

# ThingMagic IZAR



194 mm L x 139 mm W x 33.6 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
- Portals
- In-Vehicle
- Warehouse & Supply Chain
- Inventory Monitoring
- Access Control

## ThingMagic IZAR is a compact, programmable, 4-port RAIN UHF RFID network-attached reader with both read and write capability

State-of-the-art performance of over 750 tag reads per second allows ThingMagic IZAR to be used in a wide variety of applications. Output power levels of up to +31.5 dBm and high receiver sensitivity permit longer read distances.

### Powerful Processor

ThingMagic IZAR is embedded with a powerful ARM Cortex processor running the Linux Operating System (OS), and generous amounts of DDR and FLASH memory, allowing complex on-reader programs to be written with the aid of JADAK's custom Mercury API SDK. For those who simply need a data stream over network or serial interfaces, JADAK offers the proprietary RAINstream application.

### "Tagnostic"

ThingMagic IZAR 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, IP-X and AEI ATA (transportation).

### 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.

### 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

Control and data gathering connections to ThingMagic IZAR can be made over both LAN and client USB interfaces. Other interfaces can also be supported by adapters connected to the USB host interface, including WiFi, Bluetooth, and serial connections.



Bottom view



Top view

# ThingMagic IZAR

Tag/Transponder Protocols	
<b>RFID Protocol Support</b>	EPC Gen 2V2 ISO 18000-63 ISO 18000-6B (optional) IP-X (optional) AEI ATA (optional)
UHF RFID Antenna Interface	
<b>External Interface</b>	Four RP-TNC connectors
<b>RF Output Power</b>	0 to +31.5 dBm in 0.01 dBsteps
<b>Frequency Range Per Region</b>	FCC 902-928 MHZ (Americas) ETSI 865-868 MHZ (EU) MCIT 865-867 MHZ (India) <i>Customizable channel list permits subsets of these regions.</i>
Data/Control/Wireless Interfaces	
<b>Connectors</b>	RJ45 (10/100 Base-T Ethernet) USB Type B (client console, memory stick, and RNDIS port) USB Type A (host accessory port) 12-Pin, two-row Terminal Block (GPIO Interface) 5 mm x 2.1 mm coaxial Jack (DC Input) Micro SD Card Interface (Future use) Micro HDMI Video port (Future use)
<b>GPIO</b>	4 opto-Isolated Inputs 4 opto-Isolated Outputs 5V Source Isolated and chassis grounds DC input to set output levels
<b>Indicators/Switches</b>	One two-color status LEDs Four antenna status LEDs Two LAN status LEDs Clip-hole reset switch
MercuryOS Features	
<b>Networking</b>	DHCP and DNS-based configuration and firmware management TCP/IP networking stack
<b>Security</b>	SSL/SSH-based security
<b>Web-based Control</b>	Configuration, monitoring, and reading from a web browser via HTTP (HTTPS future)
Application Interface	
<b>Direct Communication on-Reader API</b>	EPC global Low Level Reader Protocol (LLRP) v 1.1 with multiprotocol and advanced feature extensions
<b>Host API</b>	C, Java C, C#/ .NET API On-reader programming through a range of languages compiled with C-API
<b>Communication Channels</b>	USB Keyboard emulator USB COM port Network Telnet Network HTTP Post
Power	
<b>Power Source</b>	DC 9-30V (AC Adapter Available) POE, POE+
<b>Power Consumption</b>	13 W typical max. 17 W worst case
Physical	
<b>Dimensions (without connectors)</b>	L: 194 mm / 7.6 in. x W: 139 mm / 5.5 in. x H: 33.6 mm / 1.3 in.
<b>Weight</b>	1.51 lbs. (0.7 kg)

# ThingMagic IZAR

Environment	
Humidity	5% to 95% (non-condensing)
Operating Temperature	-40°C to +60°C
Storage Temperature	-40°C to +85°C
Regulatory and Safety	
Regulatory	FCC 47 CFR Ch. 1 part 15 Industry Canada RSS-21 0 ENSI EN 302 208 v3.1.1 (RED 2014/53/EU)
Other	ROHS compliant IEC 60950-1(ed.2) CA-10430-UL
Architecture	
Processor	1 GHZ TI ARM cortex AB (AM335X)
O/S	Debian Linux kernel version 3.8
RAM	512 MB
Flash Memory	4 GB
Real-Time Clock	Backup time: 1 week at room temp.
Performance	
Max Tag Read Rate	More than 750 tag reads per second
Max Tag Read Distance	Over 9 m (30 feet) with 9dBiC or 6dBiL antenna
Ordering Information	
IZAR Reader With POE N. America (NA), Europe (EU), India (IN)	PLT-RFID-IZ6-NA; PLT-RFID-IZ6-EU; PLT-RFID-IZ6-IN
IZAR Power Adapter	PLT-RFID-PWRADP-IZ6-NA; PLT-RFID-PWRADP-IZ6-EU
IZAR Development Kit	PLT-RFID-IZ6-DEVKIT <i>(does not include reader or power adapter)</i>
ThingMagic RAINstream License	TM-RAINSTM-LIC

## 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.

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