

MICRO **TABI** 640

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



PORTABLE BROADBAND MICRO-TIR IMAGER FOR AIR & GROUND USE

Portable Air/Ground Broadband TIR Imager

3.7–4.8µm Spectral Coverage

40° FOV

Custom FOVs/Fore-Optics Available

640 Spatial Imaging Pixels

Cryo-Cooled

High Thermal Resolution

Wide Speed Range

Internal Blackbody Calibration Source

Optional GPS/IMU

Optional Real-Time Processing

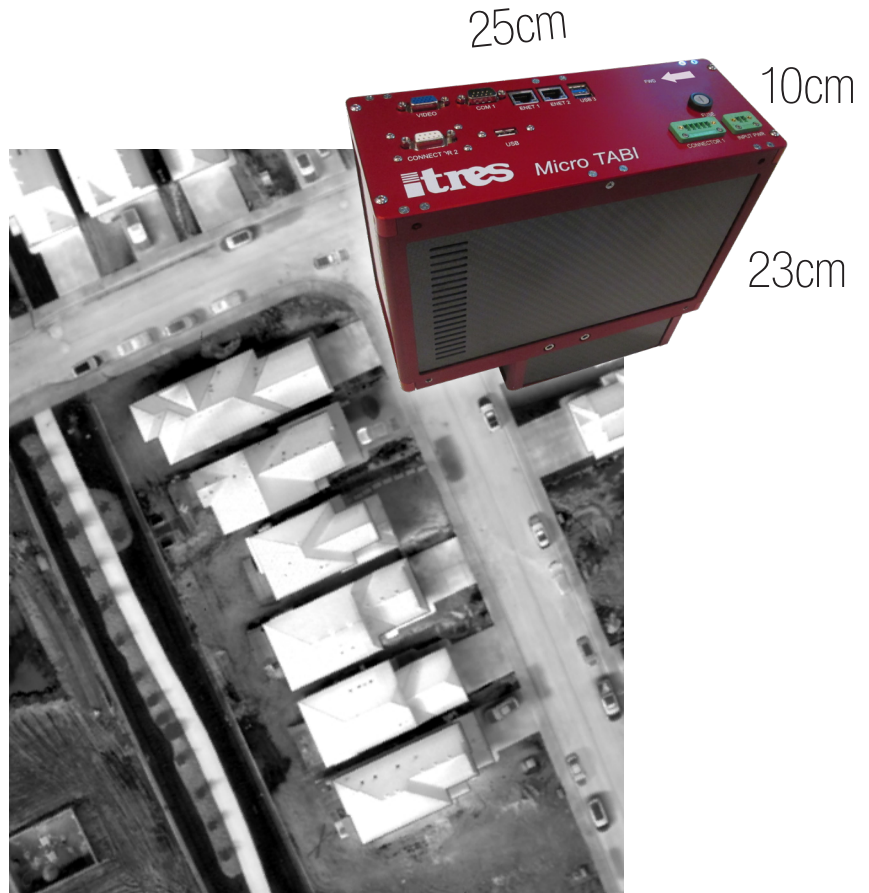
Easy Lidar Integration

Remote Operation via R/F Link or

Autonomous via Waypoints

Precision Data Time Stamping to External Devices

API Available

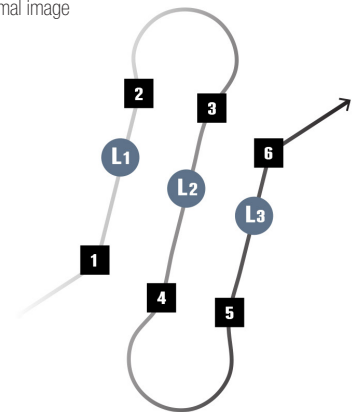
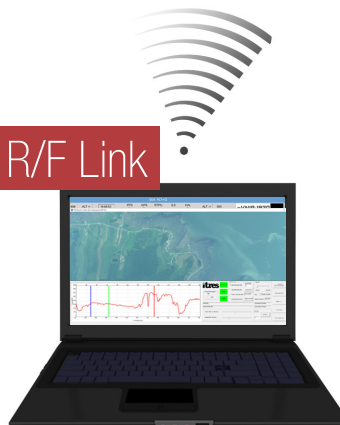


