MPR6000

Multi-Protocol RFID Reader Module

EPC Class 0/0+ Class1 and Gen2

Product Features

Compliant to Global Standards

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

.5W Transmit Power (+27 dBm)

Antenna Ports

- Single Antenna Operation
- Switchable to 2 Separate Antennas
- 50Ω MMCX Coaxial Connectors

PCMCIA Type II Form Factor

Communication Interface

- Standard 68-Pin Parallel PCMCIA
- Serial Interface 3.3V CMOS Levels, 5V tolerant

Highly Scalable

WJ Communications' MPR6000 RFID multi-protocol readers represent a new level for size, standards-based compatibility, ease of use and performance.

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 handhelds and other RFID enabled devices. The MPR6000 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 two antenna ports with the flexibility to customize RFID devices to meet application specific needs. Typical applications for the MPR6000 include handheld RFID readers, RFID enabled printers and mobile RFID devices.

Ease of Integration

The MPR6000 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!

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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	℃
Storage Temperature	-40 to +65	℃

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

Specifications

Operating Conditions: Vcc = 5.00 VDC, T_{AMB} = 25℃, 50 Ω System.

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

*Measured at connector for 800mA 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
Uraguay	902-928
The MPR6000 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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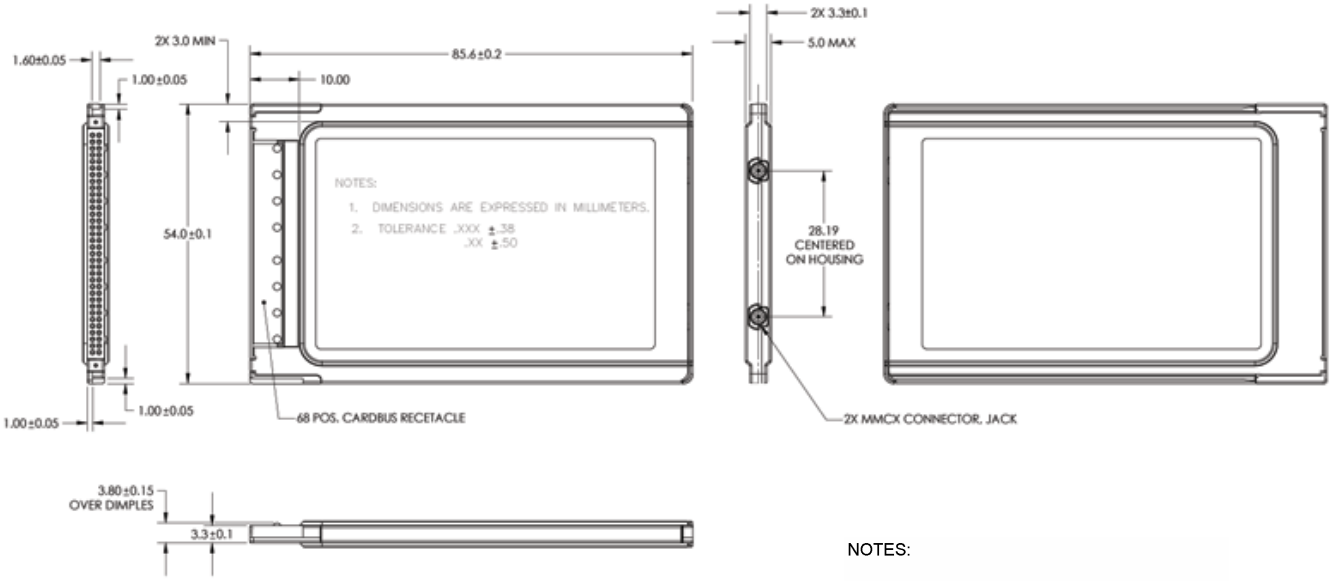
Mechanical Information

PC Card™ Mechanical Specifications

The MPR6000 is housed in a standard 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 ±.015
.XX ±.02