X86 Smart Industrial Camera

The smart industrial camera based on the Intel Atom z8350 (1.44-1.92ghz) quad core processor, supports 0.36MP to 20MP, and is fully compatible with the SDK of our GigE and USB cameras, the software developed by customers based on Windows platform can basically be used directly, then shorten the development cycle. 2-channel external USB2.0 input, external keyboard and mouse, encryption Dogs, etc. It can be externally connected to our UB series cameras, supporting multiple cameras use; 2G memory and 32g disk are more cost-effective for general use. 4G memory and64g disk. Applicable to industrial automation, aerospace, robotics, medical biology, logistics code scanning, etc.

Product features

- CPU Intel Atom Z8350 (1.44-1.92GHZ), 2G/32G 4G/64G (Memory/disk)
- Display HDMI X1supports 1920x1080 resolution, Ethernet 1000mx1, and GigE vision camera
- Support external USB2.0 x2 port, trigger x1, flash x1, RS232 x1
- M12 12core threaded aviation connector, supporting 12v/1a power input
- 1-channel input and 2-channel output interfaces can set the output delay without processing in the program
- Support Windows 10 64bit and ubuntu16.04 64bit systems
- Built in USB2.0 interface, convenient for disassembly and assembly, and can be connected to the dongle
- Integrated light source controller, optional LED lighting components, supporting stroboscopic synchronization function

Product Selection Table

Model Number	Effective Pixels	Sensor type	Shutter method	Maximum resolution	Pixel size	Frame rate (FPS)	Target size	Minimum exposure	Sensor model	Colour
MV-ITA33GC/M	0.3MP	CMOS	Global	640X480	4.0μm	790	1/5.6"	0.00124ms	SmartSens	Color/Mono
MV-ITA133GC/M	1.3MP	CMOS	Global	1280X1024	4.0μm	245	1/2.7"	0.00194ms	SC130GS	Color/Mono
MV-ITA134GC/M	1.3MP	CMOS	Global	1280X1024	4.8μm	211	1/2"	0.0045ms	PYTHON	Color/Mono
MV-ITA200GC/M	2MP	CMOS	Global	1600X1200	4.5μm	60	1/1.8"	0.015ms	EV76C570	Color/Mono
MV-ITA202GC/M	2.3MP	CMOS	Global	1920X1200	4.8μm	165	2/3"	0.0039ms	PYTHON2000	Color/Mono
MV-ITA230GC/M	2.3MP	CMOS	Global	1920X1200	5.86μm	165	1/1.2"	0.049ms	IMX174	Color/Mono
MV-ITA231GC/M	2.3MP	CMOS	Global	1920X1200	5.86μm	40	1/1.2"	0.0201ms	IMX249	Color/Mono
MV-ITA402GC/M	4MP	CMOS	Global	2048X2048	5.5μm	88	1"	0.0054ms	CMV4000	Color/Mono
MV-ITA501GC/M	5MP	CMOS	Global	2448X2048	3.45μm	40	2/3"	0.0133ms	IMX264	Color/Mono
MV-ITA502C/M	5MP	CMOS	Rolling	2592x1944	2.2μm	59	1/2.5"	0.0084ms	AR0521	Color/Mono
MV-ITA630C/M	6.3MP	CMOS	Rolling	3088X2064	2.4μm	60	1/1.8"	0.008ms	IMX178	Color/Mono
MV-ITA890GC/M	8.9MP	CMOS	Global	4096X2160	3.45μm	32	1"	0.034ms	IMX267	Color/Mono
MV-ITA1000C/M	10MP	CMOS	Rolling	3664X2748	1.67μm	8	1/2.3"	0.049ms	MT9J003	Color/Mono
MV-ITA1201C/M	12MP	CMOS	Rolling	4000X3000	1.85μm	32	1/1.7"	0.0102ms	IMX226	Color/Mono
MV-ITA1600C/M	16MP	CMOS	Rolling	4608X3456	1.34μm	12	1/2.3"	0.0233ms	IMX206	Color/Mono
MV-ITA2000C/M	20MP	CMOS	Rolling	5488X3672	2.4μm	19.5	1"	0.0138ms	IMX183	Color/Mono

