



# mini-Nyx-S 640

## Hyperspectral Smart IDCA 640 x 512 Extended Wavelength SWIR

- OEM integrated detector cooler assembly (IDCA)
- Extended wavelength (0.9 - 2.5um) high performance IRFPA
- AIRS customized optical interface, hyperspectral filter mounting and packaging
- Smart IDCA - A/D and uncorrected Camera Link video interface
- High resolution 15 um pixel
- Designed for ease of integration into hyperspectral instruments, gimbal payloads, and other OEM systems

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## AIRS Delivers Advanced Thermal Imaging

AIRS' integrated detector cooler assemblies (IDCA) offer medium and large format, high-performance SWIR, MWIR and LWIR imaging utilizing state of the art MCT and T2SLS IRFPAs. The sensitivity and resolution of the Nyx series can meet the most demanding imaging needs. AIRS and AIM are collaborating to leverage AIM's IRFPA and cryocooler capabilities into AIRS' advanced sensor products.

### IR FOCAL PLANE ARRAY

Sensor Type	MCT
Array Format	640 (h) x 512 (v)
Pixel Pitch	15 $\mu$ m
IRFPA Spectral Band	Extended SWIR (0.9- 2.5 $\mu$ m)
FPA Operating Temperature	180°K typical

### OPTICAL INTERFACE (CUSTOMIZABLE)

Cold shield	matched for system design
Cold Filter Bandpass	per customer requirements
Hyperspectral options	order blocking or sorting filter mounted in dewar cold space to customer requirements

### COOLER - INTEGRAL STIRLING

Integral Stirling	K561 or other
MTTF	> 10,000 hours
Split Stirling	Optional

### READ OUT INTEGRATED CIRCUIT (ROIC)

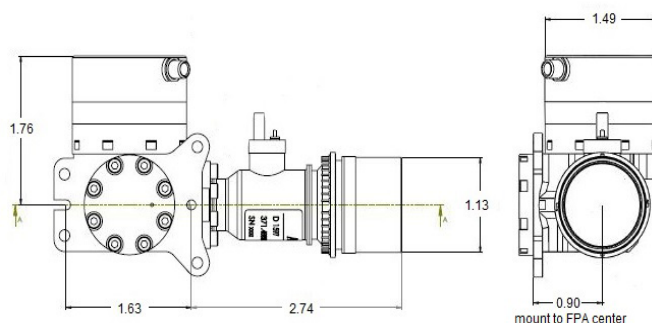
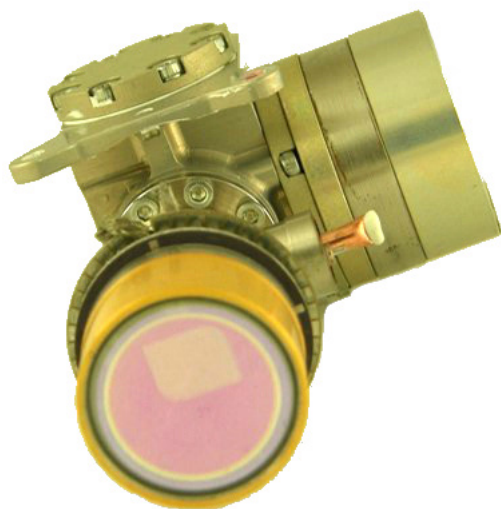
Modes	Snapshot in IWR (Integrate While Read, ITR (Integrated Then Read) or RS (Rolling Shutter)
Input Stage	Capacitance Transimpedance Amplifier (CTIA)
Sub-frame capability	any size in steps 4 hor. and 1 vert. row deselction for individual lines (e.g. spectral channels)
Outputs	4
Max. Full Frame Rate	100Hz IWR (640x512) variable (higher) with windowing

### ELECTRICAL

Voltage	12 VDC and 5 VDC
Power Dissipation @ 25°C	4 W typical steady state

### COMMAND AND CONTROL ELECTRONICS

Communications	RS-232
Video Output	Uncorrected Camera Link
A/D converter	16 bit
Frame Sync	external or internal



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