

SPACE CAMERA

ARGUS VISION SYSTEM

PRODUCT DESCRIPTION

Introducing the Redwire Space ARGUS Vision System, an adaptable and highperformance smart camera platform tailored for spaceflight applications such as payload deployment verification, vehicle inspection, close to medium range situational awareness, in-space assembly and manufacturing (ISAM), Rendezvous Proximity Operations and Docking (RPOD), and support for robotic and crewed surface operations. ARGUS boasts onboard processing features like image compression, storage, and the flexibility to accommodate client-specific machine vision applications. This modular system offers numerous configurations with diverse interface options and the ability to support up to three image sensors. Tested for radiation and environmental resilience, ARGUS has a proven track record, with 14 units set to reach the lunar surface in 2024 as part of the Commercial Lunar Payload Services (CLPS) program and an additional unit scheduled for an RPOD tech demo mission in late 2023.

Stay tuned for upcoming imaging capability upgrades.







APPLICATIONS

- + Spacecraft State Monitoring (Deployments, Assembly, Inspection, PR)
- + Rendezvous, Proximity, and Docking Operations (Stereo Imaging, Hosted On-Board Machine Vision Algorithms)
- + Space Situational Awareness (Resident Space Object Detection, Surveillance)

PARAMETERS

DIMENSIONS

+ **Dimensions** 79 mm x 83 mm x 65 mm

INTERFACES

+ Data

Ethernet 1000 BASE-T | Micro-D RS-422 | Micro-D 802.11 ac WiFi | SMA + Mass 140-250 grams including lens(es) + Lens Interface S-Mount

+ Input VoltageRange 24V to 32V | Micro-D Lower input voltage optional



FIND OUT MORE ABOUT REDWIRE SOLUTIONS REDWIRESPACE.COM | @REDWIRESPACE | SALES@REDWIRESPACE.COM



Copyright 02/2021 Redwire Corporation.Redwire reserves the right to make changes without further notice to any products herein. Redwire make no warranty, representation or guarantee regarding the suiability of tips products for any particular purpose, nor does Redwire assume any liability arising out of the application or use of any produc or circuit, and specifically disclaimsany and all liability, including without limitation special, consequencial, or incidental damages. "Typical" parameters including "Typicals" must be validated for eachcostumer application by cutomer's technical experts. Redwire does not convey any license under it patent rights nor the rights of others. Redwire products are not designed, intended, or authorized for use as componets in systemsor any other application in which the failureof the Redwire product could create a situation where personal injury of death may occur. Should Buyer purchaseor use Redwire products for any such intended or unauthorized application. Buyer shall indemnify and hold Redwire and its officers, employees, subsidiaries, affiliates, and distributors harmless againts all claims, cost, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, anyclaimof personal injury or death associated with such intended or unauthorized use, even if such claim alleges that Redwire was negligent regarding the design or manufacture of the part. Redwire is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all application convert any manner.



IMAGING SPECIFICATIONS

- + Maximum Image Resolution 4208 x 3120 pixels
- + Image Formats JPEG, RAW10
- + Pixel Bit Depth

8 or 10-bit

MEMORY AND STORAGE

+ 4 or 6 GB of SDRAM at 1.8 GHz

PROCESSING

+ 8-Core ARM CPU (4 @ 2.7 GHz and 4 @ 1.7 GHz)

TESTING

- + Radiation TID: 10 krad (200MeV p*)
- + Radiation SEU: 0.049 um² 3-σ Cross-Section
- + Random Vibration: 24 Grms

OTHER FEATURES

- + **Maximum Video Resolution** 4k-3840 x 2160
- + Maximum Video Frame Rate 30 FPS
- + Video Compression Codecs h.264 and h.265
- + 128 GB On-board SD Card Storage

- + **Shutter** Rolling Shutter, RBG
- + Qualified Lenses Multiple lens options ranging from 2mm to 16mm focal length.
- + On-Board GPU

+ **TVAC** - Number of Cycles: 12 - Op: -35C to + 65C

+ On-Board DSP

- -0p. -35C l0 + 05C
- Non-Op: -50C to +85C
- + **Shock** 1960 Gs
- + 60-180 lumen LED illuminator for basic scene illumination and use with retroreflectors.
- + Standard M12 lens interface for wide range of FOV options.
- + On-board closed-loop heater for critical components.
- + Software-defined heater and overtemperature setpoints.
- + On-board over-current and over-voltage protection circuitry.
- + Multiple mechanical configurations available: Normal, Panoramic, Stereo, Others.
- + Stereo imaging.
- + On-board camera function API for customer software development.
- + On-board GPU and DSP SDKs available

This product is controlled for export from the United States. Contact Redwire for details.

FOR MORE INFORMATION ABOUT OUR SPACE CAPABILITIES, CONTACT REDWIRE SPACE SALES AT DISCOVER@REDWIRESPACE.COM



HERITAGE

Redwire is a new leader in mission critical space solutions and high reliability components for the next generation space economy. With decades of flight heritage combined with the agile and innovative culture of commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of the future space missions. For more information, please visit **www.redwirespace.com**



FIND OUT MORE ABOUT REDWIRE SOLUTIONS

REDWIRESPACE.COM | @REDWIRESPACE | SALES@REDWIRESPACE.COM

Copyright 02/2021 Redwire Corporation.Redwire reserves the right to make changes without further notice to any products herein. Redwire make no warranty, representation or guarantee regarding the suiability of tips products for any particular purpose, nor does Redwire assume any liability arising out of the application or use of any produc or circuit, and specifically disclaimsany and all liability, including without limitation special, consequencial, or incidental damages. "Typical" parameters including "Typicals" must be validated for eachcostumer application by cutomer's technical experts. Redwire does not convey any license under it patient rights or others. Redwire products are not designed, intended, or authorized for use as componets in systemsor any other application in which the failureof the Redwire product could create a situation where personal injury or death may occur. Should Buyer purchaseor use Redwire products for any such intended or unauthorized application. Buyer shall indemnify and hold Redwire and its officers, employees, subsidiaries, and filiates, and distributors harmless againts and expenses, and reasonable attorney fees arising out of, directly or indirectly, anyclaimof personal injury or death associated with such intended or unauthorized application. Buyer shall indemnify and hold Redwire and its officers, employees, subsidiaries, affliates, and distributors harmless againts and expenses, and reasonable attorney fees arising out of, directly or indirectly, anyclaimof personal injury or death associated with such intended or unauthorized application. Buyer shall indemnify and hold Redwire and its officers, employees, subsidiaries, affliates, and distributors harmless againts and expenses, and reasonable attorney fees arising out of, directly or indirectly, anyclaimof personal injury or death associated with such intended or unauthorized application application. Buyer shall indemnify and hold react associated with such intended or unauthorized applications are not experinted associate