High Speed, High Quality Imaging

Standard Set

i-SPEED TR camera

Power supply	Pickle switch
Gigabit Ethernet crossover cable	PC software - Control
Composite video cable	Getting started guide
S-Video cable	CF card adaptor
Mains cable x 3 (UK, USA/Japan, Europe)	Transport case

Controller Display Unit (CDU) is a recommended accessory

Models

Each camera is available as a monochrome or colour unit and has a selectable internal memory size.

Memory size	Record time at full resolution
4 GB Monochrome	1.2 seconds
8 GB Monochrome	2.4 seconds
16 GB Monochrome	4.9 seconds
4 GB Colour	1.2 seconds
8 GB Colour	2.4 seconds
16 GB Colour	4.9 seconds

Memory upgrade is available between units

Features

Resolution	1280 x 1024 @ 2,000 fps
Maximum Frame Rate	10,000 fps
Shutter	2.16 µs - automatic electronic individual FPN correction on power up
i-CHEQ	Externally visible indicators to confirm camera record status. Positioned on rear of camera
i-FOCUS	Electronic function to confirm focal depth of lens and point of focus. Ideal for ease of camera set up
Luminance Histogram	For precise illumination and image set up
User Settings	Five programmable user settings in camera
Image Processing	Process images before saving via on board editing suite
Image Manipulation	Zoom/Pan/Select region of interest
Measurement	On board analysis function enabling measurement of distance, speed, acceleration, angle
Triggering	0-5V TTL, ROC, BROC
Synchronisation	Phase lock enables multiple cameras to be synchronised to one microsecond accuracy
Image Storage Formats	Raw bayer/AVI/MJPEG
Security Secure	Once powered down, the camera does not retain video images

Operation

Cameras may be operated as stand-alone units with the patented* CDU or by PC via Gigabit Ethernet connection (see software sheet)

Dimensions	112 mm (W) x 141 mm (H) x 341 mm (L)
Weight	5 kg including battery
Input Voltage	14 V -0% to 28 V +5%
Power Consumption	Camera 70 W max/System 80 W max
Mounting	5 x ¼" Whitworth threads located on three sides
Battery (optional)	Li-Ion, 10.8 V, 45 minutes continuous usage
Lens Mounting	F-Mount

Image Sensor

Alignment	Laser aligned at 90º
Sensor Type	Custom CMOS
Resolution	1280 x 1024
Sensor Size	34.423 (diagonal) 21.504 x 26.88 mm
Pixel Size	21 micron
Aspect Ratio	5:4
Shutter	2.16 µs (HQ mode)
Bit depth	10 bit
Sensor	Sealed unit, no dust ingress
ISO Rating (ISO 12232)	Mono 5,000/Mono 40,000†
	Colour 1,600/Colour 12,800†
	†ISO sensitivity with sensor gains on maximum

Regulatory Compliance

EMC	CISPR 22 (BS EN55022)
Safety	CISPR 24 (BS EN55024)
CE	BS EN61010-1
Lead Free	RoHS Directive
WEEE	Compliant
IP Rating	EN60529

Operating Environment

Temperature	0 °C to +40 °C operation
	-20 °C to +60 °C storage
Pressure	71 kpa to 106 kpa
Relative Humidity	95% at 40 °C non-condensing

Upgrade

Memory upgrade options available

Storage Case

Dimensions	560 mm (W) x 270 mm (H) x 450 mm (L)
Weight	8.20 kg without contents

CDU

Dimensions	267 mm (W) x 210 mm (H) x 43 mm (L)
Weight	1.25 kg
Display	8.4" LCD Daylight viewing
Input Voltage	12 V ± 10%
Power Consumption	8 W maximum

i-SPEED TR (High Quality) HQ Mode - 4 GB Internal Memory

Frames per Second	Resolution	Frames in Memory	Record Time (s)
1	1280 x 1024	2447	2447.000
25	1280 x 1024	2447	97.880
100	1280 x 1024	2447	24.470
150	1280 x 1024	2447	16.313
200	1280 x 1024	2447	12.235
300	1280 x 1024	2447	8.157
400	1280 x 1024	2447	6.118
500	1280 x 1024	2447	4.894
1,000	1280 x 1024	2447	2.447
1,500	1280 x 1024	2447	1.631
2,000	1280 x 1024	2447	1.224
3,000	1068 x 800	3767	1.256
4,000	912 x 684	5159	1.298
5,000	804 x 600	6672	1.334
7,500	636 x 476	10631	1.417
10,000	528 x 396	15390	1.539

Note: Record time is directly proportional to memory size

*The CDU is patented in the UK, patents pending in other markets