



**BODKIN**  
DESIGN & ENGINEERING

## MWIR-60 VIDEO RATE HYPERSPECTRAL IMAGER

*Snap-Shot Mode Imaging Spectrometer  
Produces Data Cubes at Video Rates*

- No Moving Parts
- Unique Patented Technology
- Ideal for moving platforms and transient events

### PRELIMINARY SPECIFICATIONS

Data Cube	17x 13 spatial x 60 spectral
Data Rate	60 cubes/sec
Spectral Range	3 – 5 $\mu\text{m}$
Spectral Resolution	34 nm/bin (avg)
Field(s) of View	6.7° x 5.4° & 4.8° x 3.6°
Dimensions	3.5" W x 5" H x 20" L
Weight	10 lbs
Power	14 Watts

### HYPERSPECTRAL 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*.

Typical hyperspectral imagers scan a scene over time to build a data-cube. This build time makes these technologies unsuitable for high speed applications.

BD&E's hyperspectral imaging systems use our patented *HyperPixel Array™* (HPA™) technology to combine spectral data with spatial information to create three-dimensional *hyperspectral data-cubes at video rates*. Two dimensions describe the position of a point in space and the third dimension is the spectral signature at that point.

Using no moving parts, this proprietary *HyperPixel Array™* technology creates a data-cube in one **instantaneous** frame, eliminating motion artifacts.

### APPLICATIONS

- Standoff Detection
- Material Identification
- Chemical Defense
- Environmental Monitoring
- Geologic Mapping
- Biological Research
- Medical Imaging
- Automatic Target Recognition

Spectral Identification of Potassium  
Nitrate on Test Surface

Export of this product is regulated by the U.S. Department of State in accordance with the guidance of "International Traffic in Arms Regulation (ITAR)" per Title 22, Code of Federal Regulations, Parts 120-130.

