

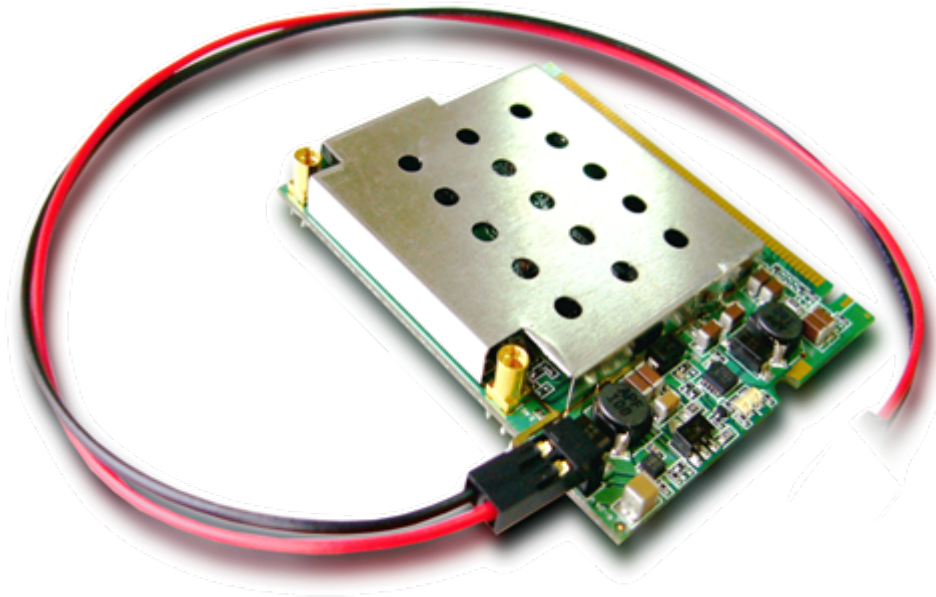
EMP-8603

Premium Sales Guide

May 2008



IEEE 802.11a/b/g *Dual Band* High power Radio



- **Plus** High Power for **Dual Band** (2.4 & 5 GHz)
- Up to **500mW**@802.11a ; **800mW**@80211b ;
600mW@802.11g
- **Industry-Best** Sensitivity
- **Advanced Lower power consumption**
design
- **ESD** Protection up to **16 kV**
- **Improving the reliability of heating**
- **5/10/20 MHz** Channels
- **MMCX** antenna connectors for low connector
lose

Real High transmit power in Dual band support -

Design to link farther and reliable

Radio Transmit output power			
	Data rate	Tx output power (dBm)	Tolerance
802.11a (5.18~5.825GHz)	6 ~ 24 Mbps	26 dBm	+1/-2 dB
	36 Mbps	24 dBm	+1/-2 dB
	48 Mbps	22 dBm	+1/-2 dB
	54 Mbps	20 dBm	+1/-2 dB
802.11g (2.412~2.472GHz)	6 ~ 24 Mbps	27 dBm	+1/-2 dB
	36 Mbps	26 dBm	+1/-2 dB
	48 Mbps	24 dBm	+1/-2 dB
	54 Mbps	23 dBm	+1/-2 dB
802.11b (2.412~2.472GHz)	1 ~ 11 Mbps	28 dBm	+1/-2 dB

Best sensitivity among the normal RF Radio -

Design to avoiding interference and receive ability

Radio Sensitivity			
	Data rate	Rx receive sensitivity	Tolerance
802.11a (5.18~5.825GHz)	6 ~ 24 Mbps	-93 ~ -85 dBm	+/-1.5 dB
	36 Mbps	-82 dBm	
	48 Mbps	-76 dBm	
	54 Mbps	-73 dBm	+/-1.5 dB
802.11g (2.412~2.472GHz)	6 ~ 24 Mbps	- 94 ~ -87 dBm	+/-1 dB
	36 Mbps	-84 dBm	
	48 Mbps	-78 dBm	
	54 Mbps	-74 dBm	+/-1 dB
802.11b (2.412~2.472GHz)	1Mbps	-97 dBm	+/-1 dB
	11Mbps	-92 dBm	+/-1 dB

