ThingMagic® RAIN Starter Kit



122.5 mm L x 50 mm W x 10.5mm H

Features & Benefits:

- Built around proven ThingMagic Nano module
- Highly integrated UHF RFID reader with ARM based Cortex-M4 architecture
- Board-mounted antenna with read range up to 2 meters
- USB interface simplifies communication
- RAIN Communication Interface supports RAIN RFID technology standards

Affordable RAIN® RFID Learning Platform

RAIN RFID is a wireless technology connecting billions of everyday items to the internet, enabling businesses and consumers to identify, locate, authenticate, and engage each item. The starter kit provides an easily accessible and affordable platform for students and hobbyists to use when learning to apply this technology, while also promoting best practices for using RAIN RFID.

ThingMagic RAIN Starter Kit consists of the ThingMagic RAIN reader, which is based on ThingMagic EL6e, and sample RAIN tags from RAIN RFID Alliance members. The starter kit delivers out-of-box item connectivity utilizing the Impini Indy R500 RAIN RFID reader chip and sample RAIN tags from RAIN RFID Alliance members.

The RAIN Starter kit is exclusively distributed by <u>atlasRFIDstore.com</u>, the leading, global distributor of RAIN RFID hardware.

Highlights:

- Speed and ease of integration due to all-in-one embedded solution that includes reader module, antenna, and processor to RFID-enable applications.
- Support a new developer friendly interface between applications and RAIN RFID readers – RAIN Communication Interface (RCI). For more information on the RCI specification and the RAIN Alliance visit https://rainrfid.org/.
- Not intended for professional use. Product includes 90-day warranty for manufacturing defects.

Ideally suited scenarios include:

 Students and hobbyist looking to learn RAIN RFID technology and best practices for implementation





ThingMagic® RAIN Starter Kit

Physical	
Dimensions	50 mm (W) x 122.5 mm (L) x 15.5 (H) mm with antenna
Mounting Holes	4 mounting holes with 2.5 mm ID
Tag / Transponder Protocols	
RFID Protocol Support	EPCglobal Gen 2V2 (ISO 18000-63)
RF Interface	
Antenna	Board-mounted antenna EU or NA frequency range, RHCP, 3 dBi nominal gain
Antenna Connector	U.FL connector for an externally mounted antenna
RF Power Output	Read and write levels adjustable from 0 to +27 dBm in 0.01 dB steps
Region Selections for High Band Freq. Range (915-928 MHz)	FCC (NA, SA), Argentina, Australia, Bangladesh, China, Indonesia, Japan, Korea, Macao, Malaysia, New Zealand, Philippines, Singapore, Taiwan, Thailand
Region Selections for Low Band Freq. Range (865-868 MHz)	ETSI (EU), Hong Kong, India, Russia, Vietnam
Data/Control Interface	
Control/Data Interfaces	USB
GPIO Sensors and Indicators	4 3.3V GPIO ports: 1 input (sensor), 1 service and 2 output (indicator) lines
User Indicators	2 bi-color LEDs and audio signal
Power	
Power Consumption	USB Powered: 5VDC +/- 10% at 3.5 W;
(Full RF Output Power)	External Power: 4.5-10 VDC at 4.9 W; 10-26 VDC at 4.4 W
Regulatory Certifications & Environment	
Certifications	M6E-NANO modular certifications incl. USA (FCC 47 Part 15), Canada (RSS-210), EU (ETSI EN 302 208 v3.1.1, RED 2014/53/EU) & FCC Class A for incidental emissions (EMI)
Environmental	RoHS, REACH
Temperature	Operating 0°C to +50°C; Storage -40°C to +70°C
Vibration (Without Antenna)	Sinusoidal vibration 1.0" peak to peak displacement 5-14 Hz; 10g acceleration 14-500 Hz, 1.0g from 500-2000 Hz; 30 min linear freq. sweep on 3 axes.
Performance	
Max Read Rate	Up to 5 tags/second
Max Tag Read Distance	Up to 2 m (6 ft) reliant on power availability, antenna choice and tag size
Ordering Information	
PLT-RFID-RAIN-USB-DEVKIT	Includes multiregional USB module, USB cable, EU and NA antennas, sample tags and quick start guide

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 business designs and manufactures embedded detection and analysis solutions that help customers solve unique inspection, tracking, scanning and documenting challenges. JADAK is based in Syracuse, New York, with sales and technical locations across the globe.

ThingMagic is JADAK's RFID line of products.

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.

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