DAHENG IMAGING
SINCE 1991

29 Years Dedicated to Machine Vision!

Welcome

Daheng Science & Technology Tower

Founded in 1991, DAHENG IMAGING is a leading supplier for professional imaging components as well as machine vision solutions. Since its founding, the company has been dedicated to the advancement of imaging & vision technologies and delivered a range of own-developed vision products with many proprietary innovations. Being a know-how company with long history in machine vision industry, DAHENG IMAGING deserves trusts from counterparts all over the world and has established close cooperation.

After over two decades of rapid growth, DAHENG IMAGING becomes one of the most famous and successful vision company in China.

As core asset of public company DAHENG TECH (stock symbol: 600288), DAHENG IMAGING is committed to providing our customers with cutting edge technology, high quality products and perfect service.

Automated Imaging Association

ISO9001:2000

Our Story

Timeline entries above the line:

- 1991 — Founded in Beijing
- 1993 — Automatic measurement system of microcirculation
- 1995 — First online inspection system
- 1997 — Watermark on banknote inspection system
- 1999 — Frame grabber family
- 2001 — Printing inspection system
- 2003 — Partner of Vision Components GmbH / Partner of CBC / Partner of NorPix Inc.
- 2005 — Partner of AOS Technologies AG / Partner of MVTec GmbH

Timeline entries below the line:

- 1992 — First frame grabber in China
- 1994 — Cell pathological analysis system
- 1996 — First frame grabber of PCI bus
- 1998 — RMB online inspection system
- 2000 — Parent company listed in Shanghai Stock Exchange (stock symbol: 600288)
- 2002 — ISO 9000 certification / USB interface digital cameras
- 2004 — Partner of schneider Optic / IEEE1394 interface digital cameras
- 2006 — Smart cameras for ITS

2007
Partner of Allied Vision Technologies GmbH
GigE interface digital cameras

2008
Shenzhen Office
Partner of TELEDYNE DALSA

Member of the AIA
Partner of JAI Ltd.

2009
Member of the EMVA
Shanghai Office

2010
Member of CMVU

2011
Partner of LMI Technologies
Wuhan Office

2012
MER-U series USB2.0 interface camera
ITS cameras family
Partner of IDT.Inc.
Xi'an office
Chengdu office

2013
Partner of Silicon Software GmbH
Partner of Coherent Inc.

2014
MER-G series GigE interface camera
Partner of AT GmbH
Partner of Raptor Photonics Ltd
Partner of Lumenera Corporation

2015
Partner of MIKROTRON GmbH
Partner of NIP Co., Ltd
Partner of Optronis GmbH

2016
MER-U3 series USB3.0 interface camera
MER-G-PoE series GigE interface camera
Partner of AT GmbH
Member of the CRIA

2017
VEN series USB3.0 interface board level camera

2018
MARS-G-P series GigE interface camera

2019
PALLAS series smart camera
MARS-U3 series GigE interface camera

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Our Philosophies

Integrity

Being honest and having strong moral principles are at the heart of our culture. We firmly believe that sincerity will lead to mutual benefit and keeping promises is the foundation of our characteristics and business ethics.

People Oriented

We respect Human Values and regard employees as our most valuable assets. All of our efforts aim to finally serve people, and we carefully hear voices of each partner. We really enjoy seeing customers' ideas come to life, employees' dreams are turned into realities, and partners' wishes come true. And such kinds of successful stories spread throughout the country and the whole world.

Keep Diligence

Just being diligence and pragmatism when working with our customers is a fundamental rule of our professionalism. We adopt a pragmatic approach to our business, admit the existence of imperfections and limitations of technologies, and constantly remind and motivate ourselves that we must pursue the best to satisfy requirements from customers and employees.

Win-Win Cooperation

We treat every customer as one of our partners, refuse to play "zero-sum game" in the business, and believe that all participants in the game will become the winner. With a sincere heart, we always take a partner's responsibility to create values for our customers and then realize our own values in return.

Continuous Innovation

From the date of establishment, we created so many "breakthroughs" which have already been recorded in the machine vision history of China. With a global vision and a natural sense of urgency, however, we clearly understand that "innovation capability" is the soul of a hi-tech company and the only way leading to cutting-edge technologies and products which deserve customers' trust and indeed improve productivity.

Our Team

- Headquarters located in Beijing, based upon the strength of Chinese Academy of Sciences
- Having enterprise post-doctoral station dedicated to Machine Vision
- Having up to 700 employees by the end of 2017
- A large network for support and services has been established
- Featuring a R&D team with over 200 professionals, 40% of employees having master degree
- Proven innovation ability and patented technologies

Doctor 5%
Bachelor 45%
Master 40%

production 15%
Support 28%
Sales 23%
R & D 32%
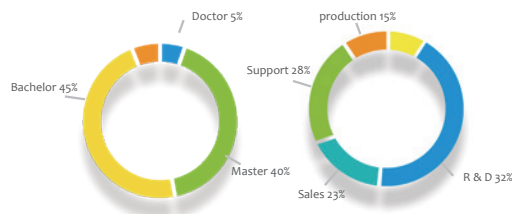
Our Promise

3-Year Warranty

DAHENG IMAGING offers a 3-year warranty for the camera. We make this unprecedented promise because we have unparalleled confidence in our products. We continually reinvest in research, development and superior manufacturing capabilities so that our customers can fully rely on the products we manufacture.

