

## The Perfect Balance of Speed, Size, and Memory



**3,985fps @ 1920x1080 | 8GPx/s throughput | 10,000fps @ 1064x768**

### FEATURES + OPTIONS

- HD resolution 1920 x1080 pixel sensor (2.1MPx), more pixels = greater accuracy
- 8 TB internal SSD capacity
- Up to 144 GB of on-board memory for long recordings or multiple buffers
- Internal or external SSD drive for fast data transfer
- Global electronic shutter to 289 ns\*
- Compatible with all Nikon F and Canon EF mount lenses
- Record up to 1,000,000 fps
- Fully compatible with the i-SPEED Software Suite 2.0 for more advanced functions
- Upgrade path between models

\* subject to export regulations

**High performance high-speed camera in a compact and durable form-factor.**



The sealed electronics design of the i-SPEED 5 utilizes an innovative internal cooling system—drawing heat from the inside of the camera and venting it to the atmosphere

**The i-SPEED 5 Series is controlled both by PC and the touchscreen CDUe.**



## IMAGER

<b>Sensor type</b>	Custom CMOS
<b>Sensor resolution</b>	1920 x 1080 pixel
<b>Sensor size</b>	25.920 mm x 14.580 mm
<b>Sensor diagonal</b>	29.74 mm
<b>Pixel size</b>	13.5 µm
<b>Bit depth</b>	12 bit (36 bit color)
<b>Light sensitivity Mono (Gain off/on)</b>	16,000 / 125,000
<b>Light sensitivity Color (Gain off/on)</b>	4,000 / 32,000
<b>Maximum frame rate</b>	1,000,000 fps
<b>Shutter type</b>	Global exposure
<b>Shutter time, standard</b>	1 µs min (standard)
<b>Shutter time, fast mode</b>	289 ns min (export restricted)

## SYNCHRONIZATION and CAPTURE

<b>Trigger</b>	TTL T0 to 0-100%
<b>Trigger modes</b>	Circular, ROC, BROCC
<b>Sync</b>	10 Hz – 350 kHz
<b>Luminance histogram</b>	Iris setting aid tool
<b>i-CHEQ 360</b>	Camera status LEDs
<b>i-FOCUS</b>	Focusing aid tool
<b>i-EXPOSE</b>	High/low exposure highlight
<b>Control</b>	PC or CDUe
<b>IRIG input</b>	IRIG – B to 1 µs
<b>Internal memory</b>	18 GB standard, upgrade to 144 GB

## PHYSICAL and ENVIRONMENTAL

<b>Dimensions inches</b>	5.0 (W) x 5.1 (H) x 12.0 (L)
<b>Dimensions mm</b>	127 (W) x 129 (H) x 305 (L)
<b>Weight</b>	9.9 lb (4.5 kg)
<b>Input voltage</b>	14-36 V
<b>Power consumption</b>	110 W nominal, 150 W max
<b>Mounting</b>	1/4 x 20 and 3/8 x 16 tripod plate
<b>Lens mount</b>	Custom, swappable lens plate
<b>EMC</b>	EN55032-A, EN55024
<b>Safety</b>	BS EN61010-1 (camera), IEC60950 (PSU)
<b>CE marking</b>	EMC directive (camera), EMC directive, LV directive (PSU)
<b>Lead free</b>	RoHS directive
<b>WEEE</b>	Compliant
<b>Temperature °F</b>	14° to 122° operation, -4° to 140° storage
<b>Temperature °C</b>	-10° to +50° operation, -20° to 60° storage
<b>Pressure</b>	71 kpa to 106 kpa
<b>Relative humidity</b>	95% at 104°F non-condensing
<b>Power input connector</b>	4 pin Lemo
<b>Trigger input</b>	BNC 75 Ω
<b>I/O connector</b>	10 pin Lemo, trigger in / sync / exposure out / remote power

