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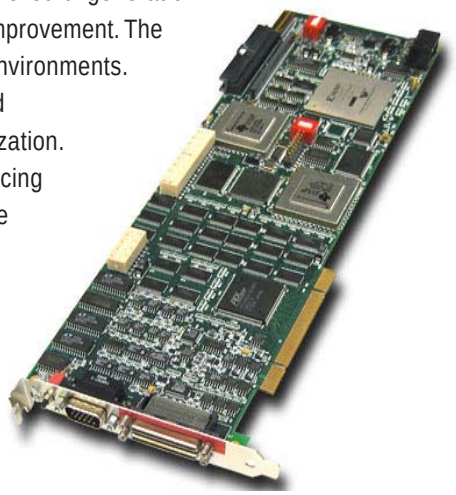
Find the *EO Imaging 6007* at our website: ***Click HERE***

ELECTRO-OPTICAL IMAGING, INC.

MODEL 6007 R4

EDGE/CENTROID/CORRELATION PCI AUTOMATIC VIDEO TRACKER

The Model 6007 R4 Edge/Centroid/Correlation PCI Automatic Video Tracker represents the fourth generation of this product, reflecting E-O Imaging's continued commitment to product innovation and improvement. The tracker provides the user a system easily adapted to a wide range of target and tracking environments. The single board tracker incorporates the latest in digital signal processing (DSP) and field programmable gate array (FPGA) technology, providing a flexible architecture for customization. The tracker interfaces with both analog and digital video sources, providing ease in interfacing with a wide variety of sensor systems. Both the analog and digital video interfaces provide full 12-bit, 4096 gray level capability supporting both standard and nonstandard video formats with array sizes up to 1024 x1024. The tracker design incorporates a multiple DSP implementation allowing concurrent operation of algorithms in realtime. The system is structured with an open architecture allowing easy incorporation of specialized features and algorithms. The Model 6007's standard features and options permit easy adaptation to even the most complex and demanding test range, tactical, surveillance and industrial applications.



Standard Features

- Algorithm Processing (5)
  - Selectable Edge, Mass/Intensity Centroid, Vector* and Correlation Modes
- RS-232/422 Serial Communication Ports (8)
- PCI Interface
- RS-170 / RS-170A / NTSC / PAL / CCIR / RS-343
- Differential / Single-ended Video Inputs (4), 12-bit Resolution
- Camera Link, (1) Input, (1) Output with Symbology
- Analog Video Outputs (3), 2 with Symbology and 1 without
- Interlaced and Sequential Video Format Capability
- 1024 x1024 Sensor Array Capability
- Analog Inputs (8), 16-bit Resolution
- Analog Error Outputs, 16-bit Resolution
- Analog Outputs (2), 16-bit Resolution
- Sophisticated Intrusion Detection Algorithms
- Auto Acquisition and Target Detection
- Auto/Manual Gate Position Capability
- Adaptive and Manual Gate Size Capability
- Adaptive and Manual Threshold Functions
- Robust Coast and Target Reacquisition Algorithms
- Advanced PID Servo Compensation Filter
- Embedded MATS or Generic Pedestal Control Interface
- Standalone Configuration
- Target Simulator

Typical Applications

- Training Systems
- Realtime Missile and Aircraft Tracking
- Simulation Systems
- Laser System Alignment
- ECM Evaluation
- Spatial Measurements of Objects
- Surveillance
- Biomedical Analysis
- Bomb and Weapons Scoring
- Weapon System Evaluation
- Re-entry Vehicle and Satellite Tracking
- Automated Calibration of Tracking Systems
- Weapons System Director
- Trajectory Analysis

Available Options

- Remote Control Unit
- Nonstandard Video Formats
- Custom Packaging
- Custom Symbology and Annotation
- Custom Tracking Algorithms
- Zoom Scaling and Correction
- Trajectory Simulation Capability
- Operator Training Capability
- Image Stabilization
- Image Processor
  - Target Enhancement / Detection
  - User-Definable Filter Characteristics
  - Stored Filters