Our Products

Top Selling Chinese Industrial Digital Cameras !　　MERCURY Series

The MERCURY family's CCD/ CMOS cameras target at industrial machine vision applications, the MERCURY family cameras are covered with full metal housings and equipped with cable locking devices. Thanks to compact size and light weight, the MERCURY family cameras can be easily deployed under various industrial circumstances or integrated into automatic devices like robot arms to accomplish machine vision tasks like locating, measuring, defect detecting, object recognizing, etc.

With the MERCURY series, you can choose the most popular data interfaces in the vision market: the popular Gigabit Ethernet interface with 100-meter cable length, the new USB 3.0 interface with plug and play capability, and the USB2.0 interface with plug and play capability. All DAHENG IMAGING's MERCURY cameras come with an option to provide camera power and data via a single cable. They also offer separate input/output ports for triggering or flash control. The MERCURY family comes with a long list of firmware features.

- Ultra small, light and robust
- 1 input and 1 output with opto-isolated, 2 programmable GPIOs
- Support Gigabit Ethernet, USB3.0, USB2.0
- A wide range of models available, support various CCD and CMOS sensors
- Meet CE, RoHS and FCC (except MER-U series) standards
- Support GigE Vision, USB3 Vision, GenICam and third-party software like HALCON, MERLIC and LabVIEW

MER-G

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-030-120GC	GigE	656 × 492	120 fps	1/4" Sony ICX618 global shutter CCD	5.6μm × 5.6μm	8/12bits	Color
MER-031-300GM/C	GigE	640 × 480	300 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-032-120GM/C	GigE	656 × 492	120 fps	1/3" Sharp RJ33B global shutter CCD	7.4μm × 7.4μm	8/12bits	Mono/Color
MER-041-302GM/C	GigE	720 × 540	302 fps	1/2.9" Sony IMX287 global shutter CMOS	6.9μm × 6.9μm	8/12bits	Mono/Color
MER-050-200GC	GigE	800 × 600	200 fps	1/3.6" ON PYTHON 500 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Color
MER-051-120GM/C	GigE	808 × 608	120 fps	1/3.6" ON PYTHON 480 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-125-30GC	GigE	1292 × 964	30 fps	1/3" Sony ICX445 global shutter CCD	3.75μm × 3.75μm	8/12bits	Color
MER-131-75GM/C	GigE	1280 × 1024	75 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-132-30GM/C	GigE	1292 × 964	30 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-132-43GM/C	GigE	1292 × 964	43 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-133-54GM/C	GigE	1280 × 960	54 fps	1/3" ON AR0135 global shutter CMOS	3.75μm × 3.75μm	8/10bits	Mono/Color
MER-200-14GM	GigE	1628 × 1236	14 fps	1/1.8" Sony ICX274 global shutter CCD	4.4μm × 4.4μm	8/12bits	Mono
MER-200-20GM	GigE	1628 × 1236	20 fps	1/1.8" Sony ICX274 global shutter CCD	4.4μm × 4.4μm	8/12bits	Mono
MER-201-25GM/C	GigE	1628 × 1236	25 fps	1/1.8" Sharp RJ31N global shutter CCD	4.4μm × 4.4μm	8/12bits	Mono/Color
MER-231-41GM/C	GigE	1920 × 1200	41 fps	1/1.2" Sony IMX249 global shutter CMOS	5.86μm × 5.86μm	8/10bits	Mono/Color
MER-500-14GM/C	GigE	2592 × 1944	14 fps	1/2.5" ON MT9P031/MT9P006 rolling shutter CMOS	2.2μm × 2.2μm	8/10bits	Mono/Color
MER-630-16GM/C	GigE	3088 × 2064	16 fps	1/1.8" Sony IMX178 rolling shutter CMOS	2.4μm × 2.4μm	8/12bits	Mono/Color
MER-1070-10GM/C	GigE	3840 × 2748	10 fps	1/2.3" ON MT9J003 rolling shutter CMOS	1.67μm × 1.67μm	8/12bits	Mono/Color
MER-1220-9GM/C	GigE	4024 × 3036	9 fps	1/1.7" Sony IMX226 rolling shutter CMOS	1.85μm × 1.85μm	8/12bits	Mono/Color
MER-1520-7GC	GigE	4608 × 3288	7 fps	1/2.3" ON MT9F002 rolling shutter CMOS	1.4μm × 1.4μm	8/12bits	Color
MER-2000-5GM/C	GigE	5496 × 3672	5 fps	1" Sony IMX183 rolling shutter CMOS	2.4μm × 2.4μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	60g
Dimensions	29mm × 29mm × 29mm

Environmental Specifications

Operating temp.	0℃ ~ +45℃
Operating humidity	10% ~ 80%
Storage temp.	-20℃ ~ +70℃

Electrical Specifications

Power requirement	12 VDC (8-PIN connector)
I/Os	Opto-isolated 1 input/1 output, 2 GPIOs
Data interface	RJ45 with locked
Power consumption	<3W@12VDC (MER-500-14GM/C MER-630-16GM/C MER-1220-9GM/C MER-2000-5GM/C: <2W@12VDC)

