



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. For those who simply need a data stream over network or serial interfaces, JADAK offers the proprietary RAINstream® application.

### 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 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, 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

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, Bluetooth, and serial connections.



Bottom view



Top view



# ThingMagic IZAR

<b>Physical</b>					
<b>Dimensions (no connectors)</b>	194 mm / 7.6 in. (L) x 139 mm / 5.5 in. (W) x 33.6 mm / 1.3 in. (H)				
<b>Weight</b>	0.7 kg / 1.51 lbs.				
<b>Tag / Transponder Protocols</b>					
<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)				
<b>RF Interface</b>					
<b>Antenna Connectors</b>	Four RP-TNC connectors				
<b>RF Power Output</b>	Read and write levels adjustable from 0 to +31.5 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), SRRC-MII 920-925 MHz (P.R. China) <i>Customizable channel list permits subsets of these regions.</i>				
<b>Data/Control Interface</b>					
<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>	12-Pin, two-row Terminal Block provides: 4 opto-isolated Inputs, 4 opto-isolated Outputs, 5V Source, Isolated and chassis grounds, DC input to set output levels				
<b>User Indicators</b>	1 bi-color status LED, 4 antenna LEDs, 2 LAN LEDs, clip-hole reset switch				
<b>Power</b>					
<b>Power Source</b>	DC 9-30V (AC Adapter Available), POE, POE+				
<b>Power Consumption</b>	13W typical max., 17W worst case				
<b>Regulatory Certifications &amp; Environment</b>					
<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), 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				
<b>Performance</b>					
<b>Max Read Rate</b>	>750 tags/second				
<b>Max Tag Read Distance</b>	>9 m (30 ft) with 9dBiC or 6dBiL antenna				
<b>Application Interface</b>					
<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, USB COM port, Network Telnet, Network HTTP Port				
<b>Mercury OS Features</b>					
<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)				
<b>Architecture</b>					
<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
<b>Ordering Information</b>					
<b>IZAR Reader with POE</b>	PLT-RFID-IZ6-NA; PLT-RFID-IZ6-EU; PLT-RFID-IZ6-IN, PLT-RFID-IZ6-JPH, PLT-RFID-IZ6-CN				
<b>Power Adapter</b>	PLT-RFID-PWRADP-IZ6-NA; PLT-RFID-PWRADP-IZ6-EU				
<b>Development Kit</b>	PLT-RFID-IZ6-DEVKIT ( <i>does not include reader or power adapter</i> )				
<b>RAINstream License</b>	TM-RAINSTM-LIC				
<b>Protocol Licenses</b>	(AEI ATA) IZ6-LIC-AEIATA, (IPX/ISO 18K-6B) IZ6-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 certified.

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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