Pechnical Parameter

Model / Parameter	MV-ITA33GC/M	MV-ITA133GC/M	MV-ITA134GC/M	MV-ITA200GC/M
Sensor type	1/5.6" CMOS	1/2.7" CMOS	1/2" CMOS	1/1.8" CMOS
Color	Color/Mono	Color/Mono	Color/Mono	Color/Mono
Effective Pixels	0.3MP	1.3MP	1.3MP	2MP
Pixel size	4.0μmX4.0μm	4.0μmX4.0μm	4.8μmX4.8μm	4.5μmX4.5μm
Shutter type	Global shutter	Global shutter	Global shutter	Global shutter
Sensitivity	8 V/lux-s 540nm	8 V/Lux.s	7.3 V/lux-s 540nm	7.4V/lux-s 3200K
Pixel bit depth	8bit	8bit	8bit	10bit
Maximum resolution	640X480	1280X1024	1280X1024	1600X1200
Frame rate	790fps	245fps	211fps	60fps
Maximum gain (multiple)	8	6	16.5	8
Exposure time range (ms)	0.00124~20.7	0.00194~31	0.0045~584	0.015~91
Video output format	Color：Bayer8 Mono：Mono8	Color：Bayer8 Mono：Mono8		Color：Bayer8/Bayer12 Mono：Mono8/Mono12
CPU frequency	Intel Z8350（1.44-1.92GHZ）			
RAM	2G(Optional 4G)			
Disk	32G(Optional 64G)			

Model / Parameter	MV-ITA202GC/M	MV-ITA230GC/M	MV-ITA231GC/M	MV-ITA402GC/M
Sensor type	2/3"CMOS	1/1.2" CMOS	1/1.2" CMOS	1" CMOS
Color	Color/Mono	Color/Mono	Color/Mono	Color/Mono
Effective Pixels	2.3MP	2.3MP	2.3MP	4MP
Pixel size	4.8μmX4.8μm	5.86μmX5.86μm	5.86μmX5.86μm	5.5μmX5.5μm
Shutter type	Global shutter	Global shutter	Global shutter	Global shutter
Sensitivity	7.5 V/lux.s 550nm	Color：1016mV 1/30s Mono：825mV 1/30s	Color：1016mV 1/30s Mono：825mV 1/30s	8.5 V/lux-s 540nm
Pixel bit depth	10bit	8bit	12bit	8bit
Maximum resolution	1920X1200	1920X1200	1920X1200	2048X2048
Frame rate	165fps	165fps	40fps	88fps
Maximum gain (multiple)	8	64	249.9	16.5
Exposure time range (ms)	Low speed0.0039~256.1 High speed0.0039~5	0.049~20000	0.0201~42112	0.0054~704
Video output format	Color：Bayer8/Bayer12 Mono：Mono8/Mono12	Color：Bayer8/Bayer12 Mono：Mono8/Mono12	Color：Bayer8 Mono：Mono8	Color：Bayer8 Mono：Mono8
CPU frequency	Intel Z8350（1.44-1.92GHZ）			
RAM	2G(Optional 4G)			
Disk	32G(Optional 64G)			

