

SMDigCam DATA ACQUISITION PROGRAM FOR ROPER SCIENTIFIC/KODAK MEGA PLUS 16.8i DIGITAL CAMERA

The SMDigCam real-time data acquisition software was developed to support the MegaPlus 16.8i digital camera from Roper Scientific. The camera is based on Kodak technology and is built around the KAF 16800, a 4,096 by 4,096 CCD chip, which is available in monochrome and color versions. The pixel size is 9 x 9 micron, and the focal plane sensor area is 36.86 mm by 36.86 mm. The highest data acquisition rate is about 2 FPS. The camera equipped with Rolleiflex medium format PQS series lenses, which offers high-quality optics and in between lens shutter, is ideal for demanding applications such as airborne mapping.

Functionality:

The SMDigCam real-time data acquisition software provides you with the capability to acquire images in a real-time environment including the control of all the camera operation aspects. Specifically, SMDigCam offers the following features:

- ✂✂ SMDigCam is designed to take advantage of Windows[®] NT/2000/XP technology, including the popular Windows user interface as well as its multitasking ability.
- ✂✂ AP32 makes full use of Windows' graphics capability by displaying the status of all the camera controls and image capture process, and provides immediate display of the recently acquired image.
- ✂✂ SMDigCam interfaces the digital camera through a high-performance BitFlow interface board and another interface card provides input for external camera triggering signal.
- ✂✂ The camera settings such as exposure control and f/stop can be controlled either manually or automatically by the program.
- ✂✂ Images can be stored in either BMP or TIFF formats.
- ✂✂ Image imprinting such as date and time or image name is available.
- ✂✂ Image acquisition can be controlled in a variety of ways such as interactively through the user interface, by external hardware signal coming either from a flight management system or manual device, and by the program by specifying the time interval between image captures.
- ✂✂ Images are named by date and time and can be automatically stored in flightline-defined folders.
- ✂✂ Optional real-time image processing can provide histogram equalization on the fly.
- ✂✂ A log file records all the image captures and thus provides an easy handling of the images
- ✂✂ Image acquisition parameters are automatically saved and restored for new sessions.

SMDigCam System Requirements:

SMDigCam real-time data acquisition software is built to run on Windows[®] NT/2000/XP PC systems. A minimum system consists of:

- ✂✂ Dual Pentium III processor, 600 MHz or better is recommended.
- ✂✂ 256 Mbyte memory, at least ½ Gbyte hard-disk (about 60 images can be stored on one Gbyte space)
- ✂✂ BitFlow frame grabber with driver.
- ✂✂ Measurement Computing interface board for external triggering.
- ✂✂ Minimum 1024 x 768 resolution graphics (XVGA) and color monitor, LCD is recommended for airborne operations.
- ✂✂ ActiveX control enabled.



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