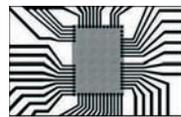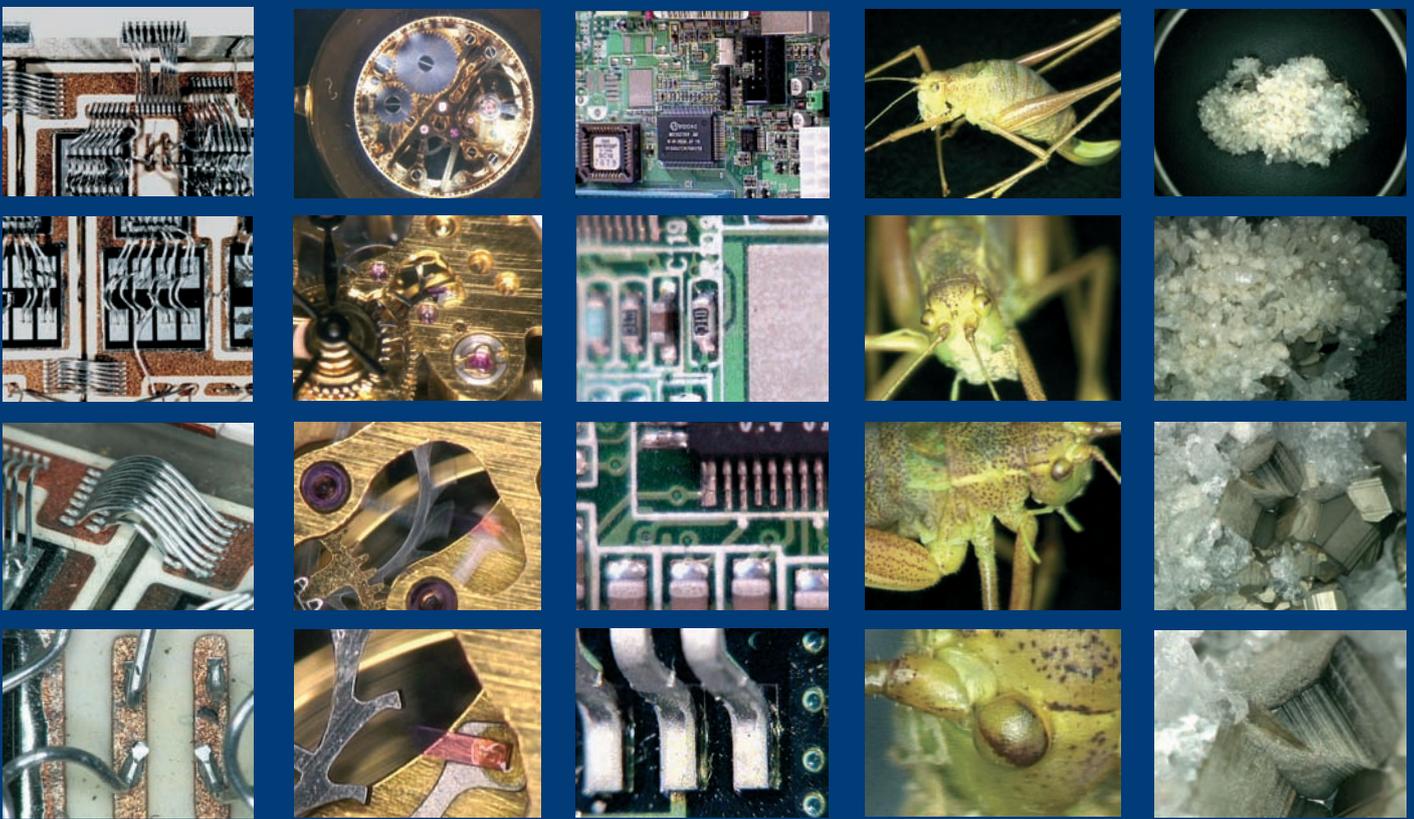# FlyInspector
## Autofocus video microscope

TechnoLab
qualifying and testing solutions

Easy optical inspection with a magnification of up to 450x

Patent pending

The FlyInspector is a PC-independent system for the optical inspection and consists of a high-resolution CCD-autofocus camera mounted on a self-balancing arm.

The user's eyes do not risk overstraining any more, because he looks at the inspection objects on a large screen instead of constantly peeping through an ocular. The screen may be installed above or by the side of the working field and delivers an excellent image with its 24 mio. colors.

The autofocus sensor makes focusing superfluous; the user simply zooms in or out.
Thanks to the double radius and the ball-and-socket-joint at the camera, objects can be inspected from various sides and angles. The LED ring light mounted at the camera head provides optimal illumination of the objects.

The FlyInspector is the ideal tool for the optical inspection in any field of application.

The FlyInspector HD shows images in full HD resolution with 30fps and 2 million pixels on a respective screen. When used with a suitable frame-grabber supporting this format, the images can be saved with the IMXpro software.

The IMXpro software developed by TechnoLab permits saving, editing and measuring images on a PC or notebook. As an option, images can also be stored directly on a USB stick without using a PC.

