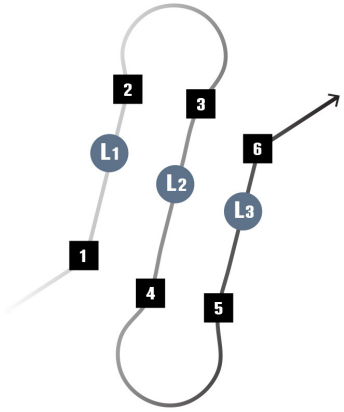
MICRO SASI 384

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

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

- Portable Air/Ground Hyperspectral SWIR Imager
- 1.0–2.5µm Spectral Coverage
- 256 Spectral Bands
- 40° FOV
- 384 Spatial Imaging Pixels
- GNSS/MEMS-Inertial System Capability
- 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



or Waypoints

itres
HYPERSPECTRAL & THERMAL REMOTE SENSING

microSASI384

SMALL FORM FACTOR, HYPERSPECTRAL PUSHBROOM SWIR IMAGER WITH DIFFRACTION-LIMITED OPTICS. CONTINUOUS VNIR-SWIR COVERAGE WHEN USED WITH ITRES μCASI-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	256
# 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	5.9 nm
Pixel Size	24 x 24 microns
Dynamic Range	14-bits
Detector Full Well	≥ 1.0 Me
Data Rate	≥ 150 FPS
Spectral Smile/Keystone	< ±0.35 pixels
Calibration Accuracy	≤ 2% (NIST-Traceable)
Data Recording Capacity (12 hrs @ 50 fps)	≥480 GB (SSD, SATA III)
Data Recording Capacity (hr)	4.0 hours @ 150 fps

DIMENSIONS, WEIGHTS, AND POWER

ITEM	W / H / D (CM) / WT. (KG)
SHU, Control, Recording	10 / 23 / 25 / 3.8kg[1]
Power Draw	24-32VDC, ~70W[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
- Automated control for pre-planned coordinates (requires MEMS inertial (accepts .shp, .kml, etc.)
- Precision data time-stamping to external devices

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)

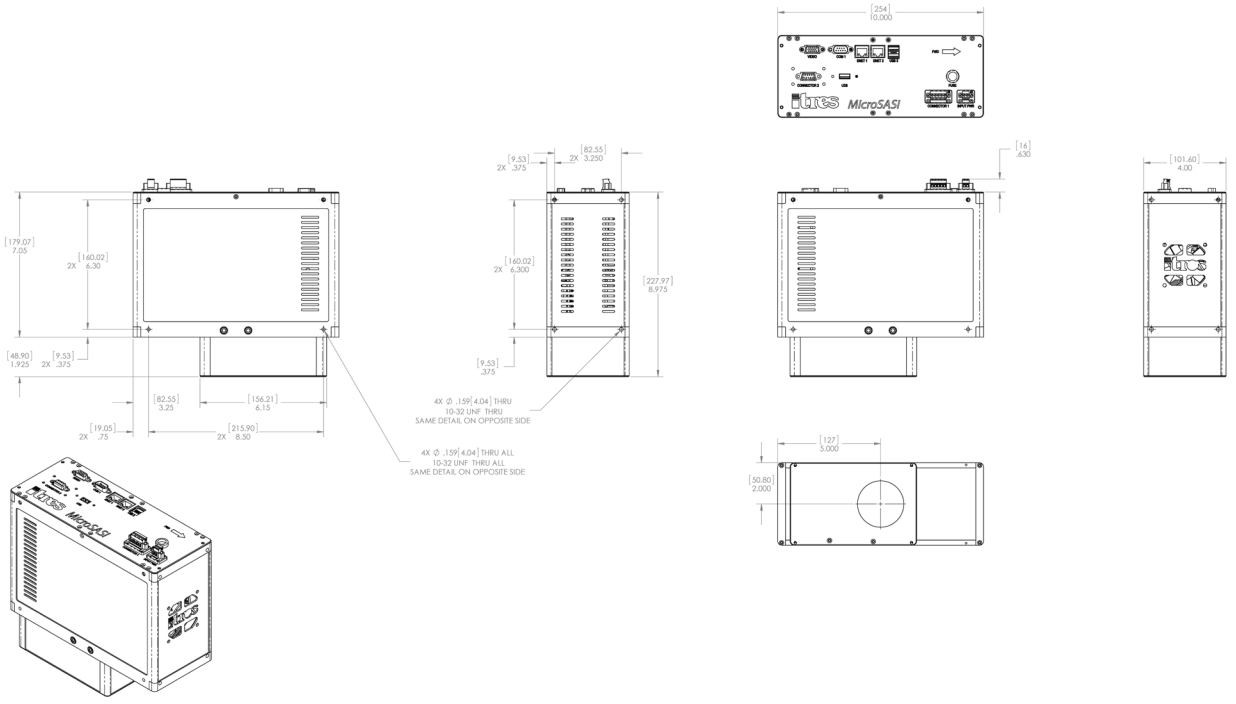
GEOCORRECTION SYSTEM

- GNSS-inertial or MEMS-inertial integration (optional)[1]
- Data synchronization (GPS, attitude, & image streams, if INS used)

[1]Many inertial systems can be used with ITRES micro imagers. Required outputs are pulse per second (PPS) and suitable GNSS timing records.

GEOCORRECTION/ORTHOCORRECTION/MOSAICKING SOFTWARE

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



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