

Eagle Eye High Quality Flexible Digital Video Endoscope

- High resolution micro camera with adjustable optics and white LED illumination
- Built-in digital Image and Video recorder
- Joystick operated 4-direction articulated head for 360° direction of view
- Tungsten mesh-coated insertion tube for highest temperature and mechanical requirements
- All-in-one mobile robust design making every inspection possible



High Performance Articulated Video Endoscope

Optilia's digital video endoscope Eagle Eye is designed and manufactured for professional inspection. It's an invaluable tool when inspecting hard-to-access or hidden objects, tightly packed equipments, parts and objects.



Maximum mobility

Eagle Eye is ergonomically designed handheld video endoscope system. Easy-to-access LCD monitor with built-in battery pack and digital video recorder (DVR), picture freeze and record button, illumination intensity control and its slim robust $\varnothing 7.0\text{mm}$ flexible insertion tube makes operation of the unit simple and convenient.

The entire system weighs only 1.4 kilograms and is therefore convenient to operate and carry around on the field. Operation time is approximately 5 hours minimum with fully charged batteries.



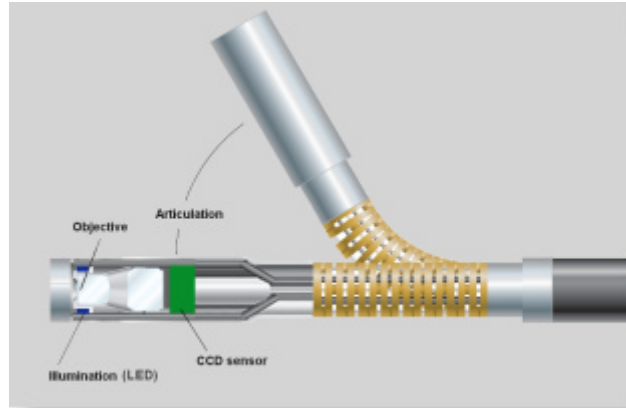
Functionality

The endoscope is simply picked up from its rigid transport case, turned on and ready to use. Eagle Eye is operated by one hand. All adjustments of illumination, camera head angle and image capture are made by the same hand.

The Eagle Eye can be operated completely mobile without any external accessories. For stationary application, the system can easily be connected to larger external monitor or to computers.

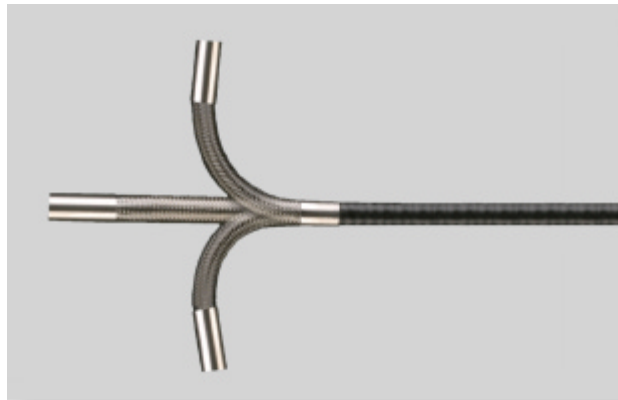
Image quality

High quality precision optics and sensitive micro CCD sensor are placed on the tip of the flexible tube for best possible image quality. The system captures high-resolution images and gives rich colours and excellent clarity throughout a large dynamic range. For minimum loss of lighting power, ultra bright LED light sources are designed inside optical head, symmetrically positioned around objective lens of the device.



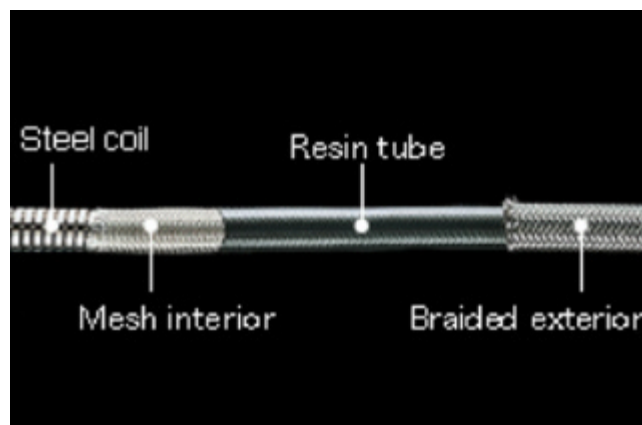
Ease of use

The ergonomic design provides the operator with easy access to controls and buttons. With the joystick, it's easy to articulate and lock the $\varnothing 7.0\text{mm}$ CCD equipped optical head in any direction up to 90° . Small bending radius of the articulating tip helps operator to access into small spaces.