# FlyInspector



- self-sustaining system, PC-independent
- compact design, small dimensions, lightweight
- easy handling
- ergonomic working posture
- positioning system with patent pending
- large working distance
- laser pointer for distance measurement / focusing
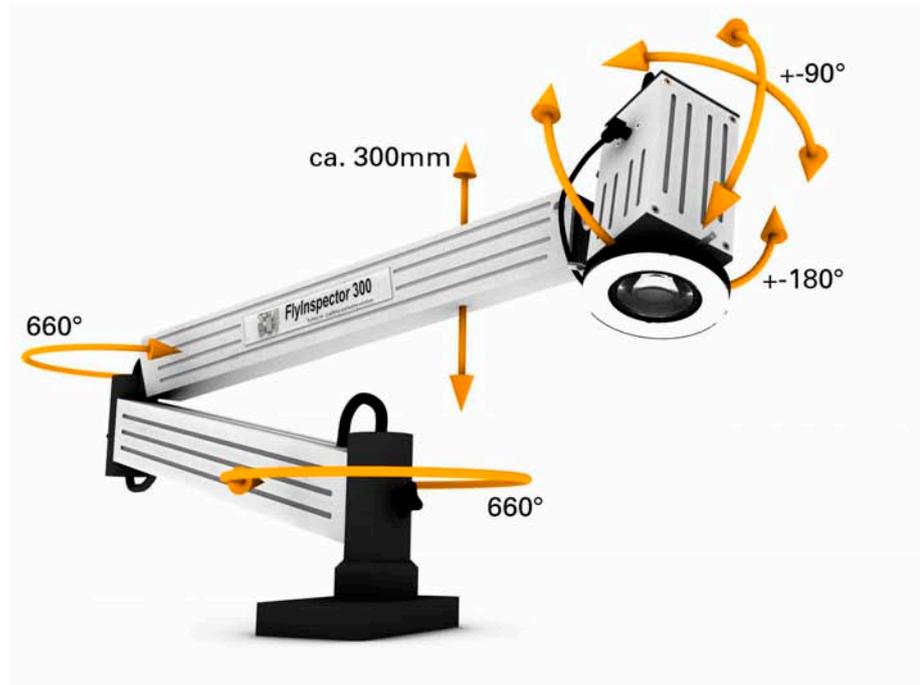
## Characteristics

- autofocus camera with multiple positioning angles
- magnification of up to 450x, 25x zoom
- self-balancing arm remains in any position chosen without the need of a locking brake

- illumination and laser pointer included
- remote control
- for use with high-resolution TFT displays
- HD resolution with 1920x1080 pixels

can be upgraded with:

o PC-independent image memory box
o software
o double polarization filter



**FlyInspector showing the outcome of soldering**

## Application

- prototyping, manual rework, micro-assembly and inspection in automotive industry, aviation and medical engineering, mechanical workshops, etc.
- quality assurance, production, defect analysis, etc.
- for universal use in: electronics industry, mechanical engineering, textile and paper industry, forensic pathology, etc.

## Ergonomic advantages

- relaxed working position thanks to upright posture
- unlimited freedom of head movements
- straight view prevents strain on eyes
- images with strong depth of field help take strain from eyes
- hygienic through contact-free use
- no handling disadvantages for spectacle wearers
- remote control relieves strain on hands
- easy handling of FlyInspector with remote control
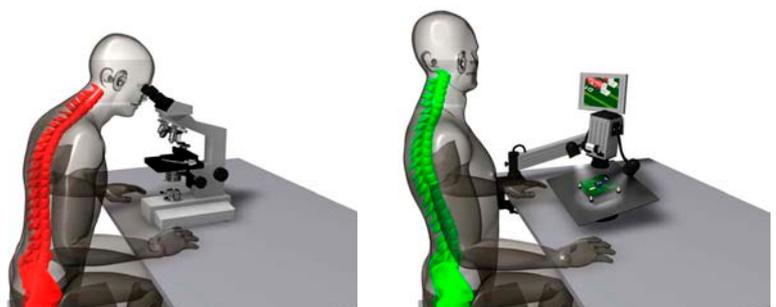
## Technical specifications

| | |
|---|---|
| degree of protection | IP40 |
| dimension (W x L x H) | see drawing below |
| weight | 11500g |
| protection class 3 | DIN EN 61140, VDE 0140-1 |
| ambient temperature | max.45°C |
| supply voltage | 12V = (power supply included) |
| power input | 1500mA max. |
| connection | YPbPr (HD), Y/C (PAL) |
| | RS 232 |

**camera** — 1-chip CCD with digital signal processor for image optimization controllable via RS 232

| | |
|---|---|
| horizontal resolution (lines TV) | HD 1080, PAL>470 |
| camera resolution (pixels) | HD 1920 x 1080, PAL 768 x 576 |
| depth of shade | 24 bit RGB |
| video signal | component YPbPr (1080i) |
| | composite 1.0 Vpp, (PAL) |

| | |
|---|---|
| magnification | up to 450x (for 24" screen, HD) |
| | 50x (for 8.4" screen, PAL) |
| zoom factor | 12x optical and 12x digital |
| working distance | depends on lens: |

| | min.focus area | focal distance |
|---|---|---|
| standard | 20 mm | 150 mm |
| optional | 28 mm | 186 mm |
| | 12 mm | 114 mm |
| | 7 mm | 87 mm |

## The FlyInspector is supplied with:

| | |
|---|---|
| basic device | self-balancing arm with autofocus camera |
| power supply | 12V=/ 110-230V~ |
| illumination | LED ring light with double laser pointer |
| remote control | for: zoom, focus, white balance, laser pointer |

**types available**
HD, 2M pixels, 1080i
PAL, 500k pixels, 576i

**optional**
screen 8-47"
framegrabber with PCIe connection for PC installatio (HD)
framegrabber with USB 2.0 port to PC (PAL)
PC-independent image memory box for USB sticks

ball turn table
mechanical XY-table
double polarization filter for ring light

IMXpro software
for image storage, measuring and
control of focus and zoom
for generating images with indefinite depth of field
(image merging)

comparison:

HD (1920x1080)
PAL (768x576)

341   512

270   39

Contact:

Subject to technical changes

D-0000003-00-01/10