## CONNECTIVITY

<b>Video outputs</b>	HD-SDI, HDMI
<b>USB</b>	USB 3
<b>Network</b>	1Gb/s RJ45 / 10 pin Lemo
<b>Video</b>	IXV, AVI (compressed or uncompressed)
<b>Image sequence</b>	TIFF, JPG, RAW
<b>Ethernet control</b>	1 Gb/s
<b>Remote control</b>	Via supplied software

## PC SOFTWARE

<b>Standard control</b>	Control ONE
<b>Premium control</b>	Control MULTI-DAQ
<b>Editing</b>	i-SPEED Movie Maker
<b>Analysis</b>	ProAnalyst® Lite by Xcitex
<b>Viewer</b>	i-SPEED Viewer
<b>Utilities</b>	i-SPEED Lens Calculator, i-SPEED Viewer
<b>Software Developers Kit</b>	C++, LabView
<b>Synchronized data acquisition</b>	USB DAQ, 8 options

## PURCHASING OPTIONS

<b>CDUe</b>	Controller Display Unit
<b>Sensor</b>	Color / Mono
<b>Memory</b>	18 GB (std) / 36 GB / 72 GB / 96 GB / 144GB
<b>Shutter time</b>	1 µs (std) / 289 ns (subject to export restrictions)
<b>Internal SSD</b>	500 GB / 1 TB / 2 TB / 4 TB / 8 TB
<b>External SSD</b>	500 GB / 1 TB / 2 TB
<b>Lens mounts</b>	F mount (Nikkor D) / F mount (Nikkor G) C mount / EF mount
<b>Warranty</b>	1 yr (std) / 2 yr / 3 yr
<b>IRIG</b>	IRIG-B

## FRAME RATES, RESOLUTION, and DURATION [in seconds]

FPS	Resolution	18GB	36GB	72GB	96GB	144GB
100	1920x1080	60.85	121.70	243.40	324.53	486.80
200	1920x1080	30.43	60.85	121.70	162.27	243.40
300	1920x1080	20.23	40.47	80.93	107.91	161.86
500	1920x1080	12.17	24.34	48.68	64.91	97.36
1,000	1920x1080	6.09	12.17	24.34	32.45	48.68
2,000	1920x1080	3.05	6.09	12.18	16.24	24.36
3,000	1920x1080	2.03	4.05	8.10	10.80	16.20
3,985	1920x1080	1.53	3.05	6.10	8.13	12.20
4,980	1512x1080	1.58	3.17	6.33	8.45	12.67
5,000	1512x1080	1.58	3.16	6.31	8.41	12.62
6,382	1344x966	1.55	3.11	6.22	8.29	12.44
7,500	1232x888	1.57	3.14	6.28	8.37	12.56
10,000	1064x768	1.58	3.15	6.30	8.41	12.61
15,000	840x630	1.62	3.25	6.49	8.65	12.98
20,000	728x540	1.64	3.28	6.55	8.74	13.10
50,000	448x324	1.77	3.55	7.10	9.46	14.20
100,000	336x198	1.94	3.87	7.74	10.33	15.49
200,000	336x84	2.28	4.56	9.13	12.17	18.26
300,000	336x48	2.66	5.32	10.65	14.20	21.30
500,000	392x18	3.65	7.30	14.60	19.47	29.21
750,000	112x42	7.30	14.60	29.20	38.93	58.40
1,000,000	112x30	7.67	15.34	30.68	40.91	61.36

*Note: Other resolutions and speeds are available.*



Specifications subject to change  
Document: DS-508-02.01.20  
Copyright © 2020 IX Cameras Ltd.

### United Kingdom

Bradley House  
Locks Hill  
Rochford  
Essex, S54 1BB  
T: +44 (0) 1702 540 669

### United States

8 Cabot Rd.  
Suite 1800  
Woburn,  
MA, 01801  
T: 339 645 0778

### China

Room 1402, Unit 65,  
No 399 Hangting Road,  
Oriental Hong Jing Garden,  
ZhuQiao Town, Shanghai,  
T: +86 186 215 60553

### India

C-207, Twin Arcs  
Legacy Life Spaces  
Punwale Bazar  
Punawale, Pune-411033  
Maharashtra, India  
T: +91 955 256 5021

