CRYO-COOLED, SMALL FORM FACTOR, BROADBAND PUSHFRAME THERMAL IMAGER.

GROUND + UAV + AIR

MICRO**TABI**640

## PORTABLE BROADBAND MICRO-TIR IMAGER FOR AIR & GROUND USE

- Portable Air/Ground Broadband TIR imager
- 3.7–4.8µm Spectral Coverage
- 21.7° or custom 40° FOV
- Custom FOVs/Fore-Optics Available
- 640 Spatial Imaging Pixels
- Cryo-Cooled
- High Thermal Resolution
- Wide Speed Range
- Internal Blackbody Calibration Source
- Optional Integrated GPS/IMU
- Optional Real-Time Processing
- Easy Lidar Integration
- Remote Operation via R/F Link or Autonomous via Waypoints
- Precision Data Time Stamping to External Devices
- API Available

Radiometrically corrected and georeferenced microTABI thermal image

Control via R/F Link

or waypoints

ITRES

H Y P E R S P E C T R A L   &   T H E R M A L   R E M O T E   S E N S I N G
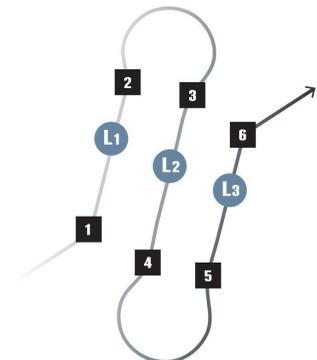
MICRO**TABI**640

Wildfire Mapping / Building Heat Loss / Emergency Response / Power Line Mapping / Soil Moisture / Wildlife Surveys / Subsurface Karst Feature Detection / Buried Pipeline Dilineation / Hotspot Mapping/ Vulcanology / Rapid Urban Thermal Mapping

SENSOR TYPE

Small Form Factor, Broadband, Pushframe Thermal Imager

PERFORMANCE

Spectral Range (Continuous Coverage)	3.7 – 4.8microns
# Spectral Channels	1 (Broadband)
Cooling System	Cryo-cooler
# Across-Track Pixels	640
Total Field of View	21.73° x 17.46° Custom. FOV's available at extra cost
F/#	F/2.0
Pixel Size	15×15 Microns
Dynamic Range	14-Bits
Detector Full Well	≥ 4 Me
Data Rate @30fps	20 Mb/s
Maximum FPS, Full Frame	120 NEDT @300K
Data Recording Capacity	≥1TB (SSD, SATA |||)
Data Recording Capacity (hr)	~17 hours (@25fps)[2]
Time Stamping	<1 ms
Data Output	Apparent Temperatures

[1]Sensor calibration traceable against NIST-traceable standard

[2]Continuous recording

DIMENSIONS, WEIGHTS, AND POWER

ITEM	W / H / D(CM) / WT. (KG)
SHU	10 / 23 / 25 / 3.8kg[1]
POWER	24–32VDC, ~70W[1] Subject to change

ENVIRONMENTAL CONSTRAINTS

Operating Temperature	Ambient 0 to +40°C (+32 +104°F)
Maximum Altitude	4500m (10,000 ft) ASL (unpressurized, non-condensing environment)
Storage Temperature	Optimum -20 to +60°C

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
- 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)
- Real-time radiometric calibration and inflight thermal anomaly detection (optional)

GEOCORRECTION SYSTEM

- GNSS-inertial or MEMS-inertial integration (optional)
- Data Synchronization (GPS, attitude, & image streams)

GEOCORRECTION/ORTHOCORRECTION/ MOSAICKING SOFTWARE

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