ThingMagic
a JADAK Brand

Vega™

Durable Indoor/Outdoor UHF RFID reader

ThingMagic's Vega reader is built around our award winning, high performance M5e UHF RFID module. The Vega reader meets the harsh environmental operating standards required for use in trucks and automobiles (In Vehicle Reader model), and is ideal for deployment in a wide variety of indoor and outdoor applications. A version is available to support applications which call for the maximum permissible output power allowed by EU regulations. The Vega reader utilizes a local personal computer (not included) to provide command and control via its RS-232 serial interface.

Ordering Information	
Reader	V5-RS-NA, V5-RS-EU In-Vehicle version: V5-IVR-NA, V5-IVR-EU
Development Kit	V5-DEVKIT-NA, V5-DEVKIT-EU

Tag / Transponder Protocols	
RFID Protocol Support	EPCglobal Gen 2 (ISO 18000-6C) with Anti-Collision, DRM, and advanced anti-jamming
Regional Support	Certification obtained, or in process, for the following regions: North and South America, EU, Korea and other Asia-PAC countries
RF Interface	
Antenna connector	Three reverse-TNC antenna ports support - ing monostatic 50 Ohm antennas (for best performance VSWR should be less than 1.5:1 in operating frequency range)
RF Power Output	Separate read and write levels, command-adjustable from 5 dBm to 30 dBm (1 W), +/- 1 .0 dBm accuracy*
Data/Control Interface	
Data/Control	9-pin serial connector, supporting RS232 with asynchronous data rates up to 921.6 kbps. DTR signal turns off reader completely to conserve power.
GPIO Sensors and Controls	2 General Purpose inputs and one output, accessible via Molex© Connector
Protocol	Command-response protocol protected by length field and 16-bit CRC
Physical	
Dimensions	21.6 cm L x 13.3 cm W x 3.8 cm H (8.5 in L x 5.25 in W x 1.5 in H)

Power	
AC/DC Power Required	Reader alone: 10-16 VDC, 8 W maximum at 12 V when transmitting Reader with AC Power Adapter: 100-240 VDC, 50-60 Hz, 10 W maximum when transmitting
Idle Power Consumption	1.7 W max at idle (Power management modes can be used to reduce this to as little as 0.1 W)
Environment	
Operating Temp.	Reader: -40 C to +75 C** AC Power Adapter: 0 C to +40 C
Storage Temp	Reader: –40C to +85C AC Power Adapter: -10 C to +70 C
Environmental Standards	Confirmed to meet in-vehicle standards for: Powered Thermal Cycle Thermal Shock Resistance A & B Powered Vibration Endurance Mechanical Shock Humidity-Temperature Cycle Water/Fluids Ingress Connector/Harness Pull-Push Voltage Overstress Electrostatic Discharge
Safety	IEC 60950-1 (ed.2) US-17640-UL
Architecture	
User-accessible Flash Memory	16 kB
Tag Buffer	200 tags
Performance	
Tag Read Rate	Up to 200 tags/second
Tag Read Distance	Over 30 feet (9m) with 6 dBiL antenna (36 dBm EIRP)
Max Receive Sensitivity	-65 dBm at full transmit power with typical antenna***

RoHS Compliant

*With an absolute maximum of +30 dBm as certified. 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.

**With reduced duty cycles. ***Receive sensitivity will improve as transmit power is reduced. Specifications subject to change without notice.

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Develop

Cr eate RFID-enabled solutions using industry-standard tools

Deploy

Enable r apid deployment and reliable operation of RFID solutions within a wide variety of new and existing environments

Optimize

Maximiz e productivity, improve ROI, and lower operating costs

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