ADC Airborne Digital Camera

AA456

AA456 Airborne Digital Camera

The AA456 Airborne Digital Camera consists of three primary modules:

- The camera head with lens and LCD shutter assembly.
- A system control and recording chassis packaged into a computer case and including an integral GPS receiver.
- A remote operator interface unit consisting of a display and keyboard housed in a portable case for lap top use.

The package also includes system cables, a GPS antenna and cable, and a mechanical assembly for mounting camera head.

The AA456 Airborne Digital Camera (ADC) is a 2-dimensional framing device with approximately 2000 pixels in each axis. The output is recorded onto 8 mm tape cartridges. Operator input and control is from a remote display/keyboard unit and instrument status and scene images are presented to the operator on the display.

The ADC is particularly designed to acquire contiguous, sequential, high resolution images of the ground from an aircraft platform, and store them for subsequent viewing and computer based analysis.

The ADC is made up of three modules: 1) the camera head with lens; 2) a system control and recording chassis packaged into a computer case; 3) a remote operator interface unit.

A mechanical assembly for mounting the camera into an aerial camera mount is also included.

ADC Airborne Digital Camera

PHYSICAL SPECIFICATIONS

Sub Assembly	Size	Weight (lb)
Electronic Chassis	19" W x 7" H x 17" D	45
Camera with Lens	4" W x 4.5" H x 8.25" D	3
Remote Operator Interface	9" H x 14" W x 2" D	6
Cables (approximate)		5
Camera Mount (approximate)		5
Total Weight (approximate)		71

TECHNICAL SPECIFICATIONS

CAMERA RESOLUTION
2020 x 2044 scene pixels

GROUND COVERAGE (with 24 mm lens)
Approximately 4000 x 4000 ft. @ 5600 feet altitude (AGL)
IFOV approximately 0.35 mrad

FRAME RATE
2 to 20 seconds per frame, operator selectable

LENS APERTURE CONTROL
Adjustable lens f/#: range is f/2.8 -f/22 for 24 mm lens

CAMERA SHUTTER CONTROL
0.25 to 40 ms exposure, operator selectable

SPECTRAL BANDWIDTH
Visual spectrum, approximately 400 - 700 nm

OUTPUT RECORDING
8 mm High Performance Cartridge Tape System
Approximately 4800 frames per tape cartridge, equaling 2.5 hours of continuous data collection per tape at the fastest frame rate.

FRAME TRIGGERING
Internal timer, External signal, or Manual (operator select)
All exposures are synchronized to GPS clock.

OPERATOR INTERFACE & CONTROL
Operator input from a display with touch-screen controls instrument functions. Instrument status and acquired images are displayed to the operator on the remote unit sunlight readable LCD screen.

GPS
Built-in receiver records aircraft position into output data. Position data is automatically correlated to frame acquisition time. Differential GPS is optional.

POWER
28VDC nominal input (approximately 250 watts)

OPERATING ENVIRONMENT
Temperature: 5° to 35°C
20% to 80% Relative Humidity
10,000 feet altitude above sea level

STORAGE ENVIRONMENT
Temperature: -25° to 80°C
20% to 80% Relative Humidity
40,000 feet altitude above sea level

OUTPUT FORMAT
Refer to the latest revision of specification 100 x 256

Rev. 3 - Nov. 2004

Imaging Group
P.O. Box 1869
Ann Arbor, MI 48106-1869 USA
(734) 769-5649 FAX (734) 769-0429

www.argonst.com

Corporate Headquarters
12701 Fair Lakes Circle, Suite 800, Fairfax, VA 22033
Phone (703) 322-0881 FAX (703) 322-0885