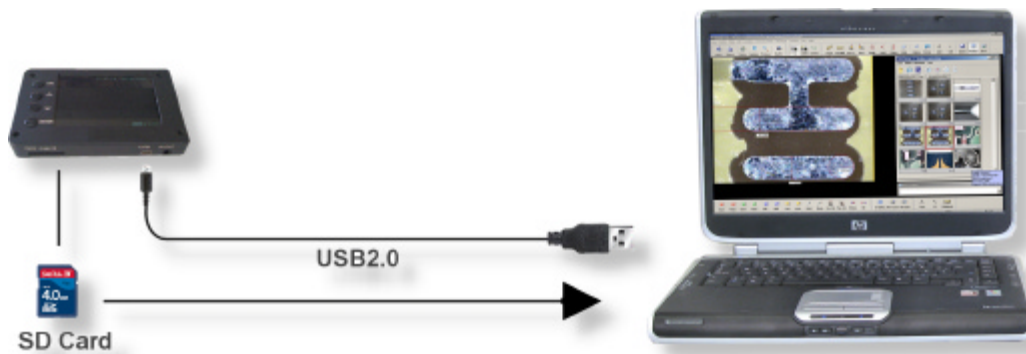
Robustness and reliability

Eagle Eye's flexible insertion tube has protective tungsten mesh which provides superior insert ability and crush resistance. The robustness and reliability of this design reduces the overall investment cost.



Digital image recording and documentation

By pressing one button, digital still pictures or videos are saved on the internal flash memory of the device or removable high capacity SD memory card. Recorded pictures and movies can easily be transferred to a PC for viewing, software analysis, information exchange and archiving via the SD card or USB cable.



Highlights of Optilia Digital Video Endoscope:

- Ergonomically and robust designed
- Easy and reliable operation
- Adjustable optical magnification and working distance
- Small and robust insertion tube (f 7mm)
- Smooth and flexible tip articulation (360°control)
- Built-in high capacity battery pack
- Built-in digital image recorder with high capacity removable media (SD memory card)
- Easy to snap pictures and videos (one-push button)
- Mobile or stationary configurable
- Water and oil resistant
- High intensity and long life power LED illumination
- Easy to access illumination intensity control
- High quality image with 470 000 pixels
- 90° mirror tip adapter included
- PAL (NTSC on request) video output for external monitors



Application areas:

Power and petrochemical plant inspection and maintenance, aviation, mechanical shops, machinery manufacturing, automotive industry, die casts, plastic injection moulds, and construction inspections are among many application areas of Eagle Eye.



Aviation



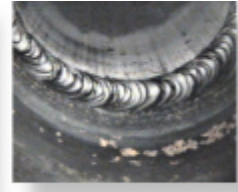
Automotive



Power plants



Pipes and tubes



Welding examination

Aviation

- Turbines
- Combustion chambers
- Low/high pressure compressors, Cells, etc.

Power and petrochemical plant maintenance:

- Visual inspection of inside of turbines, rotating equipment, condenser tubes, heat exchangers, confined spaces, feed-water heaters, boilers, headers and other difficult to see areas.
- Locate and analyse defects, cracks and deterioration.

Mechanical shops, Machinery manufacturing and Car industry

- Inspect inside of manufactured parts
- Inspection of car engines, transmission, chassis etc.
- Weld examination

