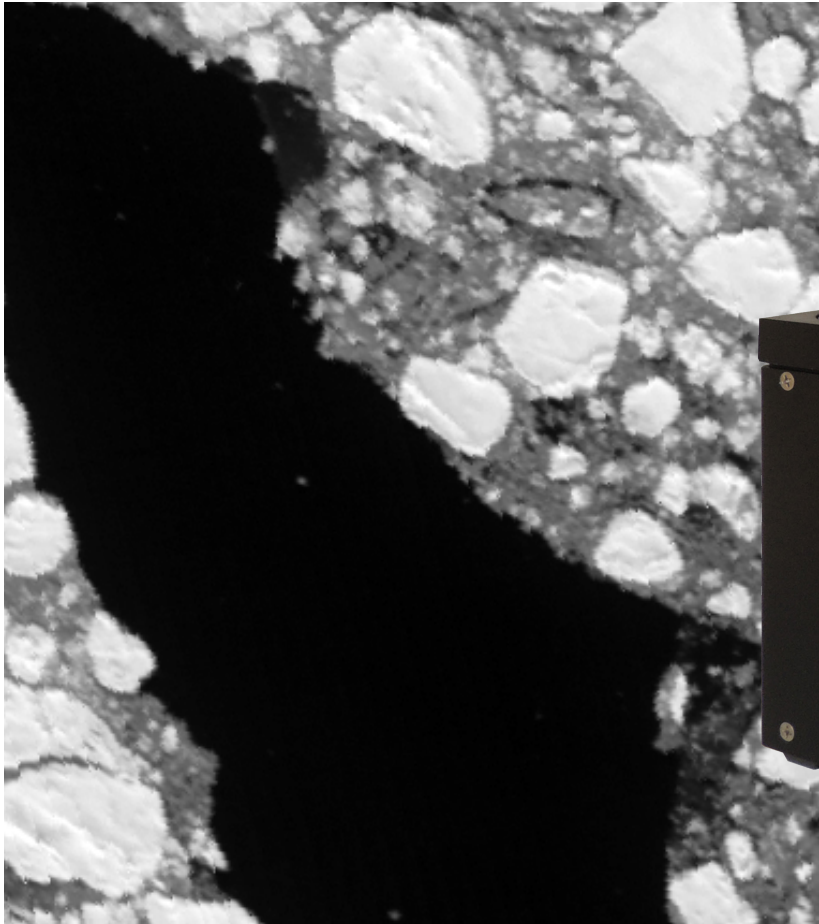# UVC1800

Broadband Ultraviolet Camera

40° FOV

Reduced acquisition costs (less flying, wider swath coverage)

Custom diffraction-limited, high-performance optics[1]

UVC-1800 ultraviolet imagery of pack ice near Newfoundland, Canada.

itres

HYPERSPECTRAL & THERMAL REMOTE SENSING

[1]Diffraction-limited optics ensure that every pixel is a spatially independent sample with no smearing. This gives users optimal image quality and focus.

UVC1800

Crop Health / Ozone Monitoring / Detect Organics with Fluorescent Properties

SENSOR TYPE

Ultraviolet Pushframe Sensor
(Cooled, Wide-Swath Ultraviolet Camera)

PERFORMANCE

Spectral Range (Continuous Coverage)	0.280-0.375 microns
# Spectral Channels	1
# Across-Track Pixels	1800
Total Field of View	40 degrees
IFOV (+/- 10%)	0.39 milliradians ±0.05
f/#	f/2
Dynamic Range	12-bits (4096:1)
Frame Rate	62.5 frames per second

ENVIRONMENTAL CONSTRAINTS

Operating Temperature	Ambient -10° to +40°C (+14° 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 0-90% non-condensing

DIMENSIONS, WEIGHTS, AND POWER

ITEM	W / H / D (CM) / WT. (KG)
SHU with Integrated ICU	20.5 / 32 / 16 / 7
ICU	48.5 / 48.5 / 18 / 15
15" Display	42.3/ 32.2 / 10.3 / 10
SHU Cable Length	3 metres
Power	24-32 VDC, 7A VDC (typical, without IMU)

OPERATION

Display	15" sunlight readable, high resolution. High altitude display available
Operator	Control via keyboard, Embedded Windows OS
Real-Time Display	Scene Image, automated sensor health diagnostics, signal level display
Remote Diagnostics	Ethernet-ready remote diagnostic capability
Data Storage	Swappable Solid State mass storage
Multiple Sensor Operation	Up to 5 different ITRES imagers may be simultaneously operated via MuSIC™ System

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)
- ASCII format ancillary QC data output – clocking, attitude, logging, GPS, and sensor health monitoring information
- Outputs diagnostic information
- Selectable band output

GEOCORRECTION SYSTEM

- GPS/IMU integration to POS AV (other systems available)
- Data synchronization (GPS, attitude, and image streams)
- Precision positional accuracy
- After bundle adjustment, no need for GCPs
- Stabilized mount option

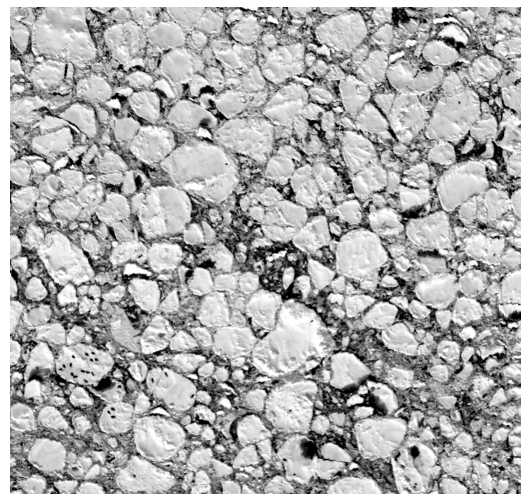### GEOCORRECTION/ORTHOCORRECTION/MOSAICKING SOFTWARE

- Best nadir pixel selection function during mosaicking
- Accepts Lidar, Ifsar, and USGS DEM inputs
- Nearest neighbor algorithm used – maintains radiometric fidelity
- Separately stores ancillary data (e.g. pointing vector, DEM)

OPTIONAL IN-FLIGHT GEOCORRECTION & ANOMALY IDENTIFICATION

- Radiometric calibration & georeferencing applied prior to landing
- Customized algorithms can detect anomalies and provide GPS location in near real-time using IPS

UVC-1800 imagery overlain on Lidar dataset

UVC-1800 ultraviolet imagery of pack ice near Newfoundland, Canada.