

OS-DCAM OptiSon® Digital Camera upgrade

OptiSon systems built until 2006 used a high linearity analog camera in conjunction with an instrumentation analog frame grabber. Since January 2007 all systems incorporate a high-speed digital camera and interface, for improved resolution and image quality.

OS-DCAM is an on-site upgrade in which the system is retrofitted with the digital camera, computer interface and data acquisition. A summary of the differences between both methods are shown below:

Image acquisition system	Analog	Digital
Resolution (pixels)	640 x 480	1392 x 1040
Number of bits per pixel	8	12
Image interface	RS-170	CameraLink

Computer considerations

The OptiSon® Digital Camera Upgrade requires a computer that meets very stringent performance conditions, to ensure compatibility with the high speed data transfer from the camera. The most important requirements are a PCI-X bus and a compatible chip set. After evaluation of several motherboards and careful consideration and discussion with the camera interface developers, we have found one that meets the requirements.

We have selected a Dell computer that is fully compatible with the camera and its interface so we offer it as part of the upgrade, to ensure a smooth transition and reliable performance.

Once we have fitted the computer with the hardware and software, it will be shipped to the customer's site and Onda personnel will go there to install the OptiSon hardware and ensure that the complete system is fully working under the new configuration.

Included in the Upgrade:

- Digital Camera
- Camera-computer interface board
- Computer fully configured
- Power supply and cables
- System optics cleaning
- Optics re-alignment as needed
- Updated Image Acquisition and OptiSon Matlab [OS-ML] library
- OSAcq digital camera application with MatLab runtime engine

Optional:

- OS-ML Image processing libraries for MatLab (MatLab Environment, Image Processing, Signal Processing required)