

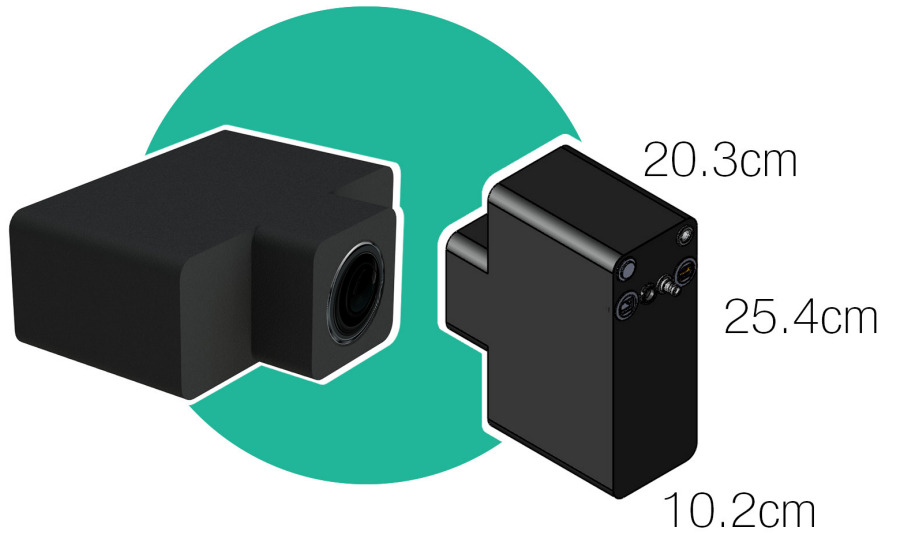
MICRO**SASI**384

INTERNALLY COOLED AND CALIBRATED,
SMALL FORM FACTOR,
HYPERSPPECTRAL SWIR IMAGER

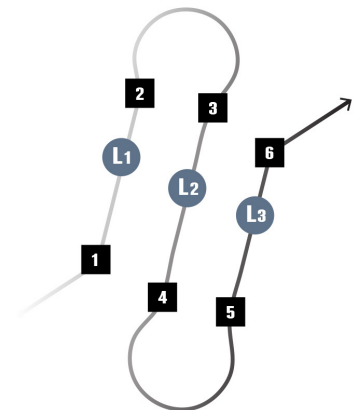


FIELD-PORTABLE HYPERSPPECTRAL MICRO-SWIR IMAGER FOR AIR & GROUND USE

- Portable Air/Ground Hyperspectral SWIR Imager
- 1.0–2.5µm Spectral Coverage
- 40° FOV
- 384 Spatial Imaging Pixels
- Diffraction-Limited Optics Across Spectrum
- Custom Fore-Optics Available
- Self-Contained Camera and Data Recording
- Internal Calibration System
- Internally Cooled
- Optional GPS/IMU
- Easy Lidar Integration
- Remote Operation via R/F Link or
Autonomous via Waypoints
- Precision Data Time Stamping to External Devices
- API Available



Control via R/F Link



or Waypoints



HYPERSPPECTRAL & THERMAL REMOTE SENSING

microSASI384

SMALL FORM FACTOR, HYPERSPECTRAL PUSHBROOM SWIR IMAGER WITH DIFFRACTION-LIMITED OPTICS. CONTINUOUS VNIR-SWIR COVERAGE WHEN USED WITH ITRES μ CASI-1920

Target Detection and Synthetic Materials Mapping / Classifications / Geological Exploration / Vegetation Speciation / Aquatic Pollution Presence / Utility Corridor Mapping / Mineral Composition

