

## HIGH RESOLUTION RECONNAISSANCE SENSOR

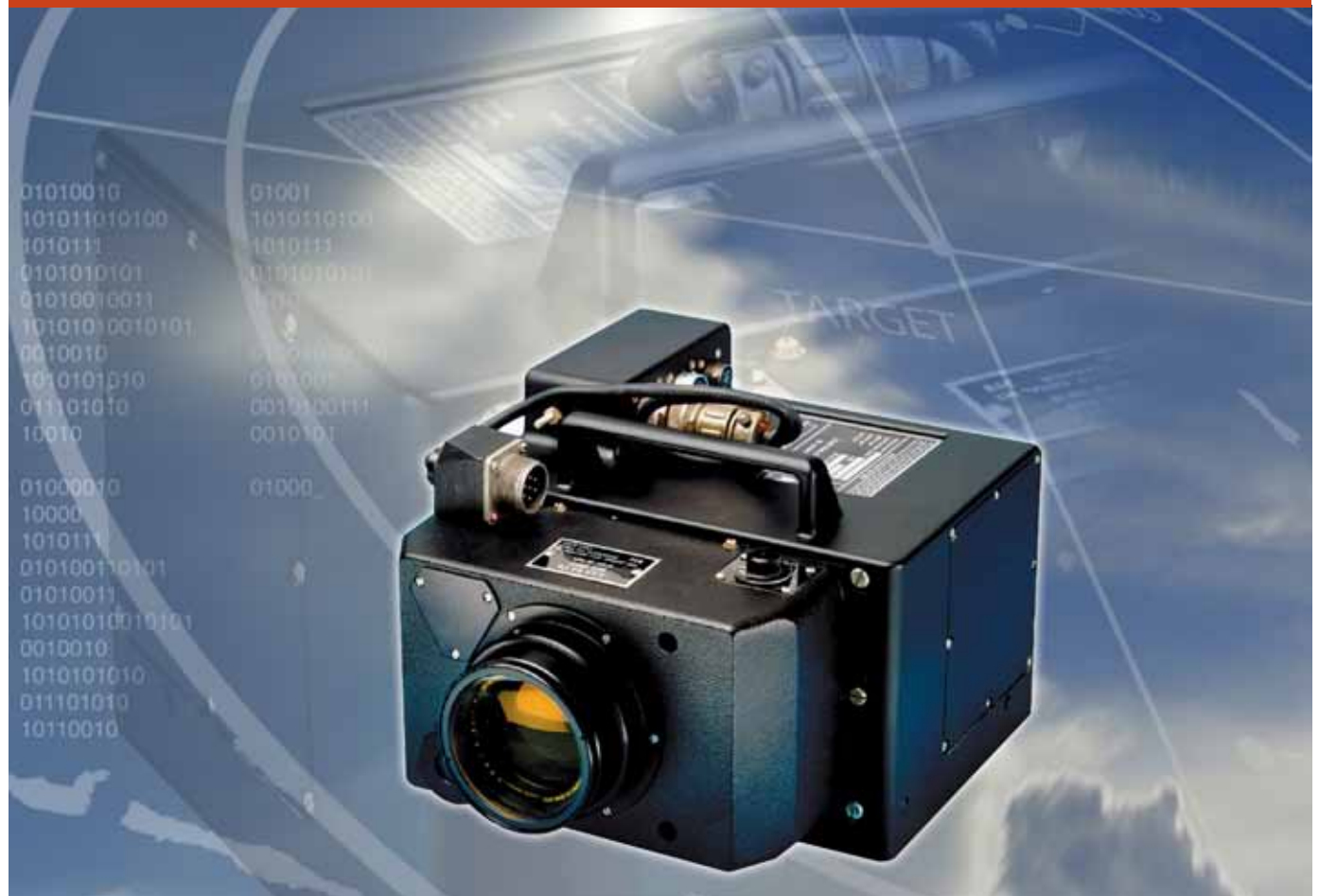
- ✦ The SWEEPIR 10 Electro Optical (EO) sensor is a cost effective, self contained single LRU, solid state push broom device employing a 12 micron 4096 pixel Linear Charge Coupled Device (CCD) array.
- ✦ The Sensor may be fitted with a range of lenses suitable for low and medium level reconnaissance applications. It may be fitted in oblique, vertical, split pair or fan configurations producing a very wide range of options to meet operational requirements.
- ✦ All sensors in the SWEEPIR range are fitted with internal solid state gyro systems which provide electronic platform motion compensation on displayed imagery.
- ✦ Imagery is recorded on board and can be displayed on a Networked Imagery Exploitation System (NIES). The imagery may also be transmitted to the ground when suitable data linking equipment is fitted to the aircraft.
- ✦ Type SWEEPIR 10 EO sensors are in service with the Royal Air Force and other Air Forces world-wide for tactical reconnaissance operations.



OPTRONICS

# SWEEPIR 10

## Electro Optical Sensor





## OPTRONICS

# SWEEPIR 10

## Remotely Operated Thermal Observation Sight

### TECHNICAL DATA

- Simultaneous High Resolution & Wide Field of View
- High Dynamic Range
- Compact, Lightweight & Robust
- Ease of Platform Integration
- High Reliability
- Visual Band & Near Infra-Red Operation
- Interchangeable Lenses
- In-service & Combat Proven
- Exceptional Image Quality

### APPLICATIONS

- Podded Systems
- UAVs
- Custom Inboard Installations
- Border Surveillance
- Maritime Patrol
- Route Clearance
- Strategic Asset Monitoring

### FEATURES & BENEFITS

- High dynamic range:
  - Excellent performance through haze and dust
  - Shadow & adverse weather penetration
  - Images from dawn until dusk
- Low weight, volume & power:
  - Ease of integration into tactical platforms: fighter pods, UAV bays and various airborne applications
- Interchangeable lenses:
  - Providing tactical role changes
- High reliability:
  - Long endurance missions

### LINEAR CCD OPERATING PRINCIPLE

The CCD array scans at a rate of typically 1800 lines per second which combined with the forward motion of the aircraft builds up a picture on a line-by-line or 'push-broom' principle.

The Field of View of the lens fitted to the sensor determines the ground coverage and resolution of the image recorded.

### EO SENSOR

Type	Solid State Pushbroom
Single LRU	Integral power, control system & gyros for roll and nod (pitch and yaw)
	Interchangeable Lenses

### SPECTRAL RANGE

Wavelengths	Visible into near infra-red (NIR) 500 nm to 950 nm
-------------	--

### IMAGE ACQUISITION

Elements	4096 linear array CCD Focal Plane Array
Line rate	1800 lines per second
Pixel size	12 micron

### OPTICAL PATH

Lenses	Interchangeable
	6.0" (152 mm) 18.3° (FOV)
	3.0" (76 mm) 35.7° (FOV)
	1.5" (38 mm) 65.6° (FOV)

### DIMENSIONS (EXCLUDING LENS)

Length	7" (178 mm)
Width	8.9" (227 mm)
Height	7.1" (182 mm maximum)

### MASS

Weight	7.8 kg (excluding lens)
	11.2 kg (including 6" lens)

### POWER

Supply	28 Vdc
--------	--------