



CONTRASTECH

iSpeedy Series High-Speed Camera

More than **1 million** fps



| ABOUT US

Hangzhou Contrastech Co.,Ltd. was established in 2008, dedicated to professional machine vision and image technology. As leading manufacturer and provider of machine vision products in China, the major products include industrial camera, scientific standard camera, high definition frame grabber card, industrial FA lens, telecentric lens, machine vision lights and image processing software. All products comply with international quality standards and we have more than 20 years industry experience in the fields of machine vision image acquisition and processing, optical imaging and thousands of automation practice projects.

With advanced technology and creative power of image acquisition and processing, Contrastech products have been exported to almost 100 countries and regions, and in thousands of projects have won countless affirmations and reputations. Contrastech machine vision products are well-known as innovative, flexible, stable and easy to use, enabling reliable inspection in many applications.



For more product information and requirements, please feel free to contact us at any time!

UP TO
1150000
FPS

iSpeedy Series High-Speed Camera

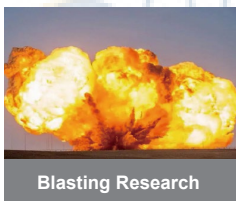


► Features

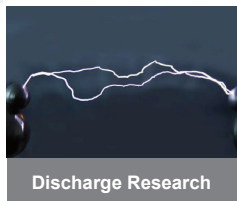
Full-featured high-speed cameras for high-end scientific research, national defense industry, aerospace, high-speed industry and other fields. Special customized sensor and unique circuit design, up to 170Gbps effective bandwidth and excellent imaging quality. Multiple expandable functional connections provide more possibilities for high-speed imaging applications.

Contrastech iSpeedy series cameras embody strict quality control, and while providing excellent high-speed performance, they also support up to 20TB optional memory for long-term recording.

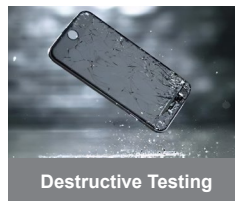
► Applications



Blasting Research



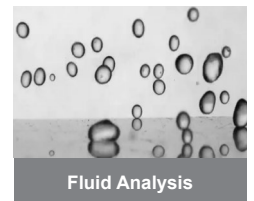
Discharge Research



Destructive Testing



Process Improvement



Fluid Analysis

► Product Description

- *Up to 64 memory partitions
- *Dual power interface and detachable lens
- *10GigE data interface, compatible with GigE
- *Automatic triggering of image changes
- *Rich ISP processing and provide high-definition color quality
- *Factory PRNU color and dark field correction
- *Support remote turning on and off of fans
- *Working speed automatically adapts to different temperatures
- *GPU acceleration technology, quickly export massive data

► Optional Lens

EFL (mm)	Aperture (F/#)	Angle of View (35mm full frame)	Minimum Object Distance	Filter Screw Size	Weight	Mount
35mm	F1.4-F16	63.4°	0.3m	67mm	665g	F-Mount
50mm	F1.4-F16	46°	0.45m	58mm	280g	F-Mount
100mm	F2.8-F32	24.4°	0.247m	67mm	638g	F-Mount
100mm	F2.8-F32	24°30'	0.3m	55mm	515g	F-Mount

► Specification

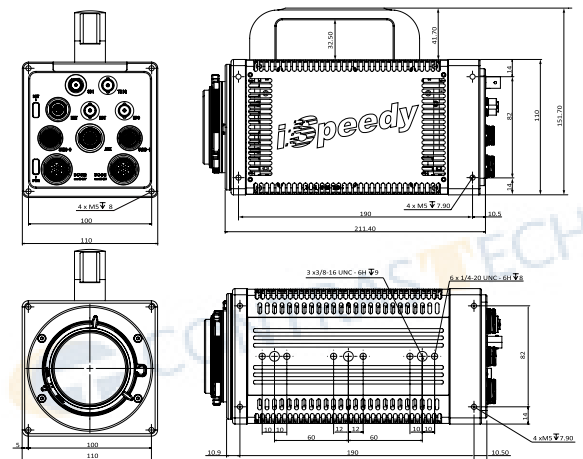
Camera	
Model	iSpeedy158MT13M/C
Full Resolution	1280×1024
Full Frame Rate	15800fps
Maximum Frame Rate	1150000fps
Minimum Exposure Time	100ns
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 160G, 320G
Extended Memory	Choose from 4T, 12T, 24T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -40–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	160GB	320GB	4TB	12TB	24TB
1280×1024	15800 fps	2.4 s	9.8 s	19.6 s	4 min	12 min	24 min
1280×768	21100 fps	2 s	8 s	16 s	3.4 min	10 min	20 min
1280×512	31500 fps	2 s	8 s	16 s	3.4 min	10 min	20 min
1280×256	62500 fps	2.1 s	9.4 s	18.8 s	3.5 min	10 min	20 min
1280×128	121000 fps	2.1 s	9.4 s	18.8 s	3.6 min	11 min	22 min
1280×64	221000 fps	2.3 s	9.2 s	18.4 s	3.9 min	12 min	24 min
1280×32	410000 fps	2.5 s	10 s	20 s	4.2 min	12.6 min	25 min
1280×8	1150000 fps	3.6 s	13.2 s	26.4 s	6 min	18 min	36 min

