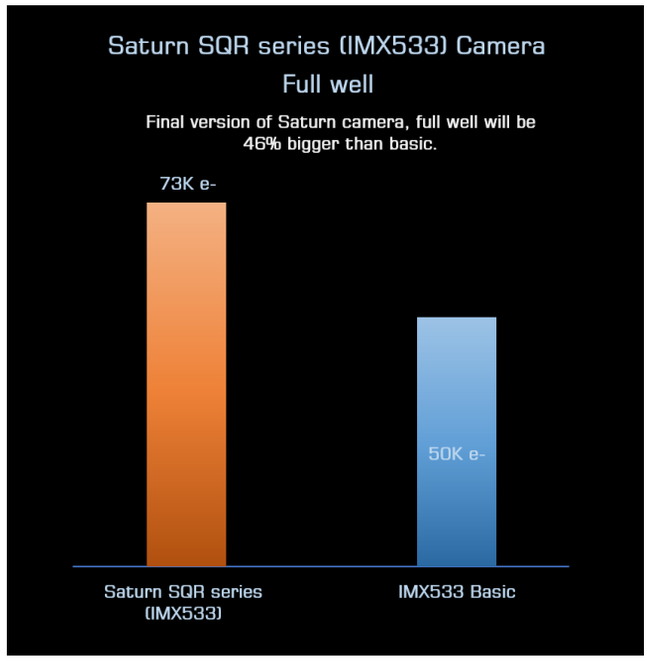
16" Newtonian + Neptune-C II camera

Player One Technology

Extend Full Well Capacity technology

Player One has a unique technology to extend the full well of camera. We use this it on Zeus PRO, Poseidon PRO series, Ares PRO series, Saturn SQR series, and so on.