Optical Specifications

Lens mount	C / CS – Mount

MER-G-P

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-030-120GC-P	GigE PoE	656 × 492	120 fps	1/4" Sony ICX618 global shutter CCD	5.6μm × 5.6μm	8/12bits	Color
MER-031-300GM/C-P	GigE PoE	640 × 480	300 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-031-300GM-P NIR	GigE PoE	640 × 480	300 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-032-120GM/C-P	GigE PoE	656 × 492	120 fps	1/3" Sharp RJ33B global shutter CCD	7.4μm × 7.4μm	8/12bits	Mono/Color
MER-041-302GM/C-P	GigE PoE	720 × 540	302 fps	1/2.9" Sony IMX287 global shutter CMOS	6.9μm × 6.9μm	8/12bits	Mono/Color
MER-050-200GC-P	GigE PoE	800 × 600	200 fps	1/3.6" ON PYTHON 500 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Color
MER-051-120GM/C-P	GigE PoE	808 × 608	120 fps	1/3.6" ON PYTHON 480 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-125-30GC-P	GigE PoE	1292 × 964	30 fps	1/3" Sony ICX445 global shutter CCD	3.75μm × 3.75μm	8/12bits	Color
MER-131-75GM/C-P	GigE PoE	1280 × 1024	75 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-131-75GM-P NIR	GigE PoE	1280 × 1024	75 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-132-43GM/C-P	GigE PoE	1292 × 964	43 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-133-54GM/C-P	GigE PoE	1280 × 960	54 fps	1/3" ON AR0135 global shutter CMOS	3.75μm × 3.75μm	8/10bits	Mono/Color
MER-200-20GM-P	GigE PoE	1628 × 1236	20 fps	1/1.8" Sony ICX274 global shutter CCD	4.4μm × 4.4μm	8/12bits	Mono
MER-201-25GM/C-P	GigE PoE	1628 × 1236	25 fps	1/1.8" Sharp RJ31N global shutter CCD	4.4μm × 4.4μm	8/12bits	Mono/Color
MER-231-41GM/C-P	GigE PoE	1920 × 1200	41 fps	1/1.2" Sony IMX249 global shutter CMOS	5.86μm × 5.86μm	8/10bits	Mono/Color
MER-232-48GM-P NIR	GigE PoE	1920 × 1200	48 fps	2/3" ON PYTHON 2000 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-500-14GM/C-P	GigE PoE	2592 × 1944	14 fps	1/2.5" ON MT9P031/MT9P006 rolling shutter CMOS	2.2μm × 2.2μm	8/10bits	Mono/Color
MER-503-20GM/C-P	GigE PoE	2448 × 2048	20 fps	2/3" Sony IMX264 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-504-10GM/C-P	GigE PoE	2448 × 2048	10 fps	2/3" Sharp RJ32S global shutter CCD	3.45μm × 3.45μm	8/12bits	Mono/Color
MER-530-20GM-P NIR	GigE PoE	2592 × 2048	20 fps	1" ON PYTHON 5000 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-531-20GM/C-P	GigE PoE	2592 × 2048	20 fps	1" ON PYTHON 5000 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-630-16GM/C-P	GigE PoE	3088 × 2064	16 fps	1/1.8" Sony IMX178 rolling shutter CMOS	2.4μm × 2.4μm	8/12bits	Mono/Color
MER-1070-10GM/C-P	GigE PoE	3840 × 2748	10 fps	1/2.3" ON MT9J003 rolling shutter CMOS	1.67μm × 1.67μm	8/12bits	Mono/Color
MER-1220-9GM/C-P	GigE PoE	4024 × 3036	9 fps	1/1.7" Sony IMX226 rolling shutter CMOS	1.85μm × 1.85μm	8/12bits	Mono/Color
MER-1520-7GC-P	GigE PoE	4608 × 3288	7 fps	1/2.3" ON MT9F002 rolling shutter CMOS	1.4μm × 1.4μm	8/12bits	Color
MER-2000-5GM/C-P	GigE PoE	5496 × 3672	5 fps	1" Sony IMX183 rolling shutter CMOS	2.4μm × 2.4μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	75g
Dimensions	29mm × 29mm × 38.3mm

Environmental Specifications

Operating temp.	0℃ ~ +45℃
Operating humidity	10% ~ 80%
Storage temp.	-20℃ ~ +70℃

Electrical Specifications

Power requirement	12 VDC (8-PIN connector) or PoE
I/Os	Opto-isolated 1 input/1 output, 2 GPIOs
Data interface	RJ45 with locked
Power consumption	<3W @ 12VDC，<3.75W @ PoE （MER-500-14GM/C-P:<2W@12VDC, < 2.5W@PoE)