## The Perfect Balance of Speed, Size, and Memory



**4,980fps @ 1920x1080 | 10GPx/s throughput | 10,000fps @ 1176x870**

### FEATURES + OPTIONS

- HD resolution 1920 x1080 pixel sensor (2.1MPx), more pixels = greater accuracy
- 8 TB internal SSD capacity
- Up to 144 GB of on-board memory for long recordings or multiple buffers
- Internal or external SSD drive for fast data transfer
- Global electronic shutter to 293 ns\*
- Compatible with all Nikon F and Canon EF mount lenses
- Record up to 1,000,000 fps
- Fully compatible with the i-SPEED Software Suite 2.0 for more advanced functions
- Upgrade path between models

\* subject to export regulations

**High performance high-speed camera in a compact and durable form-factor.**



The sealed electronics design of the i-SPEED 5 utilizes an innovative internal cooling system—drawing heat from the inside of the camera and venting it to the atmosphere

**The i-SPEED 5 Series is controlled both by PC and the touchscreen CDUe.**



## IMAGER

<b>Sensor type</b>	Custom CMOS
<b>Sensor resolution</b>	1920 x 1080 pixel
<b>Sensor size</b>	25.920 mm x 14.580 mm
<b>Sensor diagonal</b>	29.74 mm
<b>Pixel size</b>	13.5 µm
<b>Bit depth</b>	12 bit (36 bit color)
<b>Light sensitivity Mono (Gain off/on)</b>	16,000 / 125,000
<b>Light sensitivity Color (Gain off/on)</b>	4,000 / 32,000
<b>Maximum frame rate</b>	1,000,000 fps
<b>Shutter type</b>	Global exposure
<b>Shutter time, standard</b>	1 µs min (standard)
<b>Shutter time, fast mode</b>	293 ns min (export restricted)

## SYNCHRONIZATION and CAPTURE

<b>Trigger</b>	TTL T0 to 0-100%
<b>Trigger modes</b>	Circular, ROC, BROCC
<b>Sync</b>	10 Hz – 350 kHz
<b>Luminance histogram</b>	Iris setting aid tool
<b>i-CHEQ 360</b>	Camera status LEDs
<b>i-FOCUS</b>	Focusing aid tool
<b>i-EXPOSE</b>	High/low exposure highlight
<b>Control</b>	PC or CDUE
<b>IRIG input</b>	IRIG – B to 1 µs
<b>Internal memory</b>	18 GB standard, upgrade to 144 GB

## PHYSICAL and ENVIRONMENTAL

<b>Dimensions inches</b>	5.0 (W) x 5.1 (H) x 12.0 (L)
<b>Dimensions mm</b>	127 (W) x 129 (H) x 305 (L)
<b>Weight</b>	9.9 lb (4.5 kg)
<b>Input voltage</b>	14-36 V
<b>Power consumption</b>	110 W nominal, 150 W max
<b>Mounting</b>	1/4 x 20 and 3/8 x 16 tripod plate
<b>Lens mount</b>	Custom, swappable lens plate
<b>EMC</b>	EN55032-A, EN55024
<b>Safety</b>	BS EN61010-1 (camera), IEC60950 (PSU)
<b>CE marking</b>	EMC directive (camera), EMC directive, LV directive (PSU)
<b>Lead free</b>	RoHS directive
<b>WEEE</b>	Compliant
<b>Temperature °F</b>	14° to 122° operation, -4° to 140° storage
<b>Temperature °C</b>	-10° to +50° operation, -20° to 60° storage
<b>Pressure</b>	71 kpa to 106 kpa
<b>Relative humidity</b>	95% at 104°F non-condensing
<b>Power input connector</b>	4 pin Lemo
<b>Trigger input</b>	BNC 75 Ω
<b>I/O connector</b>	10 pin Lemo, trigger in / sync / exposure out / remote power

## CONNECTIVITY

<b>Video outputs</b>	HD-SDI, HDMI
<b>USB</b>	USB 3
<b>Network</b>	1Gb/s RJ45 / 10 pin Lemo
<b>Video</b>	IXV, AVI (compressed or uncompressed)
<b>Image sequence</b>	TIFF, JPG, RAW
<b>Ethernet control</b>	1 Gb/s
<b>Remote control</b>	Via supplied software