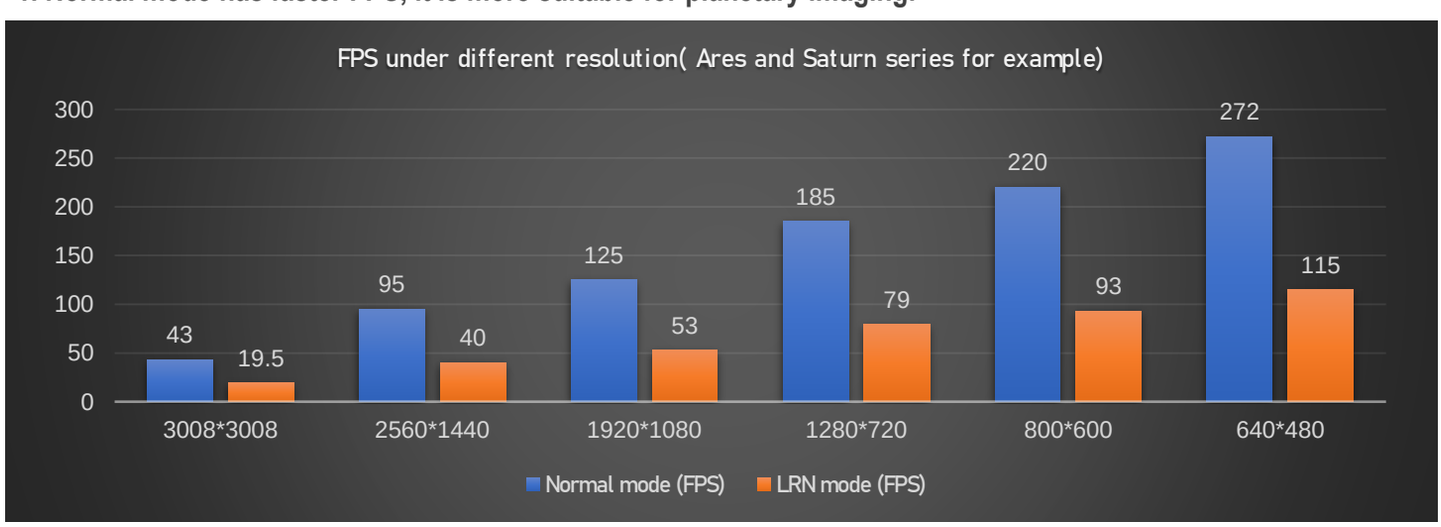




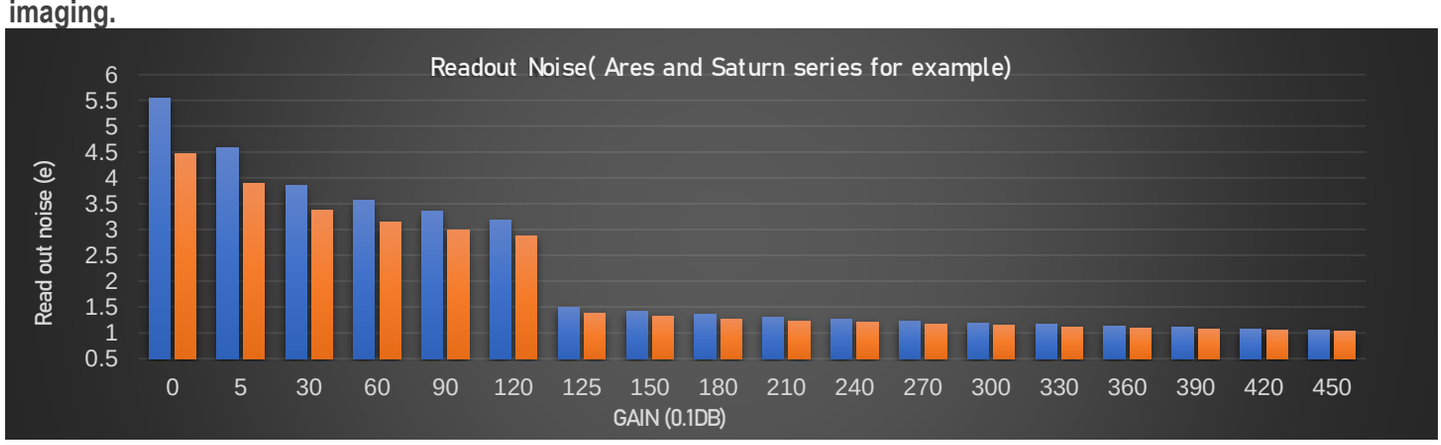
Dual Sampling Mode

Player One has a unique technology to make Zeus PRO, Poseidon PRO series, Ares PRO series, Saturn SQR series has dual sampling mode. Normal mode and LRN mode, they has different advantages in imaging.

1. Normal mode has faster FPS, it is more suitable for planetary imaging.



2. LRN (low readout noise) mode has lower readout noise and higher dynamic range. it is more suitable for DSO lucky imaging.



»05 Guiding Cameras

For guiding

The naming of Player One guiding cameras is interesting. Guiding camera is smaller than planetary camera, that's why we choose dwarf planets to name it.

Model	Sensor	Format	Resolution	Pixel	Noise	QE	FW	FPS	ADC
Xena-M	IMX249 mono	11.3×7.1mm (1/1.2")	1936×1216	5.86μm	6.0-3.5e	≈77%	32ke	48FPS	12bit
Sedna-M	IMX178 mono	7.4×5.0mm (1/1.8")	3096×2078	2.4μm	2.2-1.3e	≈80%	15ke	60FPS	14bit
Ceres 462M	IMX462 mono	5.6×3.2mm (1/2.8")	1944×1096	2.9μm	2.6-0.7	≈90%	12.3ke	136FPS	12bit

Guiding Series

1/3-1/1.2"

1944×1096@136fps | 720P@205fps

Ceres 462M
Mono camera

Best for guiding scope.

- High Sensitivity | Well-known Sony IMX462 monochrome sensor.
- USB3.0 | Up to 136FPS.
- DPS Technology | Suppress dead pixels, improve image quality.
- ST4 Port | Easy for guiding.
- Lightweight | 1.25" Diameter, only 65g.

