



87 mm L x 80 mm W x 24 mm H

## Features & Benefits:

- 2 Antenna Ports with RP-SMA Connections Provides Improved Read Coverage
- Video HDMI for Easy Display Integration
- Supports Regional Regulatory Requirements Globally
- ThingMagic Universal Reader Assistant and Mercury API Shortens Development Process
- Optional RAINstream to Allow Direct Transfer of Tag Data to Backend Systems Via Several Alternative Protocols

## 2-Port UHF RAIN® RFID Reader

ThingMagic Sargas is a small, high performance, multiprotocol, networked 2-port UHF RAIN RFID reader in a low profile enclosure with both read and write capability. With an onboard processor, memory and removable flash storage, it has features designed for enterprise applications and easy system integration.

ThingMagic Sargas is outfitted with a powerful ARM Cortex processor running Linux and generous amounts of DDR and FLASH memory, allowing complex on-reader programs to be loaded and written with the aid of ThingMagic's MercuryAPI. ThingMagic Sargas is also RAINstream enabled: with an optional, licensed, prepackaged on-reader program, it simplifies data integration, and enables the integration of the reader into existing systems, formatting tag data to multiple hosts over common communications channels.

ThingMagic Sargas is capable of reading more than 750 tags per second at distances over 9 meters when configured with appropriate antennas.

ThingMagic Sargas is certified to meet several multi-national regulatory standards, including Americas (FCC/IC), European Union (ETSI) and India (TRAI).

Multipurpose client and host USB Ports, an SD card slot, HDMI video output port, and high voltage, opto-isolated general purpose I/O ports allow Sargas to support a wide variety of applications. ThingMagic Sargas supports EPCglobal Gen 2 (ISO 18000-6C) with Anti-Collision and DRM.

## Applications:

- In-Vehicle, including Emergency Medical Services, Mobile Asset Management, Construction
- Warehouse & Supply Chain
- Outdoor Sheltered Applications



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# ThingMagic Sargas

|   |  |
|---|--|
| <b>Tag/Transponder Protocols</b>  |  |
| RFID Protocol Support   | EPC Gen 2V2 ISO 18000-63, ISO 18000-6B (optional), IP-X (optional), AEI ATA (optional)   |
| <b>UHF RFID Antenna Interface</b>   |  |
| External Interface  | Two RP-SMA connectors  |
| RF Output Power   | 0 dBm to 30 dBm (1 W) <sup>2</sup>   |
| RF Output Power Accuracy  | +/- 0.5 dBm  |
| Frequency Range Per Region  | FCC 902-928 MHz (Americas), ETSI 865.6-867.6 MHz (EU), MCIT 865-867 MHz (India)  |
| <b>Data/Control/Wireless Interfaces</b>   |  |
| Connectors  | RJ45 (10/100 Base-T Ethernet), USB Type B (console, memory stick, and RNDIS port), USB Type A (accessory port), 8-Pin Terminal Block (GPIO interface), 5 mm x 2.1 mm coaxial jack (DC input), Micro SD Card Interface, Micro HDMI Video Port |
| GPIO  | 2 opto-isolated inputs, 2 opto-isolated outputs, +5V source, ground reference  |
| Indicators/Switches   | Dual boot/reading status LEDs; Power indicator; Four processor status indicators   |
| <b>MercuryOS Features</b>   |  |
| Networking  | Cisco-certified DHCP and DNS-based configuration and firmware management, TCP/IP networking stack.   |
| Security  | SSL/SSH-based security   |
| Web-based Control   | Configuration, monitoring, and reading from a web browser via HTTP (HTTPS future)  |
| <b>Application Interface</b>  |  |
| Direct Communication  | EPCglobal Low Level Reader Protocol (LLRP) v 1.1 with multiprotocol and advanced feature extensions  |
| On-Reader API   | C API  |
| Host API  | Java, C or .NET API  |
| Communication Channels  | USB Keyboard emulator with optional streaming to USB COM port, Network Telnet or Network HTTP Post   |
| <b>Power</b>  |  |
| External DC Power   | 5 VDC +/- 0.25 V, Maximum DC power: 15 W   |
| Optional AC Adapter   | 90-264 VDC, 0.6 A RMS max, 47-63 Hz  |
| <b>Physical</b>   |  |
| Dimensions (without connectors)   | 87 mm L x 80 mm W x 24 mm H (3.4 in L x 3.1 in W x 0.9 in H)   |
| Weight  | 0.4 lbs. (0.17 kg)   |
| <b>Environment</b>  |  |
| Operating Temp.   | -40 C to +60 C   |
| Storage Temp.   | -40 C to +85 C   |
| Humidity  | 5% to 95%, non-condensing  |
| <b>Regulatory and Safety</b>  |  |
| Certifications  | FCC 47 CFR Ch. 1 Part 15; Industrie Canada RSS-21 0; ETSI EN 302 208 v3.1.1 (RED 2014/53/EU)   |
| Other   | ROHS Compliant, IEC 60950-1(ed.2), CA-10430-UL   |
| <b>Architecture</b>   |  |
| Processor   | 1 GHz TI ARM Cortex A8 (AM335x)  |
| Operating System  | Debian Linux kernel version 3.8  |
| DDRAM Memory  | 512 MB   |
| Flash Memory  | 4 GB   |
| Real-Time Clock   | Backup time: 1 week at room temperature  |
| <b>Performance</b>  |  |
| Max Tag Read Rate   | Up to 750 tag reads per second <sup>2</sup>  |
| Max Read Distance   | Over 9 m (30 feet) with 9dBiC or 6dBiL antenna   |
| <b>Ordering Information</b>   |  |
| Astra-EX Reader with POE<br>North America<br>Europe<br>India  | S6-NA<br>S6-EU<br>S6-IN  |
| AC Indoor Power Adapter   | PWRADP-S6-MR (Multi-Region)  |
| Sargas Development Kit<br>(Does Not Include Reader)   | S6-DEV-KIT   |
| RAINstream On-reader Streaming App.   | TM-RAINSTM-LIC   |
| <sup>1</sup> Maximum power may have to be reduced to meet regulatory limits, which specify the combined effect of the module, antenna, cable, and enclosure shielding of the integrated product.<br><sup>2</sup> Measured in controlled test, field results may vary. <i>Specifications subject to change without notice.</i> |  |

## ABOUT JADAK:

JADAK, a business unit of Novanta, is a market leader in machine vision, RFID, barcode, printing, and color and light measurement products and services for original equipment manufacturers. The company designs and manufactures embedded detection and analysis solutions that help customers solve unique inspection, tracking, scanning and documenting. The company is ISO 9001 and ISO 13485 registered.

Novanta is a trusted technology partner to OEMs in the medical and advanced industrial technology markets, with deep proprietary expertise in photonics, vision and precision motion technologies.

ThingMagic is the JADAK line of RFID products.

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