

Method and Apparatus for Optical Encoding with Compressible Imaging

Case Number: GSC- 14633-1
Patent Number: 7,060,968
Patent Exp. Date: 6/4/2023

DESCRIPTION

This invention is an optical encoder for determining the location of object. An area array image sensor in camera head, detects signals derived from portion of image of pattern which lies in field of view defining fixed coordinate system and performs binning of detected signals to define binned image. An image processor receives signals from sensor, finds a period within field of view based on binned image and determines location of object based on period identified within fixed coordinate system.

FEATURES AND BENEFITS

- The speed of the encoding operation is increased along with the image process time.
- The exposure times are reduced in order to avoid saturating charge coupled device (CCD) serial register as result of integrating image charge in serial register through binning.

APPLICATIONS

- Space Flights
- Cryogenic Environments
- Machine Making
- Optical Metrology
- Surveying
- Defense

FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-14633-2, please contact:

Ted Mecum
Senior Technology Manager
NASA Goddard Space Flight Center
Innovative Partnerships Program Office
alfred.t.mecum@nasa.gov
301-286-2198