1936×1216@48fps | 1080P@52fps | 720P@77fps

Xena-M
Mono camera

Best for OAG guiding with long focal length, such as RC system.

- High Sensitivity | Well-known Sony IMX249 Monochrome sensor.
- Nova Boosting Technology | Break 30FPS limit, 60% Faster.
- USB3.0 | Up to 48FPS.
- DPS Technology | Suppress dead pixels, improve image quality.
- ST4 Port | Easy for guiding.
- Lightweight | 1.25" Diameter, only 65g.

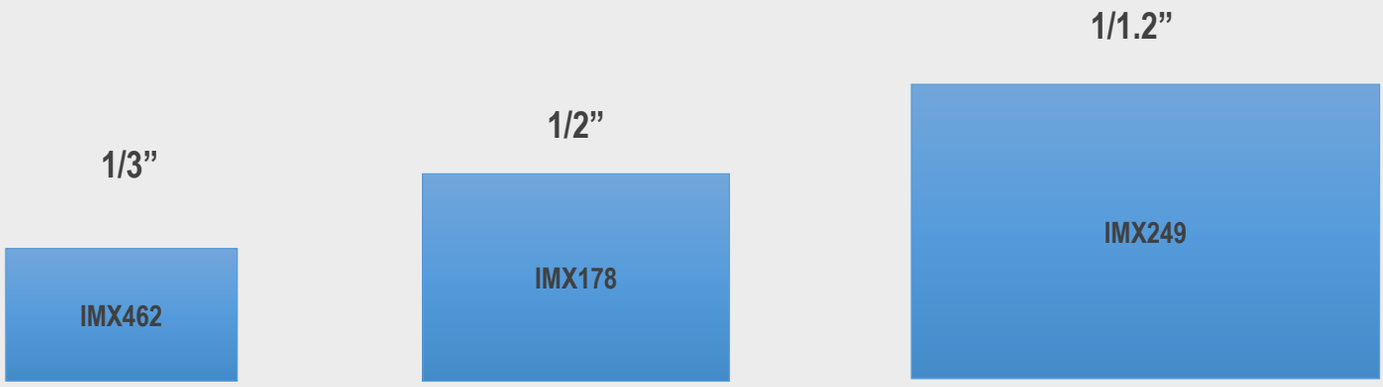
3096×2078@60fps | 2K@90fps | 1080P@120fps

Sedna-M
Mono camera

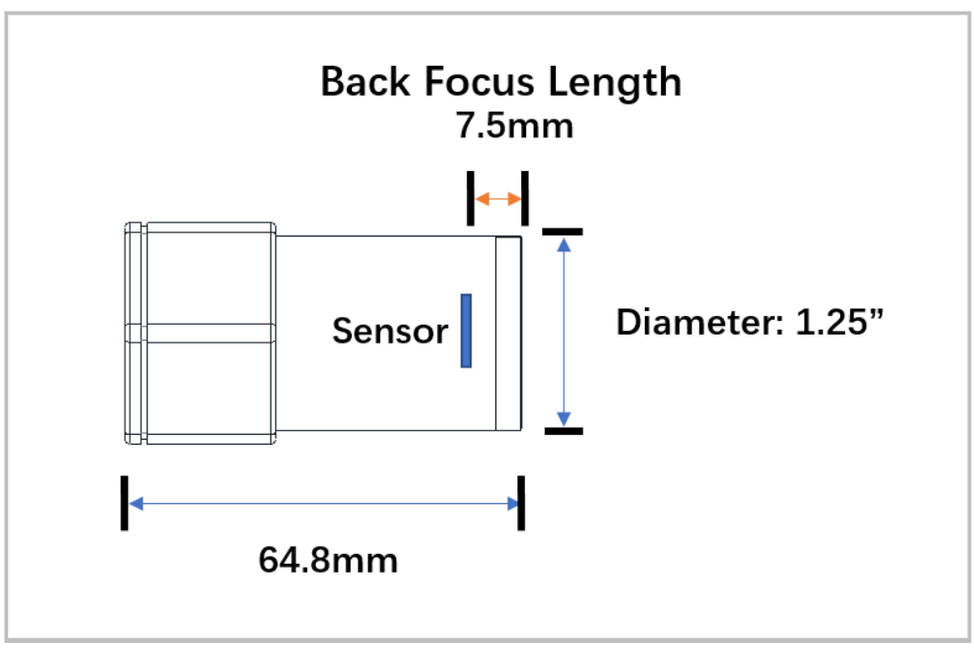
Best for OAG guiding with median focal length, such as Newtonians.