*Recording time with 8bit grayscale

► Dimensions



► Specification

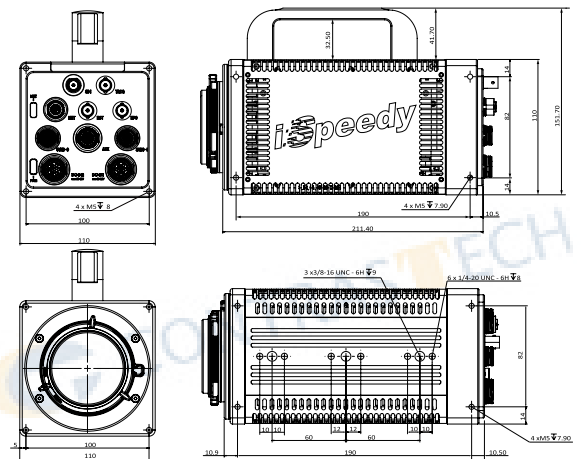
Camera	
Model	iSpeedy136MT13M/C
Full Resolution	1280×1024
Full Frame Rate	13600fps
Maximum Frame Rate	1000000fps
Minimum Exposure Time	1us (standard), 100ns (optional)
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IIRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
1280×1024	13600fps	2.4 s	4.8 s	9.6 s	8 min	24 min	40 min
1280×768	18000fps	2.4 s	4.8 s	9.6 s	8 min	24 min	40 min
1280×640	21000fps	2.6 s	5.2 s	10.4 s	8 min	25 min	42 min
1280×512	27000fps	1.9 s	3.8 s	7.6 s	6 min	18 min	30 min
1280×256	53000fps	2.6 s	5.2 s	10.4 s	8.6 min	26 min	42 min
1280×128	104000fps	2.6 s	5.2 s	10.4 s	8.6 min	26 min	42 min
1280×64	189000fps	2.6 s	5.2 s	10.4 s	8.6 min	26 min	42 min
1280×8	1000000fps	4.1 s	8.2 s	16.4 s	13.6 min	40 min	68 min

*Recording time with 8bit grayscale

► Dimensions



► Specification

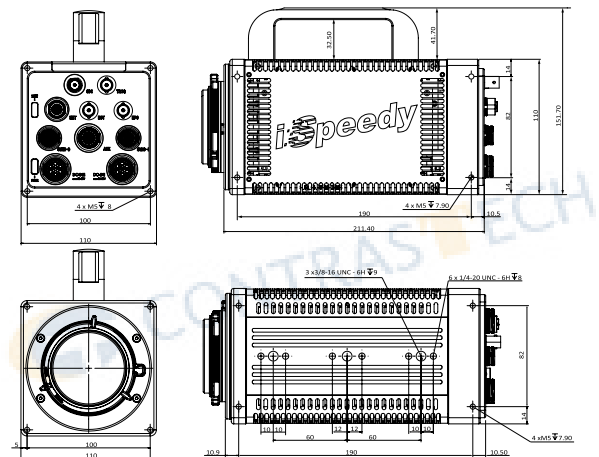
Camera	
Model	iSpeedy95MT13M/C
Full Resolution	1280×1024
Full Frame Rate	9500fps
Maximum Frame Rate	705000fps
Minimum Exposure Time	1us (standard), 100ns (optional)
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
1280×1024	9500fps	3.4 s	6.8 s	13.6 s	11 min	33 min	55 min
1280×768	12900fps	2.7 s	5.4 s	10.8 s	9 min	27 min	45 min
1280×512	19300fps	3 s	6 s	8 s	10 min	30 min	50 min
1280×256	38000fps	2.7 s	5.4 s	10.8 s	9 min	27 min	45 min
1280×128	75000fps	2.7 s	5.4 s	10.8 s	9 min	27 min	45 min
1280×64	135000fps	2.7 s	5.4 s	10.8 s	9 min	27 min	45 min
1280×8	705000fps	4.1 s	8.2 s	16.4 s	13.6 min	40 min	68 min

*Recording time with 8bit grayscale

► Dimensions



► **Specification**

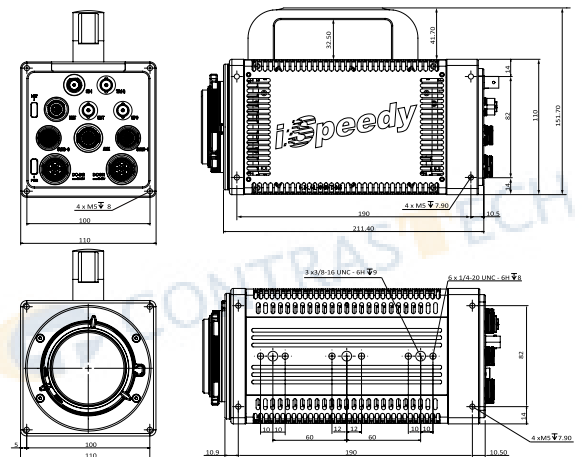
Camera	
Model	iSpeedy66MT20M/C
Full Resolution	2048×1024
Full Frame Rate	6600fps
Maximum Frame Rate	50000fps
Minimum Exposure Time	1us
Pixel Size	9um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► **Performance**

