

## DOAMS

### DISTANT OBJECT ATTITUDE MEASUREMENT SYSTEM

The L-3 Brashear DOAMS (Distant Object Attitude Measurement System) is the latest state-of-the-art tracking telescope system. It is designed for precision tracking, high resolution photography, and high accuracy data recording. The system maintains rigid optical and mechanical alignments while performing stringent dynamic operations.

DOAMS tracks aircraft, missiles, or projectiles by providing a precision mounting platform for recording instruments to collect high resolution images at a high sampling rate with low distortion. Its unique automatic focusing system incorporates precision thermal compensation over a 100°F temperature range.

The large payload capability and automatic tracking features of the DOAMS makes it an excellent instrument for a wide variety of electro-optical and LASER or RADAR ranging applications.

#### THE DOAMS DIGITAL CONTROL SYSTEM (DCS) INCLUDES:

- High speed communication via an Ethernet interface to provide remote operation
- Advanced servo loop control to optimize tracking performance
- Built-in error correction to ensure precision tracking accuracy
- Versatile chassis architecture that accommodates additional PC104 cards such as an "Automatic Video Tracker" (AVT) to satisfy specific customer requirements and missions



#### THE DOAMS FEATURES:

- An advanced high performance tracking instrument for long range data acquisition.
- Dual 600mm aperture high resolution cassegrain optical systems.
- Focal lengths of 2.5 and 5 meters.
- Precision automatic digital focusing.
- High speed recording cameras digital or film.
- Direct torquer drive on both axes to provide jitter free tracking.
- High resolution angle encoders—21-bit.
- Digital Control System (DCS) for manual or computer control.



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#### SPECIFICATIONS

##### **Optical System**

Clear Aperture	22 inches
Focal Lengths	2.5 meters, 5 meters (10 meters optional)
Field of View	1.5° (2.5m f/l)
Resolutions	90L/mm (2.5m f/l)
(shellburst Film)	70L/mm (5m f/l)
Transmission	80%

##### **Recording Cameras**

Type	Digital or Film Format
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##### **Digital Focus Control**

Accuracy	±0.02mm
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##### **Angle Encoding System**

21-bit (0.62 arc second) (23-bit optional). Angular information recorded and available in real time.

##### **Drive System**

Minimum Velocity	Earth Rate
Maximum Velocity	30 degrees per second
Acceleration	60 degrees per second squared

##### **Instrument Accuracy (Random Error)**

±5 arc seconds

#### OPTIONS INCLUDE:

- Slipring and Fiber Optic Rotary Joint assemblies on the azimuth axis for power and signal wiring along with an ethernet line, video coax lines, and single mode fiber optic lines. These options allow unlimited axis rotation and eliminate risk of cable wrap-up.
- Automatic Video Tracking (AVT) kit integrated into the DCS chassis to allow automatic target acquisition and tracking with digital or analog cameras.
- System configuration with an IR band telescope replacing the visible band telescope.

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**Brashear**

**L-3. Leading.** Headquartered in New York City, L-3 Communications employs over 63,000 people worldwide and is a prime system contractor in aircraft modernization and maintenance, C3ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, systems and subsystems. The company reported 2006 sales of \$12.5 billion.

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