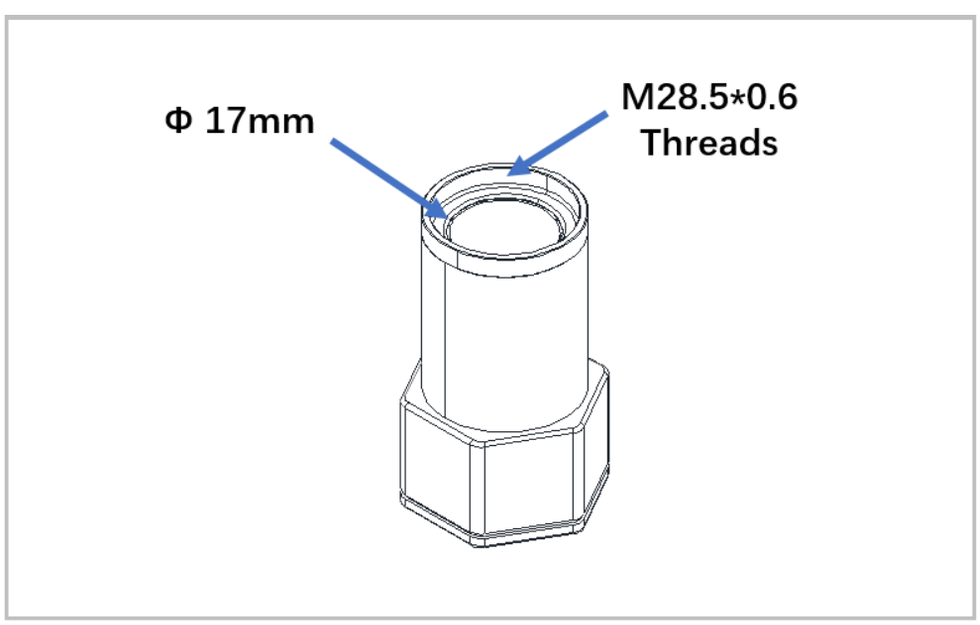
- High Sensitivity | Well-known Sony IMX178 Monochrome sensor.
- USB3.0 | Up to 60FPS.
- DPS Technology | Suppress dead pixels, improve image quality.
- ST4 Port | Easy for guiding.
- Lightweight | 1.25" Diameter, only 65g.

Guiding Camera Design



Ceres 462M	Sedna-M	Xena-M
IMX462 Mono	IMX178 Mono	IMX249 Mono
USB3.0 136FPS	USB3.0 60FPS	USB3.0 48FPS





»06 Filter and Filter Wheel

Improve imaging effect

Model	Clear Aperture	Thickness	Body Threads	Data Port	Weight	Support cameras	Support OAG	Support Filters
8×1.25"	Φ27	21mm	M42×0.75	USB Type-C	522g	OF cooled cameras, planetary cameras, guiding cameras.	OAG-MIN	1.25"
7×36mm	Φ84.5mm	21mm	M48×0.75	USB Type-C	522g	Poseidon, Artemis	OAG-MAX	36mm
5×2"	Φ47mm	21mm	M54×0.75	USB Type-C	522g	Poseidon, Artemis, Zeus	OAG-MAX	2"/50mm
7×2"	Φ47mm	21mm	M54×0.75	USB Type-C	655g	Poseidon, Artemis, Zeus	OAG-MAX	2"/50mm
7×50mm	Φ49mm	21mm	M54×0.75	USB Type-C	655g	Poseidon, Artemis, Zeus	OAG-MAX	50mm

Filters and Wheels

1.25”-2”

Standard Filter Wheels

Phoenix Wheel 8x1.25”

- Design for planetary and DSO imaging, support 1.25” filters.
- Support Ares cooled cameras, and all uncooled cameras.