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2048×1024	6600fps	3.1 s	6.2 s	12.4 s	10 min	30 min	50 min
2048×768	8500fps	3.1 s	6.2 s	12.4 s	10 min	30 min	50 min
2048×512	11000fps	3.7 s	7.4 s	14.8 s	12 min	36 min	60 min
2048×256	17000fps	4.8 s	9.6 s	19.2 s	16 min	48 min	80 min
2048×128	23000fps	7.1 s	14.2 s	28.4 s	23 min	69 min	115 min
2048×64	28000fps	11.7 s	23.4 s	46.8 s	39 min	117 min	195 min
2048×32	50000fps	13.1 s	26.2 s	54.4 s	43 min	129 min	215 min

*Recording time with 8bit grayscale

► **Dimensions**



► Specification

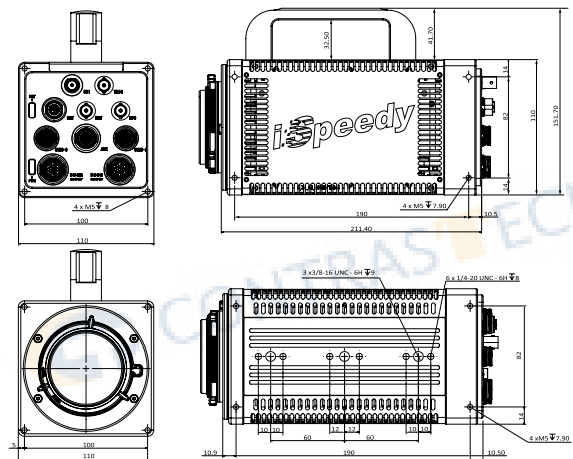
Camera	
Model	iSpeedy40MT20M/C
Full Resolution	2048×1024
Full Frame Rate	4000fps
Maximum Frame Rate	25000fps
Minimum Exposure Time	1us
Pixel Size	9um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IIRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2048×1024	4000fps	4.8 s	9.6 s	19.2 s	16 min	48 min	80 min
2048×768	5000fps	5.4 s	10.8 s	21.6 s	18 min	54 min	90 min
2048×512	5600fps	9.1 s	18.2 s	36.4 s	30 min	90 min	150 min
2048×256	9000fps	9.1 s	18.2 s	36.4 s	30 min	90 min	150 min
2048×128	12000fps	13.7 s	27.4 s	54.8 s	45 min	135 min	225 min
2048×64	20000fps	16.4 s	32.8 s	65.6 s	54 min	162 min	270 min
2048×32	25000fps	26.3 s	52.6 s	105.2 s	87 min	261 min	435 min

*Recording time with 8bit grayscale

► Dimensions



► **Specification**

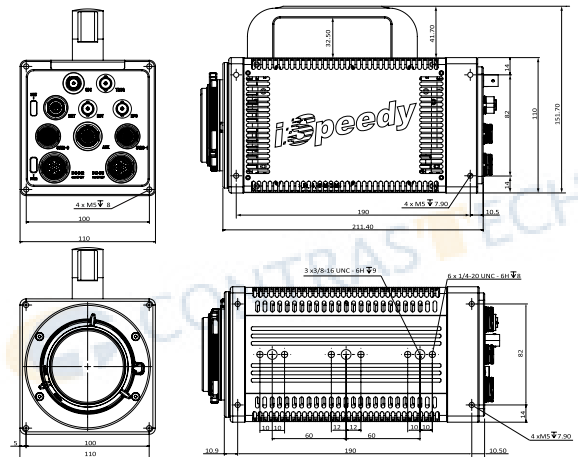
Camera	
Model	iSpeedy20MT20M/C
Full Resolution	2048×1024
Full Frame Rate	2000fps
Maximum Frame Rate	14000fps
Minimum Exposure Time	1us
Minimum Exposure Time	9um
Pixel Size	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transfered to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► **Performance**

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2048×1024	2000fps	10.2 s	20.4 s	40.8 s	34 min	102 min	170 min
2048×768	2500fps	10.9 s	21.8 s	43.6 s	36 min	108 min	180 min
2048×512	3000fps	13.6 s	27.2 s	54.4 s	45 min	135 min	225 min
2048×256	4500fps	18.2 s	36.4 s	72.8 s	60 min	180 min	300 min
2048×128	5600fps	29 s	58 s	116 s	96 min	288 min	480 min
2048×64	12000fps	27.2 s	54.4 s	108.8 s	90 min	270 min	450 min
2048×32	14000fps	46.8 s	93.6 s	187.2 s	156 min	468 min	780 min

