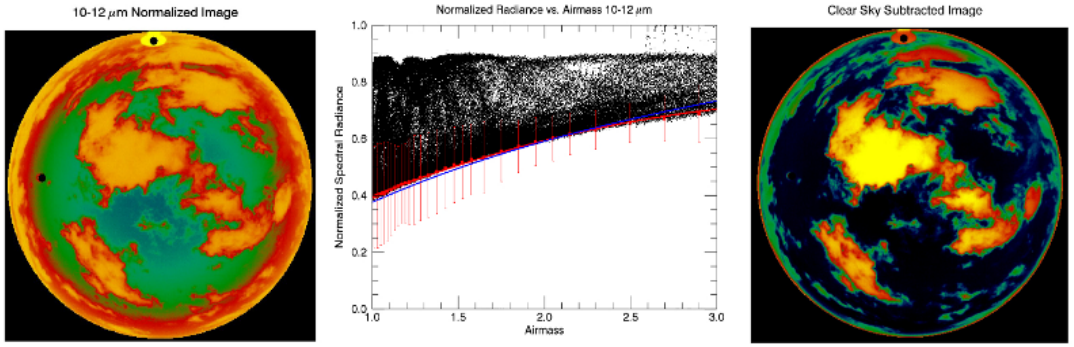
SOLMIRUS

ALL SKY IMAGING SYSTEM - ASIS M1i

The Solmirus All Sky Imaging System M1 (ASIS-M1i) is a dedicated purpose infrared sky imaging and analysis instrument designed to operate autonomously or as a component in an instrument cluster. The ASIS is a ground-based cloud detection and sky analysis system with applications ranging from astronomy, defense, free space optics, solar forecasting and a variety of meteorological applications.



- White Powder-coated Weatherproof Enclosure
- Ruggedized 180° field of view coated IR lens
- 640×480 GigE Infrared focal plane array with internal shutter
- 10-12 micron filter for optimal sky / cloud contrast
- Motorized (270° rotation) hatch with integrated hemispherical blackbody calibration reference
- Dual (heated / ambient) external calibration mast with embedded thermal monitoring
- Enclosure Thermal Management System and internal temperature sensors
- External humidity sensor
- Carrying handles
- Lifting ear attachments for installation via crane
- Leveling indicator
- Grounding attachment to earth ground
- Instrument transport case
- Customizable measurements & operation (option)
- Embedded control computer

Specifications

Connectivity / Cabling

Cable	Media	From	To	Length
Power	Copper	Main Enclosure	VAC	Customer Specified
Remote Comms	Fiber OR Ethernet	Main Enclosure	Network	Variable

Power

Parameter	Value
Primary Input	9A / 125VAC | 4.5A / 250VAC
Main Enclosure Connection	Configurable

Physical Construction

Component	Details
Instrument Enclosure	NEMA 4 Stainless Steel — 12"W × 16"D × 28"H
Weight (with case)	~60 kg
Weight (without case)	~35 kg
Instrument Base	Stainless Steel — 12" × 24" mounting holes with extension

Operating Temperatures

Component	Operating Range
Instrument Enclosure	-20 / +55°C (external)
Peltier	-10 / +60°C [-40 / +70°C]
IR Camera	-15 / +55°C
I/O Module	-40 / +85°C
Motor Controller	-20 / +80°C
Thermocouples	-50 / +200°C
Stepper Motor	-20 / +80°C

Instrument Control

Parameter	Value
System Computer	Onboard ruggedized control system
Interface	Web UI
Access	Complete instrument control, data acquisition & analysis

Measurement & Analysis

Parameter	Value
Primary Measurements	Raw, Calibrated/Actual Radiance, Normalized Radiance, NR vs. Airmass, Clear Sky Subtracted NR, Cloud Mask, Brightness Temperature, Optical Depth
Measurement Cadence	≤ 30 seconds