Phoenix Wheel 7x36mm

- Design for DSO imaging, support 36mm unmounted filters.
- Support Artemis and Poseidon cooled cameras.

Phoenix Wheel 5x2”

- Design for DSO imaging, support 2” mounted / 50mm unmounted filters.
- Support Artemis, Poseidon, Zeus cooled cameras.

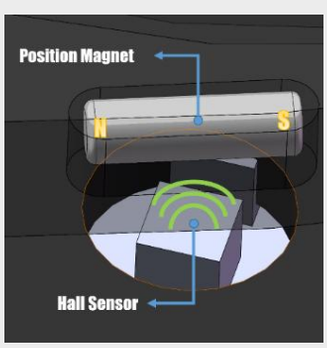
Big Filter Wheels

Phoenix Wheel 7x2”

- Design for DSO imaging, support 2” mounted / 50mm unmounted filters.
- Support Artemis, Poseidon, Zeus cooled cameras.

Phoenix Wheel 7x50mm

- Design for DSO imaging, support 50mm unmounted filters.
- Best for full-frame Zeus cooled camera, without vignette problem.
- Support Artemis, Poseidon, Zeus cooled cameras.



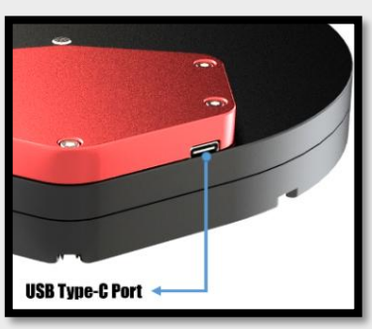
Hall magnetic positioning technique

Accurate positioning

Player One’s motor filter wheel use Hall sensor to do accurate positioning.

USB2.0 Type-C DATA port

Type-C Port can make the wheel smaller and easy to plug in.



Filter Drawer Series

Filter Drawer MAX

- Support Artemis, Poseidon, Zeus cooled cameras.
- Support FHD-OAG MAX.

Filter Drawer MINI

- Support Ares cooled cameras, and all uncooled cameras.
- Support FHD-OAG MINI.

ERF filter

Design for Quark Chromosphere

- Reject energy of the Sun.
- Protect you Quark, extend the lifetime.
- Assistant filter, (DO NOT use it for observing)

UVenus filter

Design for planetary imaging

- Transmittance 80%, Bandwidth: 60nm
- Blocking depth:
- OD5 (200-700nm), OD4(700-1100nm), OD3(1100-1500nm)

Photosphere 7.5nm filter

Design for photosphere imaging

- Increase details from photosphere.
- Suitable with Baader film and Herschel W
- Assistant filter, (DO NOT use it for observing)

CH4 8nm filter

Design for planetary imaging

- Transmittance 90%
- Bandwidth: 8nm
- Blocking depth: OD4 (200-1100nm)

Anti-Halo Pro 2” Ha+OIII filter

Dual band filter for color cameras.

- Anti-Halo coating: Eliminate halo problem around bright stars.
- Excellent effect, real 3.5nm-4.2nm bandwidth.
- Off-band rejection: OD5.0 (1/100000)

Positive side

Negative side

Anti-Halo 2” UV IR-cut filter

Dual band filter for color cameras.