*Recording time with 8bit grayscale

► **Dimensions**



► Specification

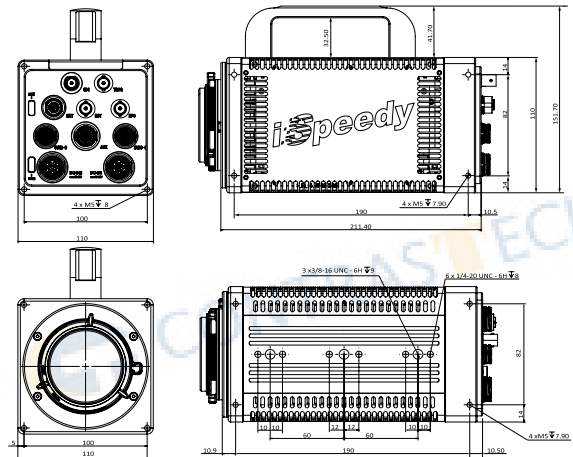
Camera	
Model	iSpeedy10MT20M/C
Full Resolution	2048×1024
Full Frame Rate	1000fps
Maximum Frame Rate	10000fps
Minimum Exposure Time	1us
Pixel Size	9um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2048×1024	1000fps	20.4 s	40.8 s	81.6 s	68 min	204 min	304 min
2048×768	1600fps	17 s	34 s	68 s	56 min	168 min	280 min
2048×512	2000fps	20.4 s	40.8 s	81.6 s	68 min	204 min	340 min
2048×256	4000fps	20.4 s	40.8 s	81.6 s	68 min	204 min	340 min
2048×128	5000fps	32 s	64 s	128 s	106 min	318 min	530 min
2048×64	8000fps	41 s	82 s	164 s	136 min	408 min	680 min
2048×32	10000fps	65.5 s	131 s	262 s	218 min	654 min	1090 min

*Recording time with 8bit grayscale

► Dimensions



► **Specification**

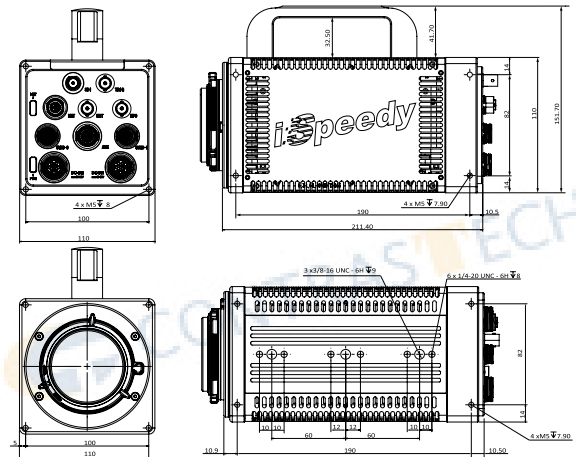
Camera	
Model	iSpeedy36MT51M/C
Full Resolution	2560×2016
Full Frame Rate	3600fps
Maximum Frame Rate	50000fps
Minimum Exposure Time	1us
Pixel Size	9um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► **Performance**

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2560×2016	3600fps	2.3 s	4.6 s	9.2 s	7 min	21 min	35 min
2560×1280	5600fps	2.3 s	4.6 s	9.2 s	7 min	21 min	35 min
2560×1024	6600fps	2.3 s	4.6 s	9.2 s	7 min	21 min	35 min
2560×256	11000fps	2.9 s	5.8 s	11.6 s	9 min	27 min	45 min
2560×128	17000fps	4.5 s	9 s	18 s	15 min	45 min	75 min
2560×64	23000fps	5.5 s	11 s	22 s	18 min	54 min	90 min
2560×32	50000fps	10.4 s	22.8 s	45.6 s	34 min	102 min	170 min

*Recording time with 8bit grayscale

► **Dimensions**



► Specification

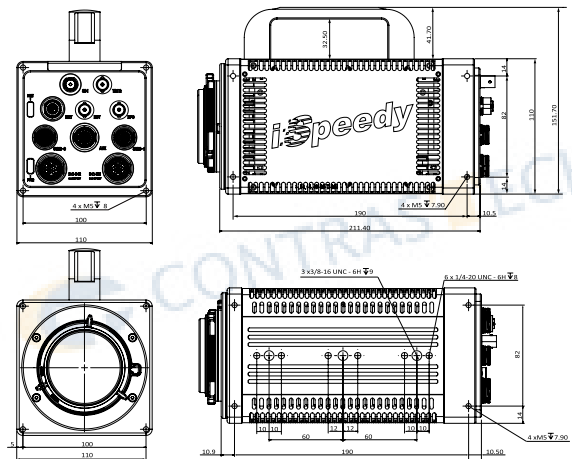
Camera	
Model	iSpeedy20MT51M/C
Full Resolution	2560×2016
Full Frame Rate	2000fps
Maximum Frame Rate	25000fps
Minimum Exposure Time	1us
Pixel Size	9um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2560×2016	2000fps	4.1 s	8.2 s	16.4 s	13 min	39 min	65 min
2560×1280	3000fps	4.1 s	8.2 s	16.4 s	13 min	39 min	65 min
2560×1024	4000fps	4.1 s	8.2 s	16.4 s	13 min	39 min	65 min
2560×256	5600fps	5.8 s	11.6 s	23.2 s	19 min	57 min	95 min
2560×128	9000fps	7.2 s	14.4 s	28.8 s	24 min	72 min	120 min
2560×64	12000fps	10.8 s	21.6 s	43.2 s	36 min	108 min	180 min
2560×32	25000fps	21 s	42 s	84 s	70 min	210 min	350 min

