



87 mm L x 80 mm W x 24 mm H

## Features & Benefits:

- Built Around Proven ThingMagic Technology
- User-friendly web interface included in software
- Broadest Range of Operating Temperatures for Both indoor and Sheltered Outdoor Environments
- ThingMagic Universal Reader Assistant and Mercury API Shortens Testing and Development Process
- Optional RAINstream to Allow Direct Transfer of Tag Data to Backend Systems Via Several Alternative Interface Protocols Eliminates Software Design

## Applications:

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

## 2-Port UHF RAIN® RFID Reader

ThingMagic Sargas is a compact, 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 as well as OEM system integration. Sargas is capable of reading more than 750 tags per second at distances over 9 meters when configured with appropriate antennas.

### Powerful Processor

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.

### RAINstream Compatible

All settings, including those for RAINstream, can be configured via a web interface sourced by the reader. This interface also permits the administrator to view status, upgrade firmware, run diagnostic tests, and test reading ability.

### “Tagnostic”

ThingMagic Sargas supports the entire suite of RAIN UHF RFID tag functionality, including Gen2V2 security. It also supports custom features from a wide variety of tag vendors, enhancing functionality for specialized applications. Optional, non-RAIN tag protocols are also available, including ISO 18000-6B, and read-only support for IP-X and AEI ATA.

### Common Language

Mercury API, ThingMagic's universal programming interface, permits easy software portability across the entire ThingMagic product line – between finished readers and embedded modules.

### Multiple Data Interfaces

Multipurpose client and host USB Ports, an SD card slot, and high voltage, opto-isolated general purpose I/O ports allow Sargas to support a wide variety of applications.



Left view



Right view



# ThingMagic Sargas

Physical					
<b>Dimensions (no connectors)</b>	87 mm / 3.4 in. (L) x 80 mm / 3.1 in. (W) x 24 mm / 0.9 in. (H)				
<b>Weight</b>	0.27 kg / 0.6 lbs.				
Tag / Transponder Protocols					
<b>RFID Protocol Support</b>	EPCglobal Gen 2V2 (ISO 18000-63); ISO 18000-6B (optional) IP-X (optional, read-only); AEI ATA (optional, read-only)				
RF Interface					
<b>Antenna Connectors</b>	Two RP-SMA connectors				
<b>RF Power Output</b>	Read and write levels adjustable from 0 to +30 dBm				
<b>Frequency Range Per Region</b>	FCC 902-928 MHz (Americas), ETSI 865-868 MHz (EU), MCITT 865-867 MHz (India), MIC 916.8-920.8 MHz (Japan) <i>Customizable channel list permits subsets of these regions.</i>				
Data/Control Interface					
<b>Control/Data Interfaces</b>	RJ45 (10/100 Base-T Ethernet), USB Type B (client console, memory stick, and RNDIS port), USB Type A (accessory port), Micro SD				
<b>GPIO Sensors and Indicators</b>	8-Pin connector provides: 2 opto-isolated Inputs, 2 opto-isolated Outputs, 5V Source, Isolated and chassis grounds, DC input to set output levels				
<b>User Indicators</b>	Bi-color status LED, Power LED, 2 LAN LEDs				
Power					
<b>Power Consumption</b>	10W typical max, 15W worst case	<b>External DC Power</b>	5 VDC +/-5%	<b>AC Adapter</b>	100-240 VAC, 1A max, 50-60Hz
Regulatory Certifications & Environment					
<b>Certifications</b>	USA (FCC 47 Part 15); Canada (RSS-210); EU (ETSI EN 302 208 v3.1.1, RED 2014/53/EU), India (MCITT), Japan (MIC) and China (SRRC). FCC Class B for incidental emissions (EMI) <i>Other regional certifications may be available through reseller partners.</i>				
<b>Safety &amp; Other</b>	ROHS compliant, IEC 60950-1 (ed. 2), CA-10430-UL				
<b>Temperature</b>	Operating -40°C to +60°C; Storage -40°C to +85°C				
<b>Humidity</b>	5%-95% non-condensing				
Performance					
<b>Max Read Rate</b>	>750 tags/second				
<b>Max Tag Read Distance</b>	>9 m (30 ft) with 9dBiC or 6dBiL antenna				
Application Interface					
<b>Direct Communication</b>	Low Level Reader Protocol (LLRP) v1.1 with multiprotocol and advanced extensions				
<b>Host API</b>	Mercury API: Java, C, C#.NET				
<b>On-Reader API</b>	Range of languages compiled with C/Java API				
<b>Communication Channels</b>	USB Keyboard emulator, Streaming to USB COM port, Network Telnet, Network HTTP Port				
Mercury OS Features					
<b>Networking</b>	DHCP and DNS-based configuration and firmware management, TCP/IP networking stack, Optional Wi-Fi support through external 3 <sup>rd</sup> party USB adapter				
<b>Security</b>	SSL/SSH-based security				
<b>Web-based Control</b>	Configuration, monitoring, and reading from web browser via HTTP (HTTPS future)				
Architecture					
<b>O/S</b>	Debian Linux kernel version 9.5				
<b>Real-Time Clock</b>	Backup time: 1 week at room temperatures				
<b>Processor</b>	1 GHz TI ARM Cortex-A8 (AM335x)	<b>RAM</b>	512 MB	<b>Flash Memory</b>	4 GB
Ordering Information					
<b>Sargas Reader</b>	S6-NA, S6-EU, S6-IN, S6-JP (high power) ( power adapter included)				
<b>Power Adapter</b>	PWRADP-S6-MR (Multi-Region)				
<b>Development Kit</b>	S6-DEVKIT ( <i>does not include reader</i> )				
<b>RAINstream License</b>	TM-RAINSTM-LIC				
<b>Protocol Licenses</b>	(AEI ATA) S6-LIC-AEIATA, (IPX/ISO 18K-6B) S6-LIC-2F				

## 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 challenges. 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 JADAK's RFID line of products. [www.jadaktech.com](http://www.jadaktech.com)



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