

# PhidgetRFID Read-Write



**Note:** The 1024\_0B is identical to the 1024\_0, except that it comes pre-assembled in a plastic shell enclosure and you have the option of which length of USB cable you want to include.

The PhidgetRFID Read-Write reads RFID tags that are brought in close proximity to the reader and returns the tag identification number. Writing data to T5577 tags is also supported. For a list of compatible RFID tags that we have available, see the Compatible Products tab.

RFID (**R**adio **F**requency **I**dentification) systems use data strings stored inside RFID tags to uniquely identify people or objects when their tags are scanned by an RFID reader. These types of systems are found in many applications such as passport protection, animal identification, inventory control systems, and secure access control systems.

The PhidgetRFID Read-Write supports reading and writing in 3 protocols; EM4100, ISO11785 FDX-B, and PhidgetTag. The PhidgetTag protocol simply stores up to 24 ASCII characters to the tag, eliminating the necessity for a table of corresponding tag numbers and names in your program. Phidgets sells EM4100 read-only tags that can be read with either of our RFID readers, and writable tags which can be written with the 1024 using any protocol. Any 3rd-party EM4100 or ISO11785 tags can be read.

Because passive tags require a strong RF field to operate, their effective range is limited to an area in close proximity to the RFID reader. The

distance over which the RFID tag is usable is affected by such things as the tag shape and size, materials being used in the area near the reader, and the orientation of the reader and tag in respect to each other and in their operating environment. The smaller a tag, the closer it must be to the reader to operate.

The 1024 has two digital outputs, labeled `""+5V""` and `""LED""`. These work the same as any other Phidgets Inc. digital output, except that the `""+5V""` output has a higher current rating. You can use these outputs to have an LED or buzzer to indicate when a tag read has occurred.

## Product Specifications

### Board

Controlled By	USB (Mini-USB)
API Object Name	RFID
USB Speed	Full Speed

### RFID Reader

API Object Name	RFID
Antenna Resonant Frequency Min	125 kHz
Antenna Resonant Frequency Max	150 kHz
Protocol	EM4100, ISO11785 FDX-B, PhidgetTag
USB Speed	Full Speed

### Electrical Properties

Available External Voltage (+5V)	5 V DC
Available External Voltage (LED)	5 V DC
Available External Current (+5V)	400 mA
Available External Current (LED)	16 mA
Output Impedance (LED)	250 $\Omega$
Current Consumption Min	27 mA
Current Consumption Max	150 mA

### Physical Properties

Recommended Wire Size	16 to 26 AWG
Operating Temperature Min	0 B°C

Operating Temperature Max	70 B°C
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**Digital Outputs**

Number of Digital Outputs	2
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Digital Output Voltage Min	0 V DC
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Digital Output Voltage Max	5 V DC
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