Optical Specifications

Lens mount	C / CS – Mount

MER-U3

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-031-860U3M/C	USB3.0	640 × 480	860 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-031-860U3M NIR	USB3.0	640 × 480	860 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-041-436U3M/C	USB3.0	720 × 540	438 fps	1/2.9" Sony IMX287 global shutter CMOS	6.9μm × 6.9μm	8/10bits	Mono/Color
MER-050-560U3C	USB3.0	800 × 600	560 fps	1/3.6" ON PYTHON 500 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Color
MER-051-120U3M/C	USB3.0	808 × 608	120 fps	1/3.6" ON PYTHON 480 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-131-210U3M/C	USB3.0	1280 × 1024	210 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-131-210U3M NIR	USB3.0	1280 × 1024	210 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-132-43U3M/C	USB3.0	1292 × 964	43 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-133-54U3M/C	USB3.0	1280 × 960	54 fps	1/3" ON AR0135 global shutter CMOS	3.75μm × 3.75μm	8/10bits	Mono/Color
MER-134-93U3M/C	USB3.0	1280 × 1024	93 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-160-227U3M/C	USB3.0	1440 × 1080	227 fps	1/2.9" Sony IMX273 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-230-168U3M/C	USB3.0	1920 × 1200	168 fps	1/1.2" Sony IMX174 global shutter CMOS	5.86μm × 5.86μm	8/10bits	Mono/Color
MER-231-41U3M/C	USB3.0	1920 × 1200	41 fps	1/1.2" Sony IMX249 global shutter CMOS	5.86μm × 5.86μm	8/10bits	Mono/Color
MER-301-125U3M/C	USB3.0	2048 × 1536	125 fps	1/1.8" Sony IMX252 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-302-56U3M/C	USB3.0	2048 × 1536	56 fps	1/1.8" Sony IMX265 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-500-14U3M/C	USB3.0	2592 × 1944	14 fps	1/2.5" ON MT9P031/MT9P006 rolling shutter CMOS	2.2μm × 2.2μm	8/10bits	Mono/Color
MER-502-79U3M/C	USB3.0	2448 × 2048	79 fps	2/3" Sony IMX250 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-502-79U3M POL	USB3.0	2448 × 2048	79 fps	2/3" Sony IMX250MZR global shutter CMOS	3.45μm × 3.45μm	8/10bits	Polarization
MER-503-36U3M/C	USB3.0	2448 × 2048	36 fps	2/3" Sony IMX264 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-630-60U3M/C	USB3.0	3088 × 2064	60 fps	1/1.8" Sony IMX178 rolling shutter CMOS	2.4μm × 2.4μm	8/10bits	Mono/Color

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-1070-14U3M/C	USB3.0	3840 × 2748	14 fps	1/2.3" ON MT9J003 rolling shutter CMOS	1.67μm × 1.67μm	8/12bits	Mono/Color
MER-1220-32U3M/C	USB3.0	4024 × 3036	32.3 fps	1/1.7" Sony IMX226 rolling shutter CMOS	1.85μm × 1.85μm	8/12bits	Mono/Color
MER-1520-13U3C	USB3.0	4608 × 3288	13 fps	1/2.3" ON MT9F002 rolling shutter CMOS	1.4μm × 1.4μm	8/12bits	Color
MER-1810-21U3C	USB3.0	4912 × 3684	21 fps	1/2.3" ON AR1820 rolling shutter CMOS	1.25μm × 1.25μm	8/12bits	Color
MER-2000-19U3M/C	USB3.0	5496 × 3672	19.6 fps	1" Sony IMX183 rolling shutter CMOS	2.4μm × 2.4μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	57g
Dimensions	29mm × 29mm × 29mm

Environmental Specifications

Operating temp.	0°C ~ +45°C
Operating humidity	10% ~ 80%
Storage temp.	-20°C ~ +70°C

Electrical Specifications

Power requirement	5 VDC (USB3.0)
I/Os	Opto-isolated 1 input/1 output, 2 GPIOs
Data interface	USB3.0 with locked
Power consumption	≤2.7W@5VDC

Optical Specifications

Lens mount	C / CS – Mount

MER-U3-L

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-031-860U3M/C-L	USB3.0	640 × 480	860 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-031-860U3M-L NIR	USB3.0	640 × 480	860 fps	1/4" ON PYTHON 300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-041-436U3M/C-L	USB3.0	720 × 540	438 fps	1/2.9" Sony IMX287 global shutter CMOS	6.9μm × 6.9μm	8/10bits	Mono/Color
MER-050-560U3C-L	USB3.0	800 × 600	560 fps	1/3.6" ON PYTHON 500 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Color
MER-051-120U3M/C-L	USB3.0	808 × 608	120 fps	1/3.6" ON PYTHON 480 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-131-210U3M/C-L	USB3.0	1280 × 1024	210 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-131-210U3M-L NIR	USB3.0	1280 × 1024	210 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono, NIR
MER-132-43U3M/C-L	USB3.0	1292 × 964	43 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-133-54U3M/C-L	USB3.0	1280 × 960	54 fps	1/3" ON AR0135 global shutter CMOS	3.75μm × 3.75μm	8/10bits	Mono/Color
MER-134-93U3M/C-L	USB3.0	1280 × 1024	93 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8/10bits	Mono/Color
MER-160-227U3M/C-L	USB3.0	1440 × 1080	227 fps	1/2.9" Sony IMX273 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-230-168U3M/C-L	USB3.0	1920 × 1200	168 fps	1/1.2" Sony IMX174 global shutter CMOS	5.86μm × 5.86μm	8/10bits	Mono/Color