- Anti-Halo coating: Eliminate halo problem around bright stars.
- Off-band rejection: OD4.0 (1/10000)

Series	Model	Size	Mount Thickness	Glass Thickness	Threads	Support Filter Wheel	Support Filter Drawer
Anti-Halo PRO	Ha+OIII	2”	5mm	1.85mm	M48×0.75	5×2“/7×2“	MAX/MN
Anti-Halo	UV IR-CUT	2”	5mm	1.85mm	M48×0.75	5×2“/7×2“	MAX/MN
E-series	Photosphere 7.5nm	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
E-series	CH4 8nm	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
E-series	UVenus	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
S-series	UV IR-CUT	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
S-series	IR685	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
S-series	IR850	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
S-series	ERF	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN
S-series	Photosphere 10nm	1.25”	5mm	1.85mm	M28.5×0.6	8×1.25"	MN

» 07 Accessories

Complete your imaging system

FHD-OAG series : No Vignetting Design

- FHD-OAG use 8*14mm prism, it is close to 16:9 format. No vignette problem with big sensor such like Xena-M camera. The prism height is only 8mm, it can be setup closer to light path center and get more light.
- Helix focuser included.
- FHD-OAG MAX design for Filter Drawer MAX, Phoenix Wheel 7x36 / 5x2” / 7x2” / 7x50.
- FHD-OAG MINI design for Filter Drawer MINI, Phoenix Wheel 8x1.25”.

8x14mm Prism

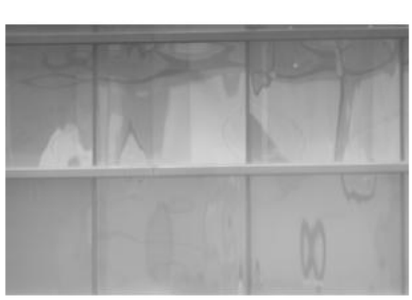
FHD-OAG MAX Vignetting Test

Sensor: IMX462

1/3″ Format

Sensor: IMX178

1/2″ Format



Sensor: IMX174/249

1/1.2″ Format

ACS (Active Cooling System) : Best assistant for solar imaging.

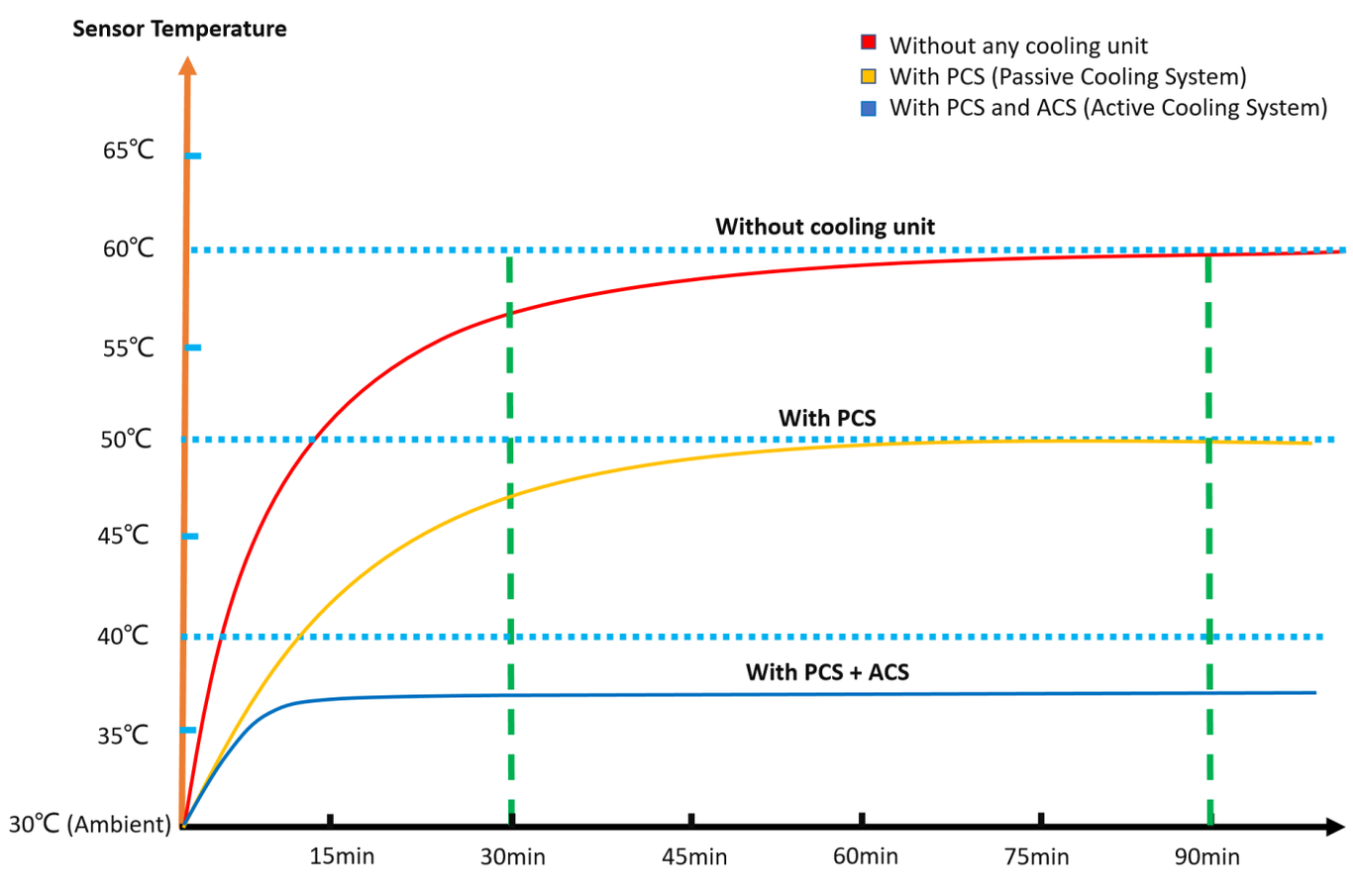
What is ACS?

