# ThingMagic® Sargas



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 embdedded 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								
_		87 mm / 3.4 in. (L) <b>x</b> 80 mm / 3.1 in. (W) <b>x</b> 24 mm / 0.9 in. (H)						
Dimensions (no connectors) Weight		0.27 kg / 0.6 lbs.						
Tag / Transponder Protocols		0.21 kg / 0.0 lps.						
RFID Protocol Support		EPCglobal Gen 2V2 (ISO 18000-63); ISO 18000-6B (optional)						
KEID FIOLOCOI Support		IP-X (optional, read-only); AEI ATA (optional, read-only)						
RF Interface		The A topic of the term of the						
Antenna Connectors		Two RP-SMA connectors						
RF Power Output		Read and write levels adjustable from 0 to +30 dBm						
Frequency Range Per Region		FCC 902-928 MHz (Americas), ETSI 865-868 MHz (EU), MCITT 865-867 MHz (India), MIC 916.8-920.8 MHz						
		(Japan)						
		Customizable channel list permits subsets of these regions.						
Data/Control Interface								
Control/Data Interfaces		RJ45 (10/100 Base-T Ethernet), USB Type B (client console, memory stick, and RNDIS port), USB Type A						
		(accessory port), Micro SD						
GPIO Sensors and Indicators		8-Pin connector provides: 2 opto-isolated Inputs, 2 opto-isolated Outputs, 5V Source, Isolated and chassis						
		grounds, DC input to set output levels						
User Indicators		Bi-color status LED, Power LED, 2 LAN LEDs						
Power								
Power Consumption	10W typical	max, 15W worst case	External DC Power	5 VDC +/-5%	AC Adapter	100-240 VA	C, 1A max, 50-60Hz	
Regulatory Certifications & Environment								
Certifications		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)						
		Other regional certifications may be available through reseller partners.						
Safety & Other		ROHS compliant, IEC 60950-1 (ed. 2), CA-10430-UL						
Temperature		Operating -40°C to +60°C; Storage -40°C to +85°C						
Humidity		5%-95% non-condensing						
Performance								
Max Read Rate		>750 tags/second						
Max Tag Read Distance		>9 m (30 ft) with 9dBiC or 6dBiL antenna						
Application Interface								
Direct Communication		Low Level Reader Protocol (LLRP) v1.1 with multiprotocol and advanced extensions						
Host API		Mercury API: Java, C, C#/.NET						
On-Reader API		Range of languages compiled with C/Java API						
Communication Channels		USB Keyboard emulator, Streaming to USB COM port, Network Telnet, Network HTTP Port						
Mercury OS Features								
Networking		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						
Security		SSL/SSH-based security						
Web-based Control		Configuration, monitoring, and reading from web browser via HTTP (HTTPS future)						
Architecture								
O/S		Debian Linux kernel version 9.5						
Real-Time Clock		Backup time: 1 week at room temperatures						
Processor 1 GHz TI ARM Cort		ex-A8 (AM335x)	RAM	512 MB	Flash I	Memory	4 GB	
Ordering Information								
Sargas Reader		S6-NA, S6-EU, S6-IN, S6-JP (high power) ( power adapter included)						
Power Adapter		PWRADP-S6-MR (Multi-Region)						
Development Kit		S6-DEVKIT (does not include reader)						
RAINstream License		TM-RAINSTM-LIC						
Protocol Licenses (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



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