*Recording time with 8bit grayscale

► Dimensions



► Specification

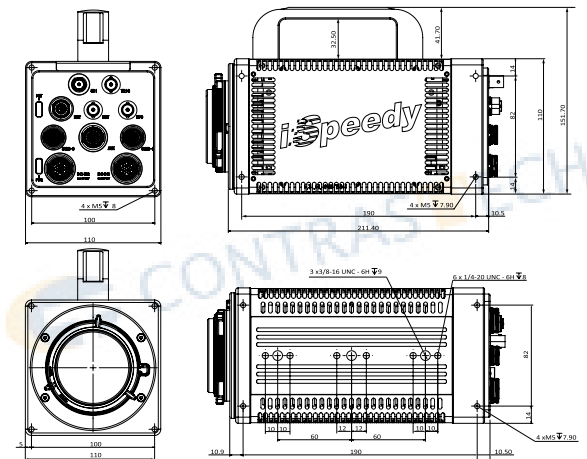
Camera	
Model	iSpeedy10MT51M/C
Full Resolution	2560×2016
Full Frame Rate	1000fps
Maximum Frame Rate	14000fps
Minimum Exposure Time	1us
Pixel Size	9um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO67000(Mono); ISO23000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transfered to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
2560×2016	1000fps	8 s	16 s	32 s	26 min	78 min	130 min
2560×1280	1600fps	10 s	20 s	40 s	33 min	99 min	165 min
2560×1024	2000fps	8 s	16 s	32 s	26 min	78 min	130 min
2560×256	3000fps	10.8 s	21.4 s	42.8 s	36 min	108 min	180 min
2560×128	4500fps	14.4 s	28.8 s	57.6 s	48 min	144 min	240 min
2560×64	5600fps	23.5 s	47 s	94 s	78 min	234 min	390 min
2560×32	14000fps	37 s	74 s	148 s	123 min	369 min	615 min

*Recording time with 8bit grayscale

► Dimensions



► Specification

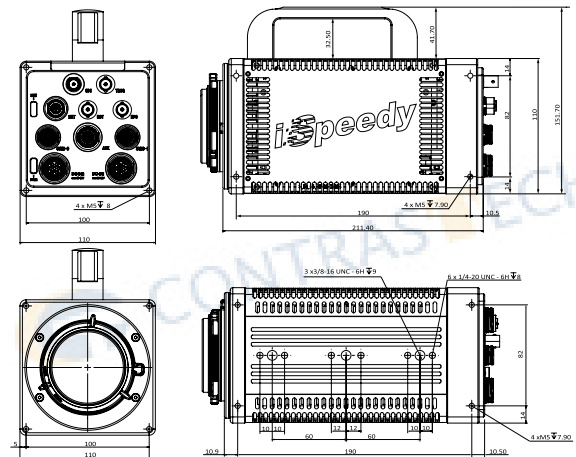
Camera	
Model	iSpeedy45MT51M/C
Full Resolution	2560×2016
Full Frame Rate	4500fps
Maximum Frame Rate	60000fps
Minimum Exposure Time	1us
Pixel Size	9 um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	/
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO10000(Mono); ISO3000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	/	/	/
2560×2016	4500fps	1.8 s	3.6 s	7.2 s			
2560×1280	6600fps	1.9 s	3.8 s	7.6 s			
2560×1024	8000fps	2 s	4 s	8 s			
2560×512	13000fps	2.5 s	5 s	10 s			
2560×256	20000fps	3.2 s	6.4 s	12.8 s			
2560×128	28000fps	4.6 s	9.2 s	18.4 s			
2560×32	60000fps	8.7 s	17.4 s	34.8 s			

*Recording time with 8bit grayscale

► Dimensions



► **Specification**

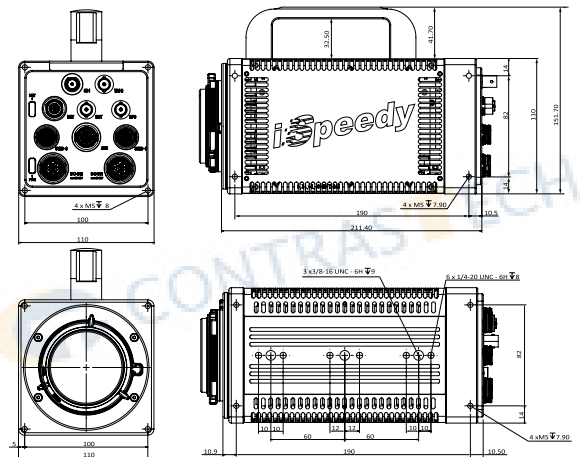
Camera	
Model	iSpeedy20MT80M/C
Full Resolution	4096×2048
Full Frame Rate	2000fps
Maximum Frame Rate	17700fps
Minimum Exposure Time	1us
Pixel Size	4.5um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO10000(Mono); ISO3000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transfered to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► **Performance**

Resolution	Frame Rate	Recording Time (memory)				Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB	
4096×2048	2000fps	2.5 s	5 s	10 s	4 min	12 min	20 min	
4096×1536	2500fps	2.5 s	5 s	10 s	4 min	12 min	20 min	
4096×1024	3800fps	2.5 s	5 s	10 s	4 min	12 min	20 min	
4096×512	6900fps	2.8 s	5.6 s	11.2 s	5 min	15 min	25 min	
4096×256	9600fps	3 s	6 s	12 s	5 min	15 min	25 min	
4096×128	17700fps	4 s	8 s	16 s	7 min	21 min	35 min	