PERFORMANCE

| | |
|-------------------------------------|------------------------------|
| Spectral Range | 1.0-2.5 microns (Continuous) |
| # Spectral Channels | 200 |
| # Across-Track Pixels | 384 |
| Total Field of View | 40 degrees |
| IFOV | 1.8 mRad (0.1 degrees) |
| f/# | f/2.5 |
| Spectral Width Sampling /Row | 6 nm |
| Pixel Size | 24 x 24 microns |
| Dynamic Range | 14-bits |
| Detector Full Well | ≥ 1.0 Me |
| Data Rate | ≥ 150 FPS |
| Spectral Smile/Keystone | $\leq \pm 0.5$ pixels |
| Calibration Accuracy | $\leq 2\%$ (NIST-Traceable) |
| Data Recording Capacity | 480 GB (SSD, SATA III) |
| | (12 hrs @ 50 fps) |
| Data Recording Capacity (hr) | 4.0 hours @ 150 fps |

DIMENSIONS, WEIGHTS, AND POWER

| ITEM | W / H / D (CM) / WT. (KG) |
|--------------------------------|--|
| SHU, Control, Recording | 10.2 / 25.4 / 20.4 / ~2kg ¹ |
| Power Draw | 50W ¹ |
| | ¹ Subject to change |

OPERATION

| | |
|----------------------------------|---|
| Operator | Control remotely via laptop & existing R/F downlink, or pre-programmed track and waypoints. |
| Multiple Sensor Operation | Up to 5 ITRES imagers may be simultaneously operated via MuSIC system |

INTERFACE, TIME-STAMPING, REMOTE OPERATION & CONTROL

- GigE or USB-3
- TTL input for waypoint trigger

- Precision data time-stamping to external devices
- API available

DATA PROCESSING SYSTEM

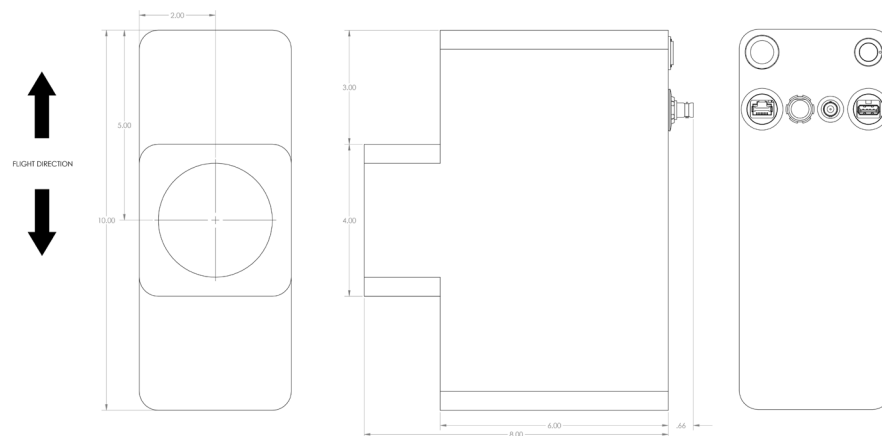
- Processing software Linux or Windows-based
- Playback software (Quicklook)
- Generates 16-32 bit BIP format data compatible with ENVI (BIL, BSQ formats possible)

GEOCORRECTION SYSTEM

- GPS/IMU integration (optional)
- Data synchronization (GPS, attitude, & image streams, if INS used)

GEOCORRECTION/ORTHO CORRECTION/MOSAICKING SOFTWARE

- Accepts Lidar, Ifsar, and USGS DEM inputs
- Nearest neighbor algorithm used – maintains radiometric fidelity



NOTES:
1. INTERPRET DIMENSIONS AND TOLERANCES AS PER ANSI Y14.5-1994.
2. REMOVE ALL BURRS AND SHARP EDGES.

| REV | DATE | BY | CHKD | APP'D | DESCRIPTION |
|-----|------|----|------|-------|----------------------|
| 1 | | | | | ISSUE FOR PRODUCTION |

ITRES
MICRO SASI (SUBJECT TO CHANGE)

REV: D
DWG. NO.: N/A
SCALE: 1:1
SHEET 1 OF 1

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All ITRES sensors are calibrated to traceable standards.
Specifications subject to change without notice.