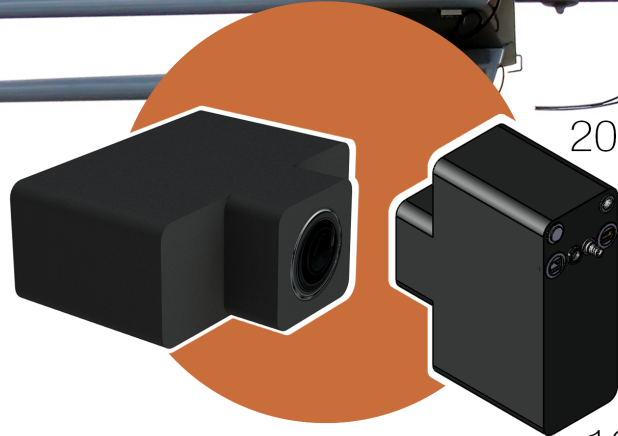


μ TIR640

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

PORTABLE BROADBAND MICRO-TIR IMAGER FOR AIR & GROUND USE



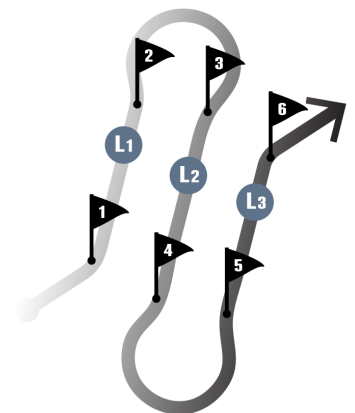
20.3cm

25.4cm

10.2cm

- Portable Air/Ground Broadband TIR Imager (3.7–4.8 μ m)
- 26.99 x 21.73° FOV, 640 Spatial Imaging Pixels
- Custom Fore-Optics Available
- High Thermal Resolution
- Wide Speed Range, Ultra-High Spatial Resolution
- Internal Blackbody Calibration Source
- 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



HYPERSPECTRAL & THERMAL REMOTE SENSING

microTIR640

SMALL FORM FACTOR, BROADBAND, WIDE ARRAY,
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	26.99 x 21.73 degrees
f/#	f/2.0
Pixel Size	30 x 30 microns
Dynamic Range	14-bits
Detector Full Well	4.25 Me
Data Rate @30fps	20 MB/s
Maximum FPS, Full Frame NETD @ 300K	120 <0.05 degrees C
Data Recording Capacity	480GB (SSD, SATA III)
Data Recording Capacity (hr)	6 hours (@ 30fps)
Time Stamping	<1 ms
Data Output	Apparent Temperatures

DIMENSIONS, WEIGHTS, AND POWER

ITEM	W / H / D (CM) / WT. (KG)
SHU, Control, Recording	10.2 / 20.3 / 25.4 / ~2kg ¹
Power Draw	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
- Precision data time-stamping to external devices
- API available

DATA PROCESSING SYSTEM

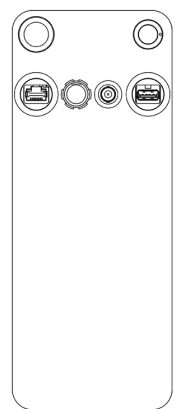
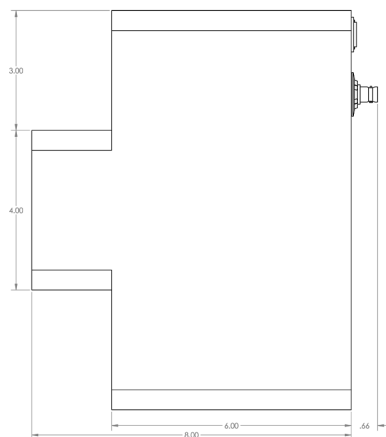
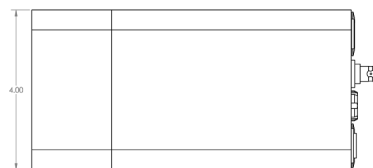
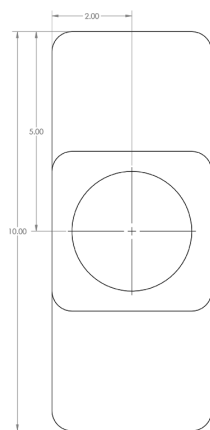
- Processing software Linux or Windows-based
- Playback software (Quicklook)
- Generates 16-32 bit BIP format data compatible with ENVI (BIL, BSQ formats possible)

GEOCORRECTION SYSTEM

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

GEOCORRECTION/ORTHO CORRECTION/MOSAICKING SOFTWARE

- Accepts Lidar, lfsar, 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.

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		QUANTITY: 1		SCALE: 1:1	
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Document ID: U10078-01
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All ITRES sensors are calibrated to traceable standards.
Specifications subject to change without notice.