Digital Camera Systems

Air Resource Specialists' (ARS') expertise will help determine the best approach to capture, transmit, archive, and display digital images and data for monitoring applications, interpretive displays, and Web displays. From our standard systems to fully customized configurations, ARS will work effectively with clients to meet individual requirements.

High-Resolution Digital Camera Systems (HRDC)

Equipment

- High-resolution (8 megapixel) digital camera with internal scripting
- Weatherproof, heated environmental enclosure
- Enclosure mounts:
  - Static directional
  - Automatic, programmable, pan-tilt
- Extended temperature image capture computer
- Optional remote configurations:
  - Hardened weatherproof computer where climate-controlled sheltering is not possible
- A variety of digital communications technologies available

Features

- Capture, store, and transmit high-resolution digital images
- Up to 8 megapixel resolution
- User-selected image capture and transmit times
- Comprehensive, easy to use software controls system functions
- Capture images to internal hard drive and upload by wireless, telephone, or satellite to FTP site for near real-time Web display
- Remote configuration via wireless, telephone, or satellite of:
  - Camera zoom
  - Focus
  - Exposure
  - Image resolution
  - Frequency of capture
- Pan-tilt capabilities permit capture of a variety of views from a single camera location
- Images from collocated cameras can be merged into a wide-angle panorama for Web display
- A series of images can be compiled to yield time-lapse sequences
- Collect and simultaneously upload supporting data from meteorological or air quality monitoring sites

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Remote Digital Camera Systems (RDCS)

Equipment

- High-resolution (8 megapixel) digital camera
- Environmental enclosures
- Batteries charged by line power or solar panels
- Extended temperature, low power image capture computer
- Removable memory card or stick for image storage
- Remote, digital image communication system options

Features

- Capture, store, and transmit high-resolution digital images
- Up to 8 megapixel resolution
- User-selected image capture and transmit times
- User friendly on-site interface for configuration of:
  - Image acquisition schedule
  - Camera zoom
  - Focus
  - Exposure
  - Image resolution
  - Frequency of capture (individual images to time-lapse sequencing)
  - Operational status

Web Sites and Interpretive Displays

ARS provides meaningful scenic vistas and air quality and meteorological data that become the centerpiece of Web pages and interactive displays.

- Raise public awareness
- Support decision-making related to air quality issues
- Customized image and data processing to meet specific needs
- Automated, remote image and data acquisition
- Integration of related data from dataloggers or central data management centers
- Automatic, secure transfer of images and data to Internet sites
- Custom interfaces to dataloggers and other specialized instrumentation
- Time-lapse sequence and panorama generation
- Web site design, hosting, and maintenance
- Web site integration of digital images with other monitoring data
- Design and implementation of computer-based interpretive displays
- Custom configurations

Example Web sites include:

- http://www2.nature.nps.gov/air/WebCams/index.htm
- http://www.fsvisimages.com
- http://www.hazecam.net
- http://www.mwhazecam.net
- http://www.wyvisnet.com
- http://www.phoenixvis.net