*Recording time with 8bit grayscale

► **Dimensions**



► Specification

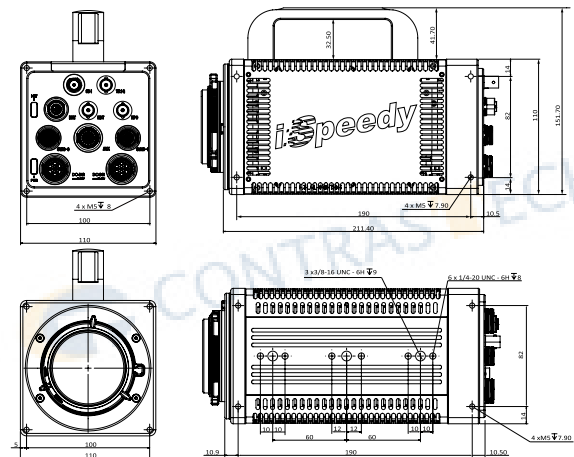
Camera	
Model	iSpeedy10MT210M/C
Full Resolution	5120×4096
Full Frame Rate	1000fps
Maximum Frame Rate	17100fps
Minimum Exposure Time	1us
Pixel Size	4.5um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	Choose from 40G, 80G, 160G
Extended Memory	Choose from 4T, 12T, 20T
Analog Gain	×2、×4、×8
ROI	Supported
Sensitivity	ISO10000(Mono); ISO3000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	217D×110W×110H, excluding projecting parts (3.8kg)
Operating Temperature/ Humidity	Standard -10~50°C , below 95% (no condensation); -35~65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB code signal. Output: Trigger (TTL/switch) signal, sync signal, ready signal, in-exposure signal, in-record signal
Video Signal Output	SDI, Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	Dual power supply, DC24V@55W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		40GB	80GB	160GB	4TB	12TB	20TB
5120×4096	1000fps	1.9 s	3.8 s	7.6 s	3 min	12 min	15 min
5120×2048	1950fps	1.9 s	3.8 s	7.6 s	3 min	12 min	15 min
5120×1024	3600fps	2.2 s	4.4 s	8.8 s	3 min	12 min	15 min
5120×512	6100fps	2.2 s	4.4 s	8.8 s	3 min	12 min	15 min
5120×256	9000fps	3.5 s	7 s	14 s	6 min	18 min	30 min
5120×128	17100fps	3.5 s	7 s	14 s	6 min	18 min	30 min

*Recording time with 8bit grayscale

► Dimensions



UP TO
55000
FPS

iSpeedy SE Series

High-Speed Camera

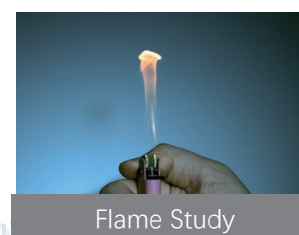
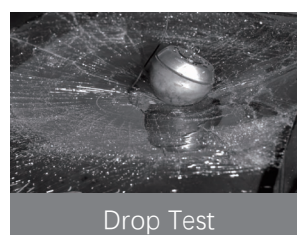
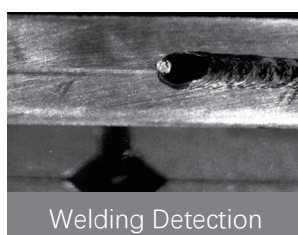
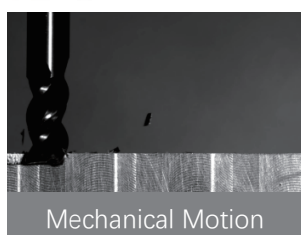


▶ Product Description

Full-featured high-speed cameras for high-end scientific research, national defense industry, aerospace, high-speed industry and other fields. which has a perfect balance of body size and heat dissipation through its 20-layer PCB stacking design and 10Gbps Serdes on-board interconnection technology.

Contrastech iSpeedy SE series cameras embody strict quality control, While offering excellent high-speed performance, At the same time, thanks to the self-developed array parallel storage architecture, the maximum storage in the device can be expanded to 4TB.

▶ Applications



▶ Optional Lens

EFL (mm)	Aperture (F/#)	Angle of View (35mm full frame)	Minimum Object Distance	Filter Screw Size	Weight	Mount
35mm	F1.4-F16	63.4°	0.3m	67mm	665g	F-Mount
50mm	F1.4-F16	46°	0.45m	58mm	280g	F-Mount
100mm	F2.8-F32	24.4°	0.247m	67mm	638g	F-Mount
100mm	F2.8-F32	24°30'	0.3m	55mm	515g	F-Mount