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-231-41U3M/C-L	USB3.0	1920 × 1200	41 fps	1/1.2" Sony IMX249 global shutter CMOS	5.86μm × 5.86μm	8/10bits	Mono/Color
MER-301-125U3M/C-L	USB3.0	2048 × 1536	125 fps	1/1.8" Sony IMX252 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-302-56U3M/C-L	USB3.0	2048 × 1536	56 fps	1/1.8" Sony IMX265 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-500-14U3M/C-L	USB3.0	2592 × 1944	14 fps	1/2.5" ON MT9P031/MT9P006 rolling shutter CMOS	2.2μm × 2.2μm	8/10bits	Mono/Color
MER-502-79U3M/C-L	USB3.0	2448 × 2048	79 fps	2/3" Sony IMX250 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-503-36U3M/C-L	USB3.0	2448 × 2048	36 fps	2/3" Sony IMX264 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color
MER-630-60U3M/C-L	USB3.0	3088 × 2064	60 fps	1/1.8" Sony IMX178 rolling shutter CMOS	2.4μm × 2.4μm	8/10bits	Mono/Color
MER-1070-14U3M/C-L	USB3.0	3840 × 2748	14 fps	1/2.3" ON MT9J003 rolling shutter CMOS	1.67μm × 1.67μm	8/12bits	Mono/Color
MER-1220-32U3M/C-L	USB3.0	4024 × 3036	32.3 fps	1/1.7" Sony IMX226 rolling shutter CMOS	1.85μm × 1.85μm	8/12bits	Mono/Color
MER-1520-13U3C-L	USB3.0	4608 × 3288	13 fps	1/2.3" ON MT9F002 rolling shutter CMOS	1.4μm × 1.4μm	8/12bits	Color
MER-1810-21U3C-L	USB3.0	4912 × 3684	21 fps	1/2.3" ON AR1820 rolling shutter CMOS	1.25μm × 1.25μm	8/12bits	Color
MER-2000-19U3M/C-L	USB3.0	5496 × 3672	19.6 fps	1" Sony IMX183 rolling shutter CMOS	2.4μm × 2.4μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	53g
Dimensions	29mm × 29mm × 29mm

Environmental Specifications

Operating temp.	0°C ~ +45°C
Operating humidity	10% ~ 80%
Storage temp.	-20°C ~ +70°C

Electrical Specifications

Power requirement	5 VDC (USB3.0)
I/Os	NULL
Data interface	USB3.0 with locked
Power consumption	≤2.7W@5VDC

Optical Specifications

Lens mount	C / CS – Mount

MER-U

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-030-120UC	Mini USB 2.0	656 × 492	120 fps	1/4" Sony ICX618 global shutter CCD	5.6μm × 5.6μm	8/12bits	Color
MER-040-60UM/C	Mini USB 2.0	752 × 480	60 fps	1/3" ON MT9V032 global shutter CMOS	6.0μm × 6.0μm	8/10bits	Mono/Color
MER-125-30UC	Mini USB 2.0	1292 × 964	30 fps	1/3" Sony ICX445 global shutter CCD	3.75μm × 3.75μm	8/12bits	Color
MER-130-30UM	Mini USB 2.0	1280 × 1024	30 fps	1/1.8" ON MT9M001 rolling shutter CMOS	5.2μm × 5.2μm	8/10bits	Mono

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-132-30UM/C	Mini USB 2.0	1292 × 964	30 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-310-12UC	Mini USB 2.0	2048 × 1536	12 fps	1/2" ON MT9T001 rolling shutter CMOS	3.2μm × 3.2μm	8/10bits	Color
MER-500-7UM/C	Mini USB 2.0	2592 × 1944	7 fps	1/2.5" ON MT9P031/MT9P006 rolling shutter CMOS	2.2μm × 2.2μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	42g
Dimensions	29mm × 29mm × 29mm

Environmental Specifications

Operating temp.	0°C ~ +60°C
Operating humidity	10% ~ 80%

Electrical Specifications

Power requirement	5 VDC (USB2.0)
I/Os	Opto-isolated 1 input/1 output
Data interface	Mini USB type B
Power consumption	<1W@5V DC (MER-030-120UC, MER-125-30UC, MER-132-30UM/C: <1.2W@5V DC)

Optical Specifications

Lens mount	C / CS – Mount

MER-U-L

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MER-030-120UC-L	Mini USB 2.0	656 × 492	120 fps	1/4" Sony ICX618 global shutter CCD	5.6μm × 5.6μm	8/12bits	Color
MER-040-60UM/C-L	Mini USB 2.0	752 × 480	60 fps	1/3" ON MT9V032 global shutter CMOS	6.0μm × 6.0μm	8/10bits	Mono/Color
MER-125-30UC-L	Mini USB 2.0	1292 × 964	30 fps	1/3" Sony ICX445 global shutter CCD	3.75μm × 3.75μm	8/12bits	Color
MER-130-30UM-L	Mini USB 2.0	1280 × 1024	30 fps	1/1.8" ON MT9M001 rolling shutter CMOS	5.2μm × 5.2μm	8/10bits	Mono
MER-132-30UM/C-L	Mini USB 2.0	1292 × 964	30 fps	1/3" Sharp RJ33J global shutter CCD	3.75μm × 3.75μm	8/12bits	Mono/Color
MER-310-12UC-L	Mini USB 2.0	2048 × 1536	12 fps	1/2" ON MT9T001 rolling shutter CMOS	3.2μm × 3.2μm	8/10bits	Color
MER-500-7UM/C-L	Mini USB 2.0	2592 × 1944	7 fps	1/2.5" ON MT9P031/MT9P006 rolling shutter CMOS	2.2μm × 2.2μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	40g
Dimensions	29mm × 29mm × 29mm

Environmental Specifications

Operating temp.	0°C ~ +60°C
Operating humidity	10% ~ 80%

Electrical Specifications

Power requirement	5 VDC (USB2.0)
I/Os	NULL
Data interface	Mini USB type B
Power consumption	<1W@5V DC (MER-030-120UC-L, MER-125-30UC-L, MER-132-30UM/C-L: <1.2W@5V DC)

Optical Specifications

Lens mount	C / CS – Mount

MARS Series

The MARS series camera is DAHENG IMAGING's latest high resolution camera with large and high quality sensor, such as Sony and Onsemi. Thanks to the compact size, robust housing and locking screw connectors, the MARS series can secure the reliability of cameras deployed in harsh industrial environments.