## PC SOFTWARE

<b>Standard control</b>	Control ONE
<b>Premium control</b>	Control MULTI-DAQ
<b>Editing</b>	i-SPEED Movie Maker
<b>Analysis</b>	ProAnalyst® Lite by Xcitex
<b>Viewer</b>	i-SPEED Viewer
<b>Utilities</b>	i-SPEED Lens Calculator, i-SPEED Viewer
<b>Software Developers Kit</b>	C++, LabView
<b>Synchronized data acquisition</b>	USB DAQ, 8 options

## PURCHASING OPTIONS

<b>CDUe</b>	Controller Display Unit
<b>Sensor</b>	Color / Mono
<b>Memory</b>	18 GB (std) / 36 GB / 72 GB / 96 GB / 144GB
<b>Shutter time</b>	1 µs (std) / 293 ns (subject to export restrictions)
<b>Internal SSD</b>	500 GB / 1 TB / 2 TB / 4 TB / 8 TB
<b>External SSD</b>	500 GB / 1 TB / 2 TB
<b>Lens mounts</b>	F mount (Nikkor D) / F mount (Nikkor G) C mount / EF mount
<b>Warranty</b>	1 yr (std) / 2 yr / 3 yr
<b>IRIG</b>	IRIG-B

## FRAME RATES, RESOLUTION, and DURATION [in seconds]

FPS	Resolution	18GB	36GB	72GB	96GB	144GB
100	1920x1080	60.85	121.70	243.40	324.53	486.80
200	1920x1080	30.43	60.85	121.70	162.27	243.40
300	1920x1080	20.29	40.57	81.14	108.19	162.28
500	1920x1080	12.17	24.34	48.68	64.91	97.36
1,000	1920x1080	6.09	12.17	24.34	32.45	48.68
2,000	1920x1080	3.04	6.09	12.17	16.23	24.34
3,000	1920x1080	2.03	4.06	8.11	10.82	16.22
3,985	1920x1080	1.53	3.05	6.10	8.13	12.20
4,980	1920x1080	1.22	2.44	4.89	6.51	9.77
5,000	1904x1080	1.25	2.51	5.01	6.68	10.02
6,382	1512x1080	1.24	2.47	4.94	6.59	9.88
7,500	1344x1008	1.27	2.54	5.07	6.76	10.14
10,000	1176x870	1.26	2.52	5.04	6.71	10.07
15,000	952x708	1.27	2.55	5.10	6.79	10.19
20,000	840x594	1.29	2.58	5.16	6.88	10.32
50,000	504x366	1.40	2.79	5.58	7.44	11.16
100,000	392x204	1.61	3.22	6.44	8.59	12.88
200,000	392x90	1.83	3.65	7.30	9.73	14.60
300,000	392x54	2.03	4.05	8.10	10.80	16.20
500,000	392x24	2.74	5.47	10.94	14.59	21.88
750,000	112x60	5.11	10.22	20.44	27.25	40.88
1,000,000	112x36	6.39	12.78	25.56	34.08	51.12

Note: Other resolutions and speeds are available.



Specifications subject to change  
Document: DS-510-02.01.20  
Copyright © 2020 IX Cameras Ltd.

**United Kingdom**  
Bradley House  
Locks Hill  
Rochford  
Essex, SS4 1BB  
T: +44 (0) 1702 540 669

**United States**  
8 Cabot Rd.  
Suite 1800  
Woburn,  
MA, 01801  
T: 339 645 0778

**China**  
Room 1402, Unit 65,  
No 399 Hangting Road,  
Oriental Hong Jing Garden,  
ZhuQiao Town, Shanghai,  
T: +86 186 215 60553

**India**  
C-207, Twin Arcs  
Legacy Life Spaces  
Punwale Bazar  
Punawale, Pune-411033  
Maharashtra, India  
T: +91 955 256 5021