- ACS (Active Cooling System) is a external air-cooled system, designed for solar and big format planetary cameras.

Why I need ACS?

- ACS (Active Cooling System) is a external air-cooled system, designed for solar and big format planetary cameras.
- ACS can provide much better temperature control for uncooled cameras. We all have some bad experiences in hot summer. The temperature of sensor rising up and camera shield is too hot to touch, afraid of the camera can't working normally. We have been aware of the heating problem before, so we added PCS (Passive Cooling System) to the camera. However, looks it is not enough! In 2022, summer ambient temperature even over 40℃ (104℉) for a month, camera sensor temperature might close to 60℃ in long time using under sunlight. Although our users said Player One camera is still working well in hot day, but we think it's still has damage risk. So we decide to make this ACS unit, to provide much better temp control.

Comparison between 3 different setup



Customer Service

Manuals

Product manuals and usage manuals can help beginners to learn fast.

Tutorials

We will upload tutorials about planetary and DSO imaging, and post-processing too.

Activity

Hold online activities, especially when some astronomical phenomena happens.

Promotion

On Black Friday and Christmas will have a very attractive promotion.

Technical support

Player One love astrophotography very much, and we like to share and communicate with astronomers, any technical question or issue will be answered in 24hrs.

Consultation, Purchase and After-sales service: support@player-one-astronomy.com

Business and Cooperation: vanessa.zhang@player-one-astronomy.com

Facebook Message: https://www.facebook.com/PlayerOneAstronomy

FAQ

1. I have never heard of this camera, is it reliable?

We are called Player One, like our company name, the main electronic components are in high quality, all aspects of the performance has reached the high standard of the market.

2. Do they familiar with astrophotography?

Yes, we are. The CEO of Player One is an experienced astrophotographer, and our engineers are familiar with astronomical products.

3.What's the difference between your camera and other brands

Our camera has a lot of advantages. We add DDR buffer, DPS technology, Sensor Tilter, Nova Boosting, Passive Cooling System into our planetary camera, and created solar cameras. In last year, we made new cooled camera, it is more advanced, Rear 4P tilter, Deep Cooling System, USB Type-C port and entire BFL solution.