► **Specification**

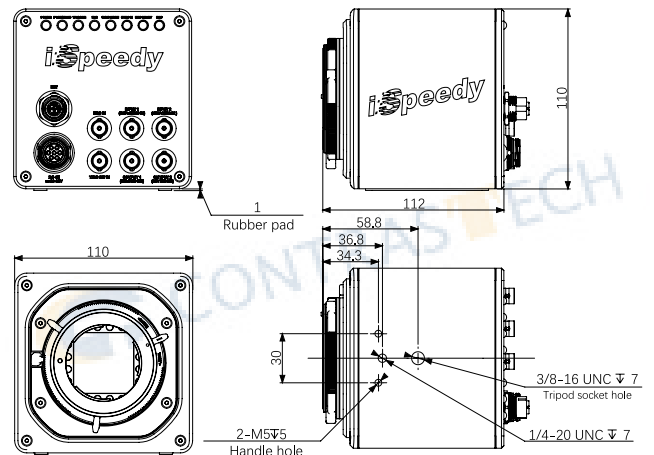
Camera	
Model	iSpeedy80MT13M/C-SE
Full Resolution	1280×1024
Full Frame Rate	8000fps
Maximum Frame Rate	550000fps
Minimum Exposure Time	1us (standard), 100ns (optional)
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	16G, 32G, 64G (Optional)
Extended Memory	1T, 2T, 4T (Optional)
Analog Gain	×2、×4、×8
ROI	Support
Sensitivity	ISO56000(Mono); ISO21000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	90D×110W×110H, excluding projecting parts (<1.6kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB. Output: Trigger signal, sync signal, ready signal
Video Signal Output	Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	DC24V@<30W

► **Performance**

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		16GB	32GB	64GB	1TB	2TB	4TB
1280×1024	8000fps	1.6 s	3.2 s	6.4 s	102 s	204 s	408 s
1280×800	10000fps	1.6 s	3.2 s	6.4 s	102 s	204 s	408 s
1280×512	16000fps	1.6 s	3.2 s	6.4 s	102 s	204 s	408 s
1280×256	32000fps	1.6 s	3.2 s	6.4 s	102 s	204 s	408 s
1280×128	64000fps	1.6 s	3.2 s	6.4 s	102 s	204 s	408 s
1280×8	550000fps	3 s	6 s	12 s	192 s	384 s	768 s

*The above recording time (hard disk) are non-real writing time;
 *The above recording time is based on the grayscale 8 bits;
 *Hard disk version iSpeedy80MT13M/C-SE supports real-time writing with restricted parameters;
 *The hard disk version supports real-time write speeds at 30Gbps (Max.).

► **Dimensions**



► Specification

Camera	
Model	iSpeedy50MT13M/C-SE
Full Resolution	1280×1024
Full Frame Rate	5000fps
Maximum Frame Rate	350000fps
Minimum Exposure Time	1us (standard), 100ns (optional)
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	16G, 32G, 64G (Optional)
Extended Memory	1T, 2T, 4T (Optional)
Analog Gain	×2、×4、×8
ROI	Support
Sensitivity	ISO56000(Mono); ISO21000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	90D×110W×110H, excluding projecting parts (<1.6kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB. Output: Trigger signal, sync signal, ready signal
Video Signal Output	Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	DC24V@<30W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		16GB	32GB	64GB	1TB	2TB	4TB
1280×1024	5000fps	2.6 s	5.2 s	10.4 s	166 s	332 s	664 s
1280×800	6400fps	2.6 s	5.2 s	10.4 s	166 s	332 s	664 s
1280×512	10000fps	2.6 s	5.2 s	10.4 s	166 s	332 s	664 s
1280×256	20000fps	2.6 s	5.2 s	10.4 s	166 s	332 s	664 s
1280×128	40000fps	2.6 s	5.2 s	10.4 s	166 s	332 s	664 s
1280×8	350000fps	4.7 s	9.4 s	18.8 s	5 min	10 min	20 min

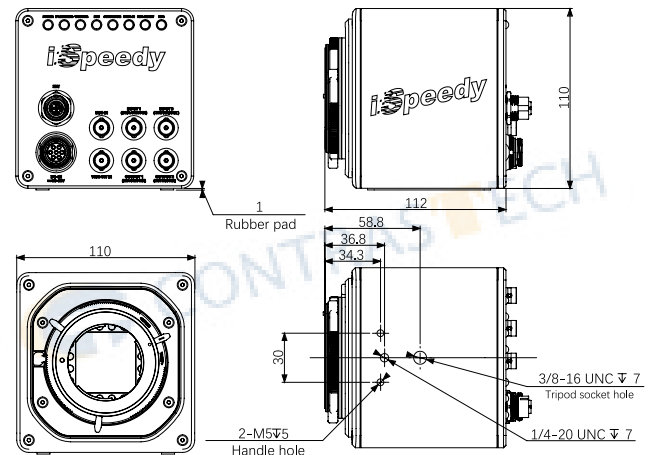
*The above recording time (hard disk) are non-real writing time;

*The above recording time is based on the grayscale 8 bits;

*Hard disk version iSpeedy50MT13M/C-SE supports real-time writing with restricted parameters;

*The hard disk version supports real-time write speeds at 30Gbps (Max.).