## The Perfect Balance of Speed, Size, and Memory



**6,382fps @ 1920x1080 | 13GPx/s throughput | 10,000fps @ 1344x984**

### FEATURES + OPTIONS

- HD resolution 1920 x1080 pixel sensor (2.1MPx), more pixels = greater accuracy
- 8 TB internal SSD capacity
- Up to 144 GB of on-board memory for long recordings or multiple buffers
- Internal or external SSD drive for fast data transfer
- Global electronic shutter to 277 ns\*
- Compatible with all Nikon F and Canon EF mount lenses
- Record up to 1,000,000 fps
- Fully compatible with the i-SPEED Software Suite 2.0 for more advanced functions
- Upgrade path between models

\* subject to export regulations

**High performance high-speed camera in a compact and durable form-factor.**



The sealed electronics design of the i-SPEED 5 utilizes an innovative internal cooling system—drawing heat from the inside of the camera and venting it to the atmosphere

**The i-SPEED 5 Series is controlled both by PC and the touchscreen CDUe.**



## IMAGER

<b>Sensor type</b>	Custom CMOS
<b>Sensor resolution</b>	1920 x 1080 pixel
<b>Sensor size</b>	25.920 mm x 14.580 mm
<b>Sensor diagonal</b>	29.74 mm
<b>Pixel size</b>	13.5 µm
<b>Bit depth</b>	12 bit (36 bit color)
<b>Light sensitivity Mono (Gain off/on)</b>	16,000 / 125,000
<b>Light sensitivity Color (Gain off/on)</b>	4,000 / 32,000
<b>Maximum frame rate</b>	1,000,000 fps
<b>Shutter type</b>	Global exposure
<b>Shutter time, standard</b>	1 µs min (standard)
<b>Shutter time, fast mode</b>	277 ns min (export restricted)

## SYNCHRONIZATION and CAPTURE

<b>Trigger</b>	TTL T0 to 0-100%
<b>Trigger modes</b>	Circular, ROC, BROCC
<b>Sync</b>	10 Hz – 350 kHz
<b>Luminance histogram</b>	Iris setting aid tool
<b>i-CHEQ 360</b>	Camera status LEDs
<b>i-FOCUS</b>	Focusing aid tool
<b>i-EXPOSE</b>	High/low exposure highlight
<b>Control</b>	PC or CDUE
<b>IRIG input</b>	IRIG – B to 1 µs
<b>Internal memory</b>	18 GB standard, upgrade to 144 GB

## PHYSICAL and ENVIRONMENTAL

<b>Dimensions inches</b>	5.0 (W) x 5.1 (H) x 12.0 (L)
<b>Dimensions mm</b>	127 (W) x 129 (H) x 305 (L)
<b>Weight</b>	9.9 lb (4.5 kg)
<b>Input voltage</b>	14-36 V
<b>Power consumption</b>	110 W nominal, 150 W max
<b>Mounting</b>	1/4 x 20 and 3/8 x 16 tripod plate
<b>Lens mount</b>	Custom, swappable lens plate
<b>EMC</b>	EN55032-A, EN55024
<b>Safety</b>	BS EN61010-1 (camera), IEC60950 (PSU)
<b>CE marking</b>	EMC directive (camera), EMC directive, LV directive (PSU)
<b>Lead free</b>	RoHS directive
<b>WEEE</b>	Compliant
<b>Temperature °F</b>	14° to 122° operation, -4° to 140° storage
<b>Temperature °C</b>	-10° to +50° operation, -20° to 60° storage
<b>Pressure</b>	71 kpa to 106 kpa
<b>Relative humidity</b>	95% at 104°F non-condensing
<b>Power input connector</b>	4 pin Lemo
<b>Trigger input</b>	BNC 75 Ω
<b>I/O connector</b>	10 pin Lemo, trigger in / sync / exposure out / remote power

## CONNECTIVITY

<b>Video outputs</b>	HD-SDI, HDMI
<b>USB</b>	USB 3
<b>Network</b>	1Gb/s RJ45 / 10 pin Lemo
<b>Video</b>	IXV, AVI (compressed or uncompressed)
<b>Image sequence</b>	TIFF, JPG, RAW
<b>Ethernet control</b>	1 Gb/s
<b>Remote control</b>	Via supplied software