4. How many different drivers of the camera?

Basic :

- Camera native driver (Windows 7/8/10/11)
- ASCOM driver (ASCOM 6.5 required)
- Camera Directshow driver (Windows 7/8/10/11)
- INDI & INDI GO driver for Linux and Raspberry Pi.

For developer:

- WINDOWS SDK
- Linux SDK
- Mac OS SDK
- Labview SDK

5. Support Software

- Sharpcap 4.0 and upper
- Firecapture 2.7 and upper
- N.I.N.A 2.1 and upper
- Astro DMx 1.7.2 and upper
- MetaGuide 6.1 and upper
- PHD2 and upper
- The SKY Imaging bundle and X2 plugin
- SGP (via ASCOM)
- Maxim DL (via ASCOM)
- APT (via ASCOM)
- Nebulosity(via ASCOM)
- AND SO ON

Worldwide Dealers

Official Dealer (Gemany)
Telescope-Service
Ransburg GmbH Von-Myra-Straße 8 85599 Parsdorf
TEL: +49-(0)89-9922875-0
FAX: +49-(0)89-9922875-99

Official Dealer (France)
Univers Astro
25 route du pont de bois
44640 VUE, France
E-mail: info@univers-astro.fr

Official Dealer (France)
SKEYEtek
7 rue principale, 68780 MORTZWILLER
France
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Mail : contact@skeyetek.space

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Pierro-astro
114 Avenue Georges Clemenceau
34500 Beziers – France
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pierro@pierro-astro.com (orders/commercial)

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La Clef des Étoiles
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31880 La Salvetat-Saint-Gilles– France
Email: contact@laclefdesetoiles.com
TEL: +33 5 61 22 58 55

Official Dealer (Switzerland)
Optique Perret
Rue du Perron 17 ,1204 Genève
Tél. +41 22 311 47 75
CHE-107.742.103

Official Dealer (Switzerland)
DEEP SPACE ASTRONOMY
Rue du Vieux-Marché 9,
1260 Nyon,Switzerland
Tél. +41 79 646 15 09
Email: info@deep-space-astronomy.ch

Official Dealer (UK)
Dark Clear Skies
E-mail:
Contact@darkclearskies.co.uk

Official Dealer (UK)
Pro Astronomy
E-mail:
robert.wells@proastronomy.co.uk

Official Dealer (UK)
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Alresford,England,SO24 0NZ
United Kingdom
E-mail: info@specialistcameras.co.uk

Official Dealer (Italy)
Tecnosky di Monti Giuliano
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15023 Felizzano (AL)
TEL: +39 0131 772241
E-mail: info@tecnosky.it

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33030 – Campoformido (UD),Italy
TEL: +39-0432-652609
E-mail: info@skypoint.it

Official Dealer (Spain)
Alpha Cygni S.L.
C/ San Agustin, 23
38410 – Los Realejos
S.C. de Tenerife,Canary Islands – Spain
Tel: 0034 922 34 30 39
Email: info@alphacygni.com

Official Dealer (Netherlands)
Ganymedes Optische Instrumenten
Middeldorpstraat 1,1182HX Amstelveen
The Netherlands
TEL: +31206412083
Email: info@ganymedes

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j.k. Lulin bl. 133, fl.8 ap. 28
Sofia 1335 , Bulgaria
Tel: +359889398555
E-mail: astronomy@mail.bg

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d.14/22, korp.3, Moscow,
127018, Russia
E-mail: info@astronom.ru

Official Dealer (United States)
Astro Hutech
Hutech Corporation
25691 Atlantic Ocean Dr., Unit B-17
Lake Forest, CA 92630
TEL: 877-289-2674

Official Dealer (United States)
Astro World Telescopes
Levittown, NY 11756
TEL: 516-273-3771

Official Dealer (United States)
Stellarvue
11802 Kemper Road
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