Radiometrically corrected and georeferenced microTABI thermal image



HYPER SPECTRAL & THERMAL REMOTE SENSING

Control via R/F Link



or Waypoints

micro **TABI640** SMALL FORM FACTOR, BROADBAND, PUSHFRAME THERMAL IMAGER

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

PERFORMANCE

Spectral Range (Continuous Coverage)	3.7-4.8 microns
# Spectral Channels	1 (Broadband)
Cooling System	Cryo-cooler
Image Frame Dimensions	640 x 512
# Across-Track Pixels	640
Total Field of View	40° Custom
FOVs available at extra cost	
f/#	f/2.0
Pixel Size	15 x 15 microns
Dynamic Range	14-bits
Detector Full Well	≥ 4 Me
Data Rate @30fps	20 MB/s
Maximum FPS, Full Frame NEDT @ 300K	120 <0.025°C @ 300K, <1% ¹
Data Recording Capacity	≥1TB (SSD, SATA III)
Data Recording Capacity (hr)	~17 hours (@ 25fps) ²
Time Stamping	<1 ms
Data Output	Apparent Temperatures

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 <i>¹Subject to change</i>
ENVIRONMENTAL CONSTRAINTS	
Operating Temperature	Ambient 0 to +40°C (+32 to +104°F) RH 20-50% non-condensing
Maximum Altitude	3,048m (10,000 ft) ASL (unpressurized, non-condensing environment)
Storage Temperature	Optimum -20 to +60°C (-4 to +140°F) RH 20-50% non-condensing

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

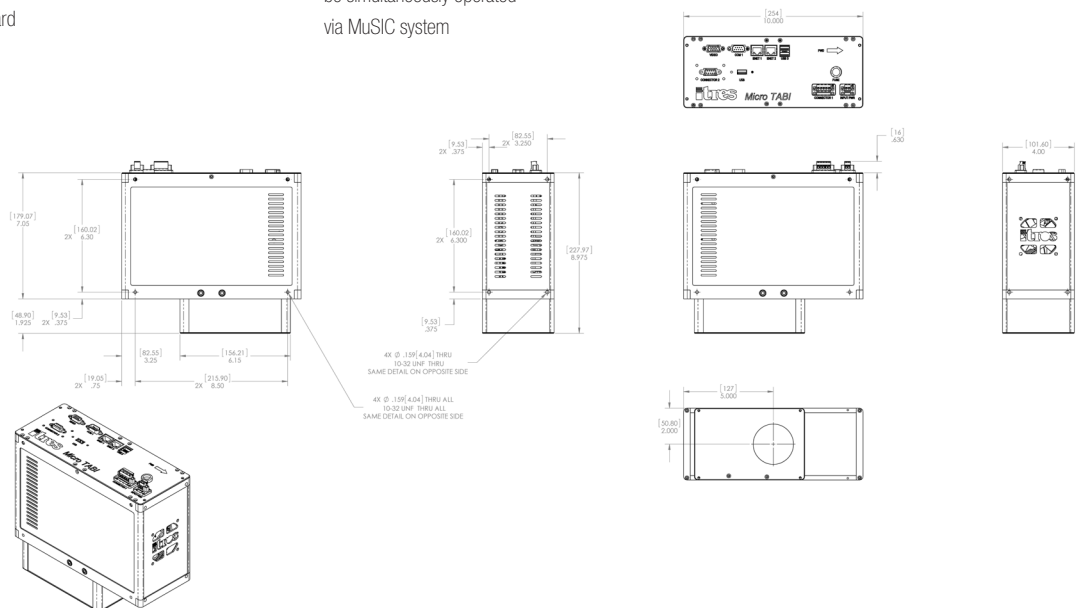
- GNSS-inertial or MEMS-inertial integration (optional)
- Data synchronization (GPS, attitude, & image streams)

GEOCORRECTION/ORTHO CORRECTION/MOSAICKING SOFTWARE

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

¹Sensor calibration traceable against NIST-traceable standard

²Continuous recording.



ITRES Research Limited

Calgary, Alberta, Canada info@itres.com
 T: +1.403.250.9944 www.itres.com
 F: +1.403.250.9916

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