# OLYMPUS®

*Your Vision, Our Future*

## High Speed, High Quality Imaging

### Standard Set

*i-SPEED 3* camera

| | |
|---|---|
| Power supply | Pickle switch |
| Gigabit Ethernet crossover cable | PC software - Control |
| Composite video cable | Getting started guide |
| S-Video cable | CF card adaptor |
| Feature connector cable | Battery |
| 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/HG | 1.2 seconds |
| 8 GB Monochrome/HG | 2.4 seconds |
| 16 GB Monochrome | 4.9 seconds |
| 4 GB Colour/HG | 1.2 seconds |
| 8 GB Colour/HG | 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 | 150,000 fps |
| Shutter | 1 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 and infinitely expandable via CF card |
| 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, angular velocity, and angular acceleration |
| Triggering | 0-5V TTL, Video Trigger, ROC, BROC |
| Permanent Text | Burn permanent text onto individual frames |
| Logo Load | Load corporate logos to personalise cameras and videos |
| 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 |
| Random Snapshot | Image capture upon receipt of a synchronisation pulse |

## 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)/1 µs (QS 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 |
| Export restrictions apply | |

## 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 |

## G Rating

| | | |
|---|---|---|
| HG Cameras | 100 G @ 11 milliseconds | IEC 68-2-27 Ea |
| | 100 G @ 2 milliseconds | IEC 68-2-29 Eb |

## 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 3 (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 |
| 10,000 | 528 x 396 | 15393 | 1.539 |
| 15,000 | 420 x 312 | 24561 | 1.637 |
| 20,000 | 348 x 260 | 35572 | 1.779 |
| 30,000 | 264 x 196 | 62202 | 2.073 |
| 40,000 | 216 x 160 | 93130 | 2.328 |
| 50,000 | 180 x 132 | 135462 | 2.709 |
| 75,000 | 132 x 96 | 253992 | 3.386 |
| 100,000 | 96 x 72 | 465653 | 4.657 |
| 125,000 | 72 x 52 | 859625 | 6.877 |
| 150,000 | 60 x 44 | 1219165 | 8.127 |

### i-SPEED 3 (Quality with Speed) QS Mode

| | | | |
|---|---|---|---|
| 100,000 | 108 x 80 | 372522 | 3.725 |
| 125,000 | 84 x 60 | 638625 | 5.109 |
| 150,000 | 72 x 52 | 859667 | 5.731 |

Note: Record time is directly proportional to memory size

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

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