The MARS series camera is featured in high resolution, high definition and low noise. The Gigabit Ethernet interface is used for long distance transmission. The MARS series is especially designed for industrial inspection, rail traffic, scientific research and 3D reconstruction and so on.

- Support Binning, Decimation, Gamma, Sharpness, Digital Shift, Reverse X/Y and Black Level (except MARS-880-13GM/C-P and MARS-1230-9GM/C-P)
- Flat Field Correction (only for MARS-3140-3GM/C-P)
- Defect Pixel Correction (only for MARS-U3 series)
- Programmable LUTs and storable user sets
- Programmable ROI, increased frame rate with partial scan
- Adjustable packet-size and packet-delay, and reserved bandwidth (except MARS-U3 series)
- 16KB user data area for saving algorithm coefficients, parameter configuration, etc. (except MARS-880-13GM/C-P and MARS-1230-9GM/C-P)
- Reliable data transmission and compatible with various network cards (only for MARS-G-P series)
- Regulations: CE, RoHS, GenICam, GigE Vision, USB3 Vision, IEEE802.3af (PoE)
- Support a variety of 3rd-party software such as HALCON, MERLIC and LabVIEW
- Optimized software package for 32/64bit Windows, support Linux, Android (only for MARS-U3 series), ARMv7, ARMv8, etc.

MARS-G-P

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MARS-880-13GM/C-P	GigE PoE	4096 × 2160	13 fps	1" Sony IMX267 global shutter CMOS	3.45μm × 3.45μm	8/12bits	Mono/Color
MARS-1230-9GM/C-P	GigE PoE	4096 × 3000	9 fps	1.1" Sony IMX304 global shutter CMOS	3.45μm × 3.45μm	8/12bits	Mono/Color
MARS-3140-3GM/C-P	GigE PoE	6464 × 4852	3.4fps	APS-C (27.9mm) Sony IMX342 global shutter CMOS	3.45μm × 3.45μm	8/12bits	Mono/Color

Mechanical Specifications

Weight	274g (MARS-3140-3GM/C-P: 292g)
Dimensions	62mm × 62mm × 50.4mm (MARS-3140-3GM/C-P: 62mm × 62mm × 52.1mm)

Environmental Specifications

Operating temp.	0℃ ~ +45℃
Operating humidity	10% ~ 80%
Storage temp.	-20℃ ~ +70℃

Electrical Specifications

Power requirement	+12V DC (±10%) ~ +24V DC (±10%) or PoE
I/Os	Opto-isolated 1 input/1 output, 2 GPIOs
Data interface	RJ45 with locked
Power consumption	<3W@12VDC ,<3.5W@ PoE (MARS-3140-3GM/C-P: <5.5W@12VDC, <6W@ PoE)

Optical Specifications

Lens mount	C – Mount (MARS-3140-3GM/C-P-M02: F-Mount, MARS-3140-3GM/C-P-M03: M42-Mount, back-flange distance is 12mm)

MARS-U3

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
MARS-1230-23U3M/C	USB3.0	4096 × 3000	23.4 fps	1.1" Sony IMX304 global shutter CMOS	3.45μm × 3.45μm	8/12bits	Mono/Color
MARS-1231-32U3M/C	USB3.0	4096 × 3000	32.1 fps	1.1" Sony IMX253 global shutter CMOS	3.45μm × 3.45μm	8/10bits	Mono/Color

Mechanical Specifications

Weight	281g
Dimensions	62mm × 62mm × 50.4mm

Environmental Specifications

Operating temp.	0℃ ~ +45℃
Operating humidity	10%~80%
Storage temp.	-20℃ ~ +70℃

### Electrical Specifications

Power requirement	5V DC (USB3.0)
I/Os	Opto-isolated 1 input/1 output, 2 GPIOs
Data interface	USB3.0 with locked
Power consumption	< 4W @5VDC

Optical Specifications

Lens mount	C / CS – Mount

VENUS Series

The VENUS series (VEN-U3) camera is DAHENG IMAGING's latest board level camera. The VEN-134-90U3M/C-D is a monochrome/ color USB3 Vision board level camera with two Onsemi PYTHON 1300 CMOS sensors. The VEN-134-90U3M-D NIR is a NIR enhanced USB3 Vision camera and the sensor has optimized response in the near-infrared band. There are three connection ports in the main board and each sensor board can be freely connected to one of the three ports by FPC cables, more flexible for installment and suitable for more applications. Furthermore, the VENUS series camera is powered over the USB3.0 interface. The camera has an outstanding price/performance ratio.