## PC SOFTWARE

<b>Standard control</b>	Control ONE
<b>Premium control</b>	Control MULTI-DAQ
<b>Editing</b>	i-SPEED Movie Maker
<b>Analysis</b>	ProAnalyst® Lite by Xcitex
<b>Viewer</b>	i-SPEED Viewer
<b>Utilities</b>	i-SPEED Lens Calculator, i-SPEED Viewer
<b>Software Developers Kit</b>	C++, LabView
<b>Synchronized data acquisition</b>	USB DAQ, 8 options

## PURCHASING OPTIONS

<b>CDUe</b>	Controller Display Unit
<b>Sensor</b>	Color / Mono
<b>Memory</b>	18 GB (std) / 36 GB / 72 GB / 96 GB / 144GB
<b>Shutter time</b>	1 µs (std) / 277 ns (subject to export restrictions)
<b>Internal SSD</b>	500 GB / 1 TB / 2 TB / 4 TB / 8 TB
<b>External SSD</b>	500 GB / 1 TB / 2 TB
<b>Lens mounts</b>	F mount (Nikkor D) / F mount (Nikkor G) C mount / EF mount
<b>Warranty</b>	1 yr (std) / 2 yr / 3 yr
<b>IRIG</b>	IRIG-B

## FRAME RATES, RESOLUTION, and DURATION [in seconds]

FPS	Resolution	18GB	36GB	72GB	96GB	144GB
100	1920x1080	60.85	121.70	243.40	324.53	486.80
200	1920x1080	30.43	60.85	121.70	162.27	243.40
300	1920x1080	20.28	40.57	81.13	108.18	162.26
500	1920x1080	12.17	24.34	48.68	64.91	97.36
1,000	1920x1080	6.09	12.17	24.34	32.45	48.68
2,000	1920x1080	3.04	6.09	12.17	16.23	24.34
3,000	1920x1080	2.03	4.06	8.11	10.82	16.22
3,985	1920x1080	1.53	3.05	6.11	8.14	12.21
4,980	1920x1080	1.22	2.44	4.89	6.51	9.77
5,000	1920x1080	1.22	2.43	4.87	6.49	9.74
6,382	1920x1080	0.95	1.91	3.81	5.08	7.62
7,500	1624x1080	0.98	1.96	3.92	5.22	7.83
10,000	1344x984	0.97	1.95	3.90	5.19	7.79
15,000	1064x798	1.01	2.02	4.04	5.39	8.08
20,000	952x678	1.00	1.99	3.98	5.31	7.96
50,000	560x420	1.10	2.19	4.38	5.84	8.76
100,000	504x216	1.18	2.36	4.72	6.29	9.44
200,000	504x96	1.33	2.66	5.32	7.09	10.64
300,000	560x54	1.42	2.84	5.68	7.57	11.36
500,000	560x24	1.92	3.83	7.66	10.21	15.32
750,000	112x78	3.93	7.86	15.72	20.96	31.44
1,000,000	112x48	4.79	9.58	19.16	25.55	38.32

*Note: Other resolutions and speeds are available.*



Specifications subject to change  
Document: DS-513-02.01.20  
Copyright © 2020 IX Cameras Ltd.

**United Kingdom**  
Bradley House  
Locks Hill  
Rochford  
Essex, SS4 1BB  
T: +44 (0) 1702 540 669

**United States**  
8 Cabot Rd.  
Suite 1800  
Woburn,  
MA, 01801  
T: 339 645 0778

**China**  
Room 1402, Unit 65,  
No 399 Hangting Road,  
Oriental Hong Jing Garden,  
ZhuQiao Town, Shanghai,  
T: +86 186 215 60553

**India**  
C-207, Twin Arcs  
Legacy Life Spaces  
Punwale Bazar  
Punawale, Pune-411033  
Maharashtra, India  
T: +91 955 256 5021