** Vector Track mode is only available with mount position feedback.*

Engineering High Performance Tracking Solutions

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MODEL 6007 R4

EDGE/CENTROID/CORRELATION PCI AUTOMATIC VIDEO TRACKER SPECIFICATIONS

Electrical Interface

- Composite Video Inputs (4)
  - Compatible with TV or FLIR
  - Video Std's RS-170 / RS-170A / NTSC / PAL / CCIR / RS-343
  - Single-Ended or Differential, Switch Selectable
- Composite Video Outputs (3)
  - Two (2) mixed with symbology
  - One (1) with no symbology
- Analog Errors (2)
  - Azimuth and Elevation Errors
- Analog Output (2)
  - User Defined
- Tracker Status Discretes (3)
  - On-Target Discrete: indicates that target data is present and a valid track is active
  - Coast Discrete: indicates target has been lost and reacquisition sequence is in process
  - Track/Acquire: indicates track state
- Digital Video Input/Output
  - Camera Link Base
  - One Input; One Output
- Analog Input (8)
  - Analog input ports +/- 10v max, 8 channels, 16-bit Resolution for Joystick, Zoom Position and Related Functions
- Power Consumption, Typical
  - 15W; +5V, 2.0A; +12V, 0.2A; -12V, 0.2A

Remote Control Input/Output

- RS-232/422 Serial Interface (8)
  - 115.2 K baud max. (default)
- PCI Local Bus
  - Rev 2.3 Compliant

Functionality

- Tracking Algorithms:
  - Mass Centroid: Integrating (true centroid), Binary or Multi Gray level
  - Thresholded Intensity Centroid
  - Edge: Selectable (top, bottom, left, right)
  - Correlation (Exhaustive Search)
  - Vector (Leading Edge) Tracks*
- Tracking Gate Auto/Manual Size
  - Manual: adjustable from 1% to 90% of the field-of-view area in Edge/Centroid Modes
  - Adaptive: automatically adjusts to variations in target size
  - Correlation Mode: reference area size from 8 x 8 up to 32 x 32 elements, independent horizontal and vertical size controls. Search area is 64 x 64 pixels/TV lines.
- Threshold (automatic/manual)
  - Allows identification of White and/or Black contrast targets or target gray levels
  - Manual: set by the operator to optimize the threshold level
  - Adaptive: automatically adjusts to variations in scene intensity based on video levels
  - Automatic: adapts to variations in target contrast through a realtime Statistical Video process providing enhanced thresholding capability
- Automatic Coast Mode
  - Statistical Process determines the validity of the target. Parameters set by the user optimize recovery from intrusions and disruption of track.
- Reticle
  - Defines the AZ/EL null point of the system. User may select reticle.
  - User selectable reticle format
- Display Symbology
  - Tracking Gate Outline (Window/Corners)
  - Reticle (Crosshair)
  - Track Point Indicator (Flag/Crosshair)
  - Offset Track Point
  - Threshold Enhancements (Highlighted Target Data)
  - Characters for displaying system status and mode information
  - Alphanumeric generator for user-defined messages
- Graphical User Interface
  - PC-based program for configuration setup and testing through the RS-232/422 interface (user friendly)
- Built-In-Test
  - Performs end-to-end testing
  - Verifies all track modes
- Field Downloadable Software (DSP/FPGA)
- Sophisticated PID Filter
- Configuaration Save Capability
  - Stores up to 10 user-defined configurations in FLASH
  - Allows user to define TRACKER boot-up configuration

Physical Specifications

- Board Dimension
  - Full Length PCI Card
- Environmental Operating Temperature Range
  - Commercial units: 0 to + 70°C
  - Ruggedized units: -40 to + 85°C
    Storage Commercial or Ruggedized: -40 to +85°C
- Cooling
  - Forced Air Cooling
- Relative Humidity
  - Commercial Units: 0 to 95% non-condensating
  - Ruggedized Units: 0 to 95% non-condensating

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** Vector Track mode is only available with mount position feedback.*

Specifications Subject to Change Without Notice. Consult Factory for Latest Specification and Available Options.
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