► Dimensions



► Specification

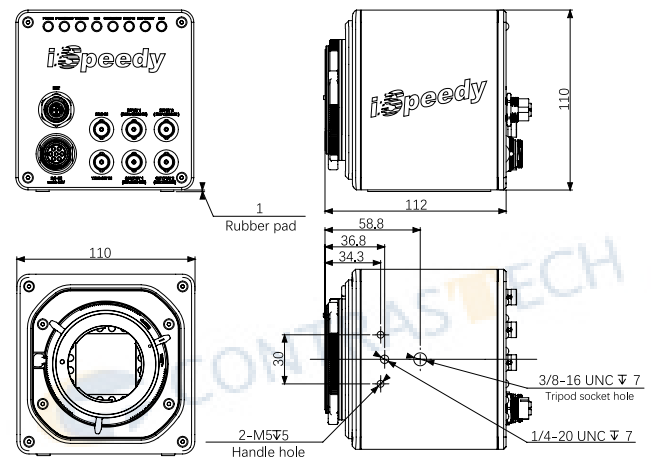
Camera	
Model	iSpeedy30MT13M/C-SE
Full Resolution	1280×1024
Full Frame Rate	3000fps
Maximum Frame Rate	200000fps
Minimum Exposure Time	1us (standard), 100ns (optional)
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	16G, 32G, 64G (Optional)
Extended Memory	1T, 2T, 4T (Optional)
Analog Gain	×2、×4、×8
ROI	Support
Sensitivity	ISO56000(Mono); ISO21000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	90D×110W×110H, excluding projecting parts (<1.6kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB. Output: Trigger signal, sync signal, ready signal
Video Signal Output	Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	DC24V@<30W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		16GB	32GB	64GB	1TB	2TB	4TB
1280×1024	3000fps	4.3 s	8.6 s	17.2 s	3.7 min	7.4 min	14.8 min
1280×800	3800fps	4.3 s	8.6 s	17.2 s	3.7 min	7.4 min	14.8 min
1280×512	6000fps	4.3 s	8.6 s	17.2 s	3.7 min	7.4 min	14.8 min
1280×256	12000fps	4.3 s	8.6 s	17.2 s	3.7 min	7.4 min	14.8 min
1280×128	24000fps	4.3 s	8.6 s	17.2 s	3.7 min	7.4 min	14.8 min
1280×8	200000fps	8.3 s	16.6 s	33.2 s	8.8 min	17.6 min	35.2 min

*The above recording time (hard disk) are non-real writing time;
*The above recording time is based on the grayscale 8 bits;
*Hard disk version iSpeedy30MT13M/C-SE supports real-time writing;
*The hard disk version supports real-time write speeds at 30Gbps (Max.).

► Dimensions



► Specification

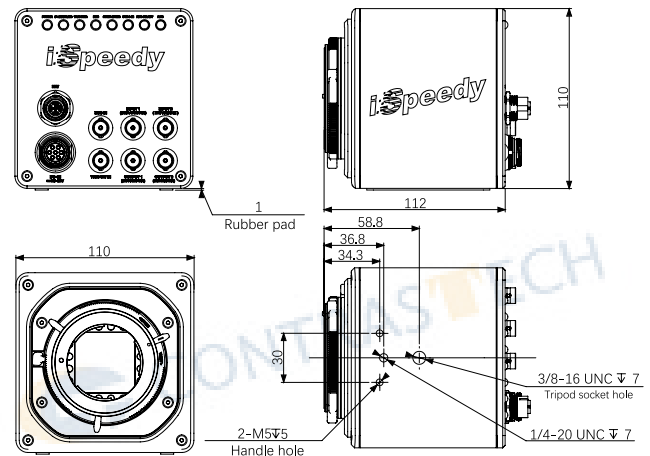
Camera	
Model	iSpeedy10MT13M/C-SE
Full Resolution	1280×1024
Full Frame Rate	1000fps
Maximum Frame Rate	70000fps
Minimum Exposure Time	1us (standard), 100ns (optional)
Pixel Size	14.6um
Shutter Mode	Global shutter
Dynamic Range	60dB
Bit Resolution	8bit / 10bit / 12bit
Color	Mono/Color
Data Interface	10 GigE, Adaptive GigE
Standard RAM	16G, 32G, 64G (Optional)
Extended Memory	1T, 2T, 4T (Optional)
Analog Gain	×2、×4、×8
ROI	Support
Sensitivity	ISO56000(Mono); ISO21000(Color)
Recording Mode	Start, End, Center, Random, Manual
Trigger Mode	Manual, IO, Image
Dimensions	90D×110W×110H, excluding projecting parts (<1.6kg)
Operating Temperature/ Humidity	Standard -10–50°C , below 95% (no condensation); -35–65°C can be customized
Lens Mount	E connector, which can be transferred to F / C / EF connector
External Signal	Input: Trigger (TTL/switch) signal, sync signal, ready signal, event signal, IRIGB. Output: Trigger signal, sync signal, ready signal
Video Signal Output	Ethernet
Fan Control	The fan can be turned on and off remotely and can auto adapt to different temperatures
Power Supply	DC24V@<30W

► Performance

Resolution	Frame Rate	Recording Time (memory)			Recording Time (hard disk)		
		16GB	32GB	64GB	1TB	2TB	4TB
1280×1024	1000fps	13 s	26 s	52 s	13 min	26 min	52 min
1280×800	1280fps	13 s	26 s	52 s	13 min	26 min	52 min
1280×512	2000fps	13 s	26 s	52 s	13 min	26 min	52 min
1280×256	4000fps	13 s	26 s	52 s	13 min	26 min	52 min
1280×128	8000fps	13 s	26 s	52 s	13 min	26 min	52 min
1280×8	70000fps	23 s	46 s	92 s	24 min	48 min	96 min

*The above recording time (hard disk) are non-real writing time;
*The above recording time is based on the grayscale 8 bits;
*Hard disk version iSpeedy10MT13M/C-SE supports real-time writing;
*The hard disk version supports real-time write speeds at 30Gbps (Max.).

► Dimensions



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