



SCANNING SLIT HYPERSPPECTRAL IMAGER

APPLICATIONS

Data-Cube Dim	318 x 256 x 100
Data Rate	3 cubes/sec
Spectral Band	8.1 - 12.5 μm
Spectral Resolution	100 Bins (~ 43nm)
F-number	1.5
Field of view	7.3° X 5.6°
Dimensions	15" H X 33" L X 15" W
Weight	55 Lbs

- Airborne Reconnaissance
- Standoff Detection
- Automatic Target Recognition
- Material Identification
- Chemical Defense
- Environmental
- Monitoring
- Geologic Mapping
- Biological Research
- Medical Imaging
- Cancer Screening
- Clinical Instrumentation
- Machine Vision

HYPERSPPECTRAL IMAGING

Combining Imaging with Spectral Analysis

A conventional color image has three colors per pixel, but a hyperspectral image can have **hundreds**. Because every material has a characteristic spectral signature, this information can be used to identify an object by analyzing its *spectra*. Two dimensions describe the position of a point in space and the third dimension is the spectral signature at that point. BD&E's Multislit Scan hyperspectral imager uses a scanning mirror and three separate image plane slits to produce a multiplexed hyperspectral image at three times the rate possible with a single slit.

Working with a fast FPA, running at 304 Hz, the Multislit Scan hyperspectral imager can produce high resolution hyperspectral data-cubes at speeds of up to 3 FPS. The full system includes an automated calibration system to ensure radiometrically and spectrally accurate data under all conditions.