The VENUS series board level camera is especially designed for binocular vision applications such as handheld 3D scanner, desktop 3D scanner and so on.
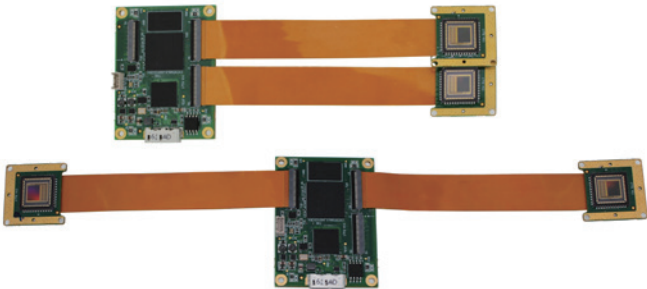
- Software reset function
- Hot plugging available
- FPC cables extension can be put in both sides or the same side
- Support Windows, Linux, Android, ARMv7, ARMv8, etc.
- The length of FPC cable can be extended up to 460mm
- Regulations: CE, RoHS, GenICam, USB3 Vision

VEN-U3

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color
VEN-134-90U3M/C-D	USB3.0	1280 × 1024 × 2	90 fps	1/2" ON PYTHON 1300 global shutter CMOS	4.8μm × 4.8μm	8bits	Mono/Color
VEN-134-90U3M-D NIR	USB3.0	1280 × 1024 × 2	90 fps	1/2" ON PYTHON1300 global shutter CMOS	4.8μm × 4.8μm	8bits	Mono, NIR

Mechanical Specifications

FPC cable extension	Up to 460mm
Dimensions	Main board: 54.0mm × 40.0mm × 6.4mm
	Sensor board: 25.4mm × 25.4mm× 6.1mm

Environmental Specifications

Operating temp.	0℃ ~ +45℃
Operating humidity	10% ~ 80%
Storage temp.	-20℃ ~ +70℃

Electrical Specifications

Power requirement	5 VDC (USB3.0)
I/Os	1 input,1 input / output
Data interface	USB3.0 with locked
Power consumption	<3.5W@5VDC

Optical Specifications

|	
Lens mount	No – Mount
	M12/C – Mount (optional)

PALLAS Series Smart Camera

The PALLAS series camera is the first industrial smart camera from DAHENG IMAGING, its processor is based on Xilinx Zynq UltraScale+ MPSoC platform with 4-core A53@1.2GHz, 2G DDR4 and 8G Flash. As an outstanding smart camera, the PALLAS series camera has many attractive features such as extremely high processing speed, compact structure, small size, low weight, low power consumption, etc. Moreover, the rugged metal housing and Hirose connectors make the camera well suitable for harsh industrial environments. In addition, the camera has three opto-isolated I/Os, 100M/1000M Adaptive Ethernet interface and RS232 serial port, which can meet the requirements of most industrial applications.

- Metal housing, Hirose connector, compact and robust
- Innovative ARM+FPGA architecture with 64-bit 4-core processor
- Graphical user interface, interactive operation
- Multiple communication interfaces
- Low power consumption (< 6W), high price/performance ratio
- Compatible with GEN<i>CAM™

Features

- Programmable ROI, increased frame rate with partial scan
- Support auto gain, auto exposure and auto white balance
- Gain, exposure and white balance programmable
- Three acquisition controls: Continuous acquisition/ Software trigger acquisition/ External trigger acquisition
- Support UART, I/O, Ethernet data transmission methods, provide light source control interface, no expansion board required
- Flash sync for firing external lights at precisely the moment when exposure is performed
- Long cable lengths: up to 100m (without any hubs, repeaters, etc.)
- 2GB RAM and 8GB flash
- 5 LEDs for checking network connection, power supply and working status
- Integrated MERLIC graphical vision software, drag-and-drop tools, no user programming required
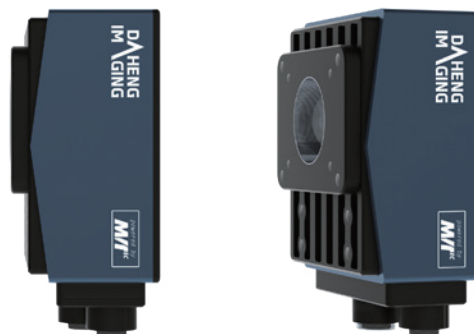
PALLAS Smart Camera (MERLIC Version)

Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color	Version
PALLAS 6513M/C-M0	100M/1000M Adaptive Ethernet	1280 × 960	54 fps	1/3" ON AR0135 global shutter CMOS	3.75μm × 3.75μm	8bits	Mono/Color	MERLIC
PALLAS 6563M/C-M0	100M/1000M Adaptive Ethernet	3096 × 2080	29 fps	1/1.8" Sony IMX178 rolling shutter CMOS	2.4μm × 2.4μm	8bits	Mono/Color	MERLIC

Mechanical Specifications

Weight	200g
Dimensions	90.7 mm x39.5mm x60.5mm

Environmental Specifications

Operating temp.	0℃ ~ +45℃
Operating humidity	10%~80%
Storage temp.	-20℃ ~ +70℃

Electrical Specifications

Power requirement	+24V DC (±10%)
I/Os	Opto-isolated 3 input/3 output, 1 RS232
Data interface	100M/1000M Adaptive Ethernet
Power consumption	< 6W@24VDC

Optical Specifications

Lens mount	C – Mount

More Versions

The PALLAS series of smart cameras are also available in open platform version PALLAS P513M/C and PALLAS P563M/C, which can be developed and programmed by users.

