




# microSAVI-2C


Hyperspectral VIS-SWIR Imager 400nm to 2500nm


 Water Quality / Bathymetry

 Pollution Monitoring

 Forestry

 Mineral Exploration

 Ecology

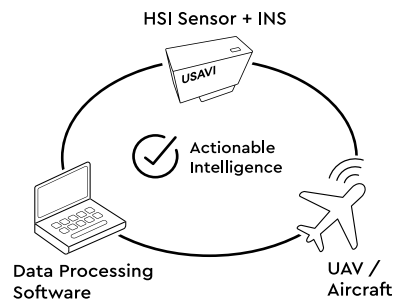
 Urban Mapping



microSAVI-2C  
True Color Image Mosaic  
Okotoks, AB

## BENEFITS

- Compact Air / Ground Hyperspectral Imager
- Aircraft/Unmanned or Ground installation
- High Spectral and Spatial Resolution
- Wide Field of View
- High Area Coverage Rate
- Optional Inertial Navigation System
- Autonomous and Remote Operation via RF Link
- Wide Operational Envelope
- Fly Projects at any Altitude (crewed aircraft or UAV operations)
- ITRES' Quality Management System is AS9100 Certified
- Turn Key Data Processing and Analytics Software



● **SWaP\***

Item Control, Recording

H / D / W (CM)/WGT (KG)

SHU 27.33 / 25.4 / 21.84 / 7.4 kg / ~110w

POWER: 24-32VDC, 110W

● **Visible Near IR (Pushbroom) Internal Nav Module**

• **Spectral Range** (Continuous Coverage)

└ 0.4 – 1.0 microns (combined) (uCASI)

• **# Spectral Channels**

└ up to 288 at maximum spectral resolution (combined)  
subject to optional spectral binning of uCASI data under both columns

• **# Across-Track Pixels**

└ 1920 (1840 effective) add 620 (combined)

• **Total Field of View**

└ 36.6 Degrees

• **IFOV**

└ 0.36 mRAD (0.021°)

• **F/#**

└ F/2.5

• **Spectral Width Sampling /Row**

└ 2.1nm

• **Spectral Resolution (FWHM)**

└ <5nm

• **Dynamic Range**

└ 12-Bits

• **Maximum FPS**

└ 83 fps (full frame)

• **Data Recording Capacity**

└ 2TB (SSD, SATA III)

• **Data Recording Capacity(hr)**

└ >5 hours (@ 83fps)

• **Data Rate**

└ 92 MB/s

• **Pixel Size (Microns)**

└ 5.86 × 5.86

• **Detector Full Well (Single Pixel)**

└ 32,500 e

● **Shortwave IR (Pushbroom)**

• **Spectral Range** (Continuous Coverage)

└ 0.95 – 2.5 microns (uSASI)

• **# Spectral Channels**

└ up to 256 at maximum spectral resolution (combined)  
subject to optional spectral binning of uCASI data under both columns

• **# Across-Track Pixels**

└ 640 (620 effective) add 1840 (combined)

• **Total Field of View**

└ 40 Degrees

• **IFOV**

└ 1.09 mRAD (0.021°)

• **F/#**

└ F/2.5

• **Spectral Width Sampling /Row**

└ 6.1nm

• **Spectral Resolution (FWHM)**

└ <9nm

• **Dynamic Range**

└ 16-Bits

• **Maximum FPS**

└ 100 fps

• **Data Recording Capacity**

└ 2TB (SSD, SATA III)

• **Data Recording Capacity(hr)**

└ >12 hours (@ 100fps)

• **Data Rate**

└ 33 MB/s

• **Pixel Size (Microns)**

└ 15 × 15

• **Detector Full Well (Single Pixel)**

└ >1,000,000 e



**CUSTOM OPTICS**

All ITRES performance imagers feature our custom diffraction-limited optics. This ensures that the full imaging swath is achieved as specified. Focus is sharp and excellent spectral registration is achieved across all wavelengths.



**LIDAR INTEGRATION**

Co-incidently acquired or existing LiDAR DSM/DEM data can be integrated with imager data for improved georeferencing results and combined analysis of spectral and volumetric data.



**GNSS COMPATIBILITY**

Synchronization of < 1 ms between a GNSS-Inertial and imager raw data for high-precision pixel positioning.

Interface, Time-Stamping, Remote Operation & Control Georeferencing (accepts kml/shp) for UAV acquisitions < 1.0ms synchronization with Nav Module data.

**FUSED VNIR-SWIR**

# Spectral Bands	530
# Across-Track Pixels	620 (+/- 2%)
# Spectral Range	0.4-2.5 μm

**Suggested Environmental Constraints**

Operating Conditions	Ambient -10° to +40°C (+14° to +104° F) RH 20-50% non-condensing
Maximum Altitude	4,420m (14,500 ft) AS
Storage Conditions	Optimum -20° to +60°C (-4° to +140° F) RH 10-90% non-condensing