



# MPR5000

## Multi-Protocol RFID Reader Module EPC Class 0/0+ Class1 and Gen2 with Integral Antenna



### Product Features

Compliant to Global Standards

- Class 0/0+
- Class1 Gen1
- Class1 Gen2

.5W Transmit Power (+27 dBm)

Integrated Antenna

Extended PCMCIA Type II Form Factor

Communication Interface

- Standard 68-Pin Parallel PCMCIA
- Serial TTL Interface

### Highly Scalable

WJ Communications' MPR5000 RFID multi-protocol reader module is designed specifically for software developers and quick and easy experimentation with RFID.

Operating at the UHF frequency, this product offers OEMs and System Integrators the ability to deliver highly reliable, best-in-class, high performing RFID enabled printers, RFID handhels and other RFID enabled devices. The MPR5000 reader module supports Class 0, Class1 and Class1 Gen2 international standards.

### Superior Performance

WJ's innovative, cost-effective and easy to integrate reader module delivers up to a half watt of RF power and boasts an integrated dipole antenna to complete a painless integration of this reader module. Typical applications for the MPR5000 include handheld RFID readers, RFID enabled printers and mobile RFID devices.

### Ease of Integration

The MPR5000 is packaged in a PCMCIA Type II PC Card™ form factor, for ease of integration into various RFID devices. Just plug it into PC card socket, load the driver and demo software and get ready to read tags!

**MPR5000**

# Multi-Protocol RFID Reader Module

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### Absolute Maximum Rating\*

Parameter	Rating	Units
ESD Protection (per ISO 7816-1)	2	KV
Maximum Operating Voltage	6	V
Operating Case Temperature	-20 to +55	°C
Storage Temperature	-40 to +65	°C

\*Operation of this device above any of these parameters may cause permanent damage.

### Specifications

Operating Conditions: V<sub>CC</sub> = 5.00 VDC, T<sub>AMB</sub> = 25°C, 50 Ω System.

Symbol	Parameter	Min	Typ	Max	Units
f <sub>RFID</sub>	RF Frequency—UHF Operation	902		928	MHz
f <sub>CH</sub>	Channel Spacing		500		kHz
CH	Frequency Hopping Channels (See Hop Frequency Channels Table below)		50		Channels
V <sub>CC</sub>	Supply Voltage @ 800mA, Connected to System*	4.900	5.00	5.5	V
I <sub>PEAK OP</sub>	Peak Operating Current		600	750	mA
P <sub>TX-Max</sub>	Maximum Transmit Power		+26.6	+27	dBm
P <sub>RANGE</sub>	Power Control Range		12		dB
	Step Size		1		dB
T <sub>OPERATING</sub>	Operating Temperature Range	-20		+50	°C
S <sub>f</sub>	Frequency Stability			±10	ppm

\*Measured at connector for 750mA load.



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### Protocol Support

Protocol	ID Read	ID Write	Data Read	Data Write	Password Write	Lock	Kill
EPC Class0	X						X
EPC Class0+	X	X	X	X		X	X
EPC Class1 Gen1	X	X			X	X	X
EPC Class1 Gen2 (ISO-18000-6C)	X	X	X	X	X	X	X

### Frequency Bands

Country	Frequency (MHZ)
United States	902-928
Puerto Rico	902-928
Canada	902-928
Taiwan	917-922
Singapore	922-928
Hong Kong	923-925
Malaysia	920-925
Philippines	915-928
Thailand	902-928
Brazil	902-928
Argentina	902-928
Chile	902-928
Costa Rica	902-928
Mexico	902-928
Australia	920-926
South Africa	917-921
Uruguay	902-928
The MPR5000 can be configured to support any country that falls within the US frequency band. The hop table is then limited to the channels that apply to the specific country.	

### US Frequency Hop Table

Channel	Hop Frequency (MHz)	Channel	Hop Frequency (MHz)
1	901.75	26	915.25
2	902.25	27	915.75
3	902.75	28	916.25
4	903.25	29	916.75
5	903.75	30	917.25
6	904.25	31	917.75
7	904.75	32	918.25
8	905.25	33	918.75
9	905.75	34	919.25
10	906.25	35	920.75
11	906.75	36	920.25
12	907.25	37	921.75
13	907.75	38	922.25
14	908.25	39	922.75
15	908.75	40	923.25
16	909.25	41	923.75
17	910.75	42	924.25
18	910.25	43	924.75
19	911.75	44	925.25
20	912.25	45	925.75
21	912.75	46	926.25
22	913.25	47	926.75
23	913.75	48	927.25
24	914.25	49	927.75
25	914.75	50	928.25

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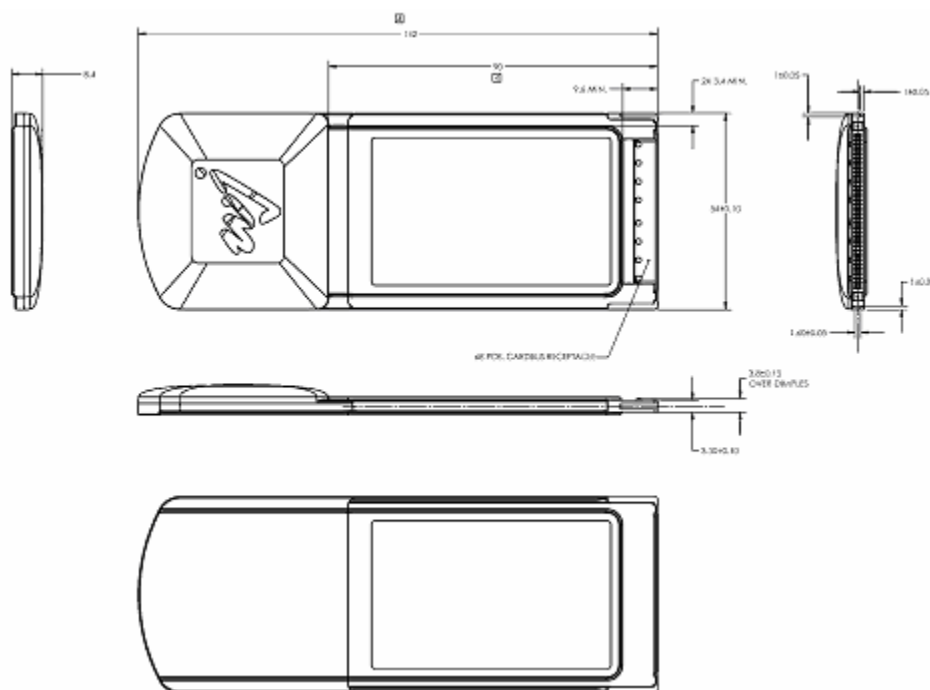
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### Mechanical Information

#### PC Card™ Mechanical Specifications

The MPR5000 is housed in an extended 68-pin PCMCIA Type II PC Card™ form factor and the physical dimensions are listed in the diagram below.



#### NOTES:

1. DIMENSIONS ARE EXPRESSED IN INCHES.
2. TOLERANCE .XXX  $\pm$  .015  
.XX  $\pm$  .02