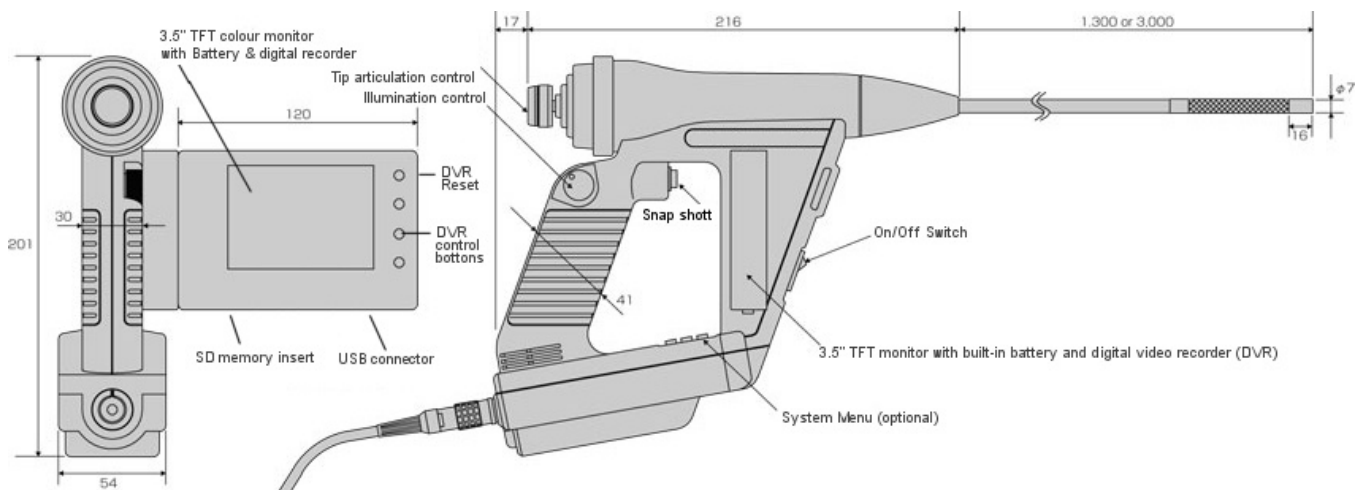
Die casting and plastic injection

- Quality control of injected parts
- Quality control of moulds

Boarder Control, Crime investigation and Forensic analysis

Eagle Eye allows you to inspect hard-to-reach and hidden areas quickly and reliably. Live images can be viewed in real-time, be shared with others and be recorded digitally for documentation and archiving.

Dimensions:



Technical Specification:

| Parameter | Digital Video Endoscope Eagle Eye |
|----------------------------------|--|
| Inserting tube length / diameter | 1.3m, 3m / ϕ 7mm |
| Illumination system | 8x ultra bright white LED light sources positioned around objective lens |
| Direction of view | Straight (0°), 90° with mirror adapter |
| Viewing angle of optics | Approx. 80° |
| Articulating angle of camera | Minimum 90° all directions |
| Focusing distance | 10mm to infinity. (Focusing is adjustable by screwing the head part) |
| Tip articulation angle | All the direction (360°) |
| Material of tube | Flexible tungsten braid |
| Image sensor / Resolution | 1/6" CCD / 470 000 pixels |
| Video Output | Composite PAL (NTSC at request) |
| Digital image recording system | Still picture and movie |
| Digital image recording media | Internal 90 MB flash memory. External SD card 4.0GB |
| Digital image record size | VGA 480x640 pixels |
| LCD Monitor | Colour 3.5" 480(H)x234(V) |
| Electronic Shutter | Automatic (PAL 1/60~1/120,000 (16 steps), NTSC 1/50~1/120,000 (16 steps)) |
| Gain control | Automatic |
| Colour white balance | Automatic |
| Operation temperature | - 10°C ~+60°C / Rh.0~90% (No condensing) |
| Operation temperature | - 5°C ~+40°C / Rh.0~90% (No condensing) |
| External Dimensions | 216(L) x 201 (H) x 54 (W) mm (excl. LCD and insertion tube) |
| Power | External power supply. Rechargeable Li-Ion battery packs via USB connector |
| Weight | Eagle Eye Approx. 1 400 gr. |

Ordering information:

Eagle Eye can be ordered with 1.3m or 3.0m insertion tube lengths:



OP-019 370, Eagle Eye, Digital LCD kit, 1.3m insertion tube length,



OP-019 371, Eagle Eye, Digital LCD kit, 3.0 m insertion tube length

Following accessories are always included when you order Eagle Eye:

- Flexible head articulated Endoscope with 3.5" colour LCD, battery and digital image & video recorder
- 90 degree mirror adapter
- USB2.0 PC connection cable
- AV video-out, DC-in connection cable
- Memory card for image and video recording
- External power supply
- Heavy duty water resistant Transport Case



Heavy duty case 90° mirror adapter

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