The open smart cameras provide operating environments such as OpenCV, Qt and Python, and support Windows and Linux platforms to develop applications.

PALLAS Smart Camera (Open Platform Version)

| Model	Interface	Resolution(H×V)	Frame Rate	Sensor	Pixel Size	Pixel Bit Depth	Mono/ Color	Version
PALLAS P513M/C	100M/1000M Adaptive Ethernet	1280 × 960	54 fps	1/3" ON AR0135 global shutter CMOS	3.75μm × 3.75μm	8bits	Mono/Color	Open Platform
PALLAS P563M/C	100M/1000M Adaptive Ethernet	3096 × 2080	29 fps	1/1.8" Sony IMX178 rolling shutter CMOS	2.4μm × 2.4μm	8bits	Mono/Color	Open Platform

Embedded Vision

Embedded vision has become very popular in recent years, and it is well suited for some applications where the primary emphasis is on low cost, power consumption, size and weight, such as pilotless automobile, unmanned aerial vehicle, robot and medical device etc. Compared with traditional PC vision solutions, embedded vision solutions are more robust, cost effective and compact.

Thanks for the tremendous progress of computational capacity, data accumulation, mathematical tools and so on, we can see the rapid growth of artificial intelligence (AI). The popularity of AI has brought much attention to deep learning. For deep learning, GPUs' highly parallel structure make them more efficient than general-purpose CPUs for algorithms where the processing of large blocks of data is done in parallel. Through Nvidia's continuous research and development, the efficiency of GPU accelerated computing platform has been greatly improved, and the cost has been greatly reduced. DAHENG IMAGING has launched a supporting suite for NVIDIA's popular ARM+GPU computing platform, providing a complete set of embedded vision solutions, including data acquisition module, image processing algorithm package, and computing platform.

Data Acquisition Module

DAHENG IMAGING's USB3.0 and GigE cameras of MERCURY series, MERCURY2 series, MARS series and VENUS series all support the ARM-Based platform and can be connected to any Linux platform, especially for ARM-Based embedded platforms with Linux operating system.
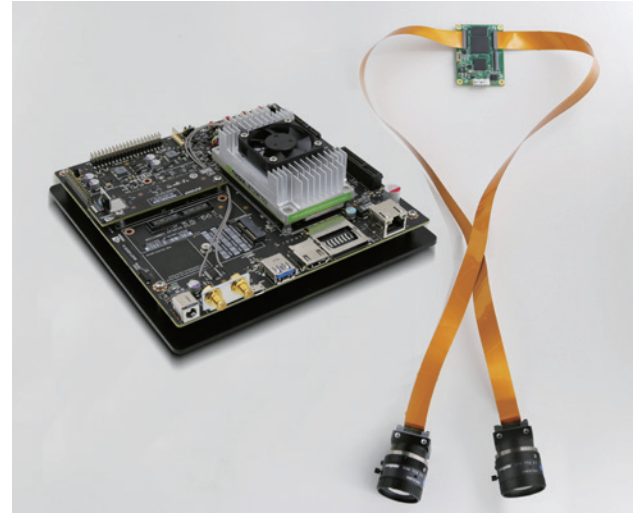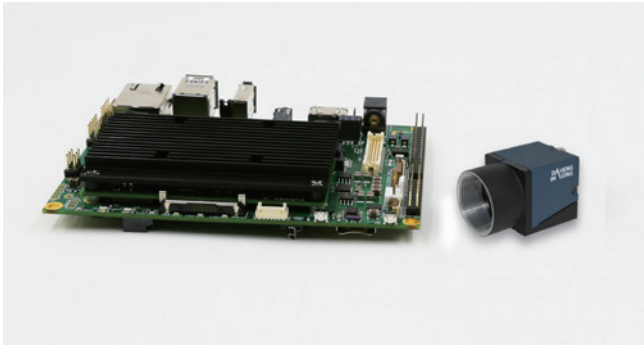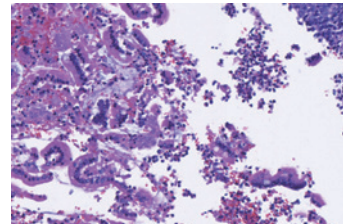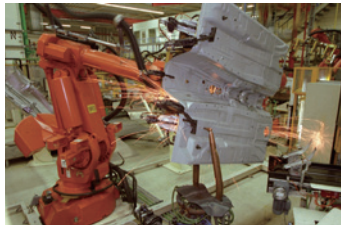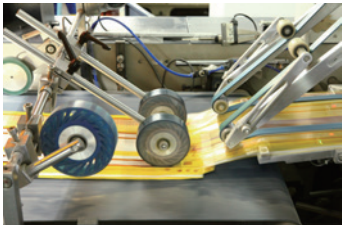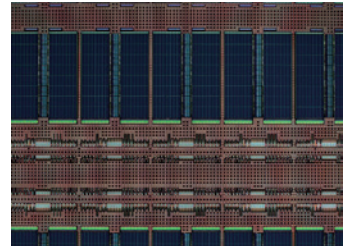

Computing Platform

The following ARM platforms were extensively tested by DAHENG IMAGING:

- NVIDIA Jetson TX1/ TX2
- NVIDIA Tegra TK1
- Toradex Apalis TK1 on Ixora Carrier Board
- Raspberry Pi 3B, incl. support of the camera module

Applications

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