Pechnical Parameter

Model / Parameter	MV-ITA501GC/M	MV-ITA502C/M	MV-ITA630C/M	MV-ITA890GC/M
Sensor type	2/3" CMOS	1/2.5" CMOS	1/1.8" CMOS	1" CMOS
Color	Color/Mono	Color/Mono	Color/Mono	Color/Mono
Effective Pixels	0.5MP	0.5MP	6.3MP	8.9MP
Pixel size	3.45μmX3.45μm	2.2μmX2.2μm	2.4μmX2.4μm	3.45μmX3.45μm
Shutter type	Global shutter	Rolling Shutter	Rolling Shutter	Global shutter
Sensitivity	Color：1146mV 1/30s Mono：915mV 1/30s	Color：18.8ke-/lux*sec Mono：36ke-lux*sec	425mV 1/30s	Color：1146mV 1/30s Mono：915mV 1/30s
Pixel bit depth	12bit	15bit	8bit	12bit
Maximum resolution	2448X2048	2592X1944	3088X2064	4096X2160
Frame rate	40fps	59fps	60fps	32fps
Maximum gain (multiple)	249.9	15	32	249.9
Exposure time range (ms)	0.0133~13924	0.0084~553.4	0.008~5000	0.034~29546.9
Video output format	Color：Bayer8/Bayer12 Mono：Mono8/Mono12	Color：Bayer8 Mono：Mono8	Color：Bayer8 Mono：Mono8	Color：Bayer8/Bayer12 Mono：Mono8/Mono12
CPU frequency	Intel Z8350（1.44-1.92GHZ）			
RAM	2G(Optional 4G)			
Disk	32G(Optional 64G)			

Model / Parameter	MV-ITA1000C/M	MV-ITA1201C/M	MV-ITA1600C/M	MV-ITA2000C/M
Sensor type	1/2.3" CMOS	1/1.7" CMOS	1/2.3" CMOS	1" CMOS
Color	Color/Mono	Color/Mono	Color/Mono	Color/Mono
Effective Pixels	10MP	12MP	16MP	20MP
Pixel size	1.67μmX1.67μm	1.85μmX1.85μm	1.34μmX1.34μm	2.4μmX2.4μm
Shutter type	Rolling shutter (GRR mode supported)	Rolling Shutter	Rolling shutter (GRR mode supported)	Rolling shutter (GRR mode supported)
Sensitivity	0.31V/lux-s 550nm	250mV 1/30s	142mV 1/30s	Color：462mV 1/30s Mono：388mV 1/30s
Pixel bit depth	12bit	8bit	12bit	8bit
Maximum resolution	3664X2748	4000X3000	4608X3456	5488X3672
Frame rate	8fps	32fps	12fps	19.5fps
Maximum gain (multiple)	8	22	16	22
Exposure time range (ms)	0.049~951	0.0102~2665.1	0.0233~7741	0.0138~3608
Video output format	Color：Bayer8/Bayer12 Mono：Mono8/Mono12	Color：Bayer8 Mono：Mono8	Color：Bayer8/Bayer12 Mono：Mono8/Mono12	Color：Bayer8 Mono：Mono8
CPU frequency	Intel Z8350（1.44-1.92GHZ）			
RAM	2G(Optional 4G)			
Disk	32G(Optional 4G)			

General Parameters

System	Win10 64-bit system is pre-installed by default, Win10 32-bit system or Ubuntu 64bit system can be optionally installed
Interface	External USB2.0x2 port, Gigabit Ethernet port x1, HDMI port x1, built-in USB2.0 port x1, light source power supply port x1, RS232x1, RTC clock
I/O port	1 optical isolation trigger input, 1 optical isolation flash output, 1 optical isolation input, 2 optical isolation outputs
Power supply	12V~24V
Power	≤18W
Lens Mount	CS-Mount, pre-installed adapter ring, compatible with C-mount lens, optional M12 Lens Mount
Dimensions	64X105X35mm(Without lens mount and rear shell interface)
Weight	<500g
Operating temperature	0~50℃
Working humidity	20~80%（No condensation）
Storage temperature	-30~60℃
Storage humidity	20~95%（No condensation）
Driver	Directshow component Halcon dedicated component Labview dedicated driver OCX component TWAIN component
Programming language pack	C/C++/C#/VB6/VB.NET/Delphi/BCB/Python/Java
Other functions	Support any size ROI custom resolution, contrast and gamma adjustment, saturation adjustment, white balance correction, black levelcorrection, custom dead point coordinate correction,ISP image processing acceleration, 3D noise reduction, custom LUT table, frame rate adjustment, custom camera name, etc.

X86 Smart Camera Dimension Drawing