Lower down the power consumption for **Energy saving** –

Auto-switching mechanism with a jump wire (Plug and Play)

Jump on (Mode 2)

Jump wire connect to the
5V + Ground →

Power supply from external
DC power

External DC power could be
5V +/- 5% input Voltage

Jump on (Mode 1)

Jump wire connect to the
9 ~ 24V + Ground →

Power supply from external
DC power

External DC power could
be 9V~24V +/- 5% input
Voltage

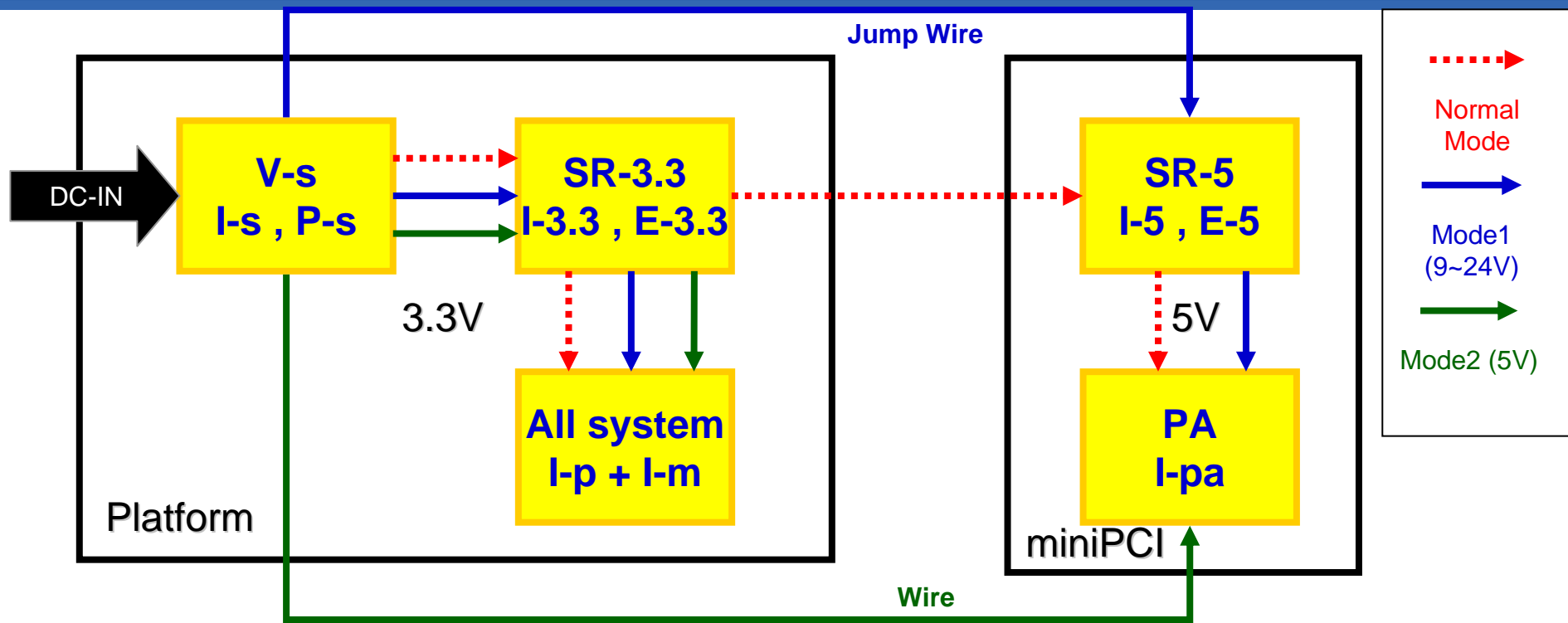
Jump off (Normal mode)

Without Jump wire →
Power supply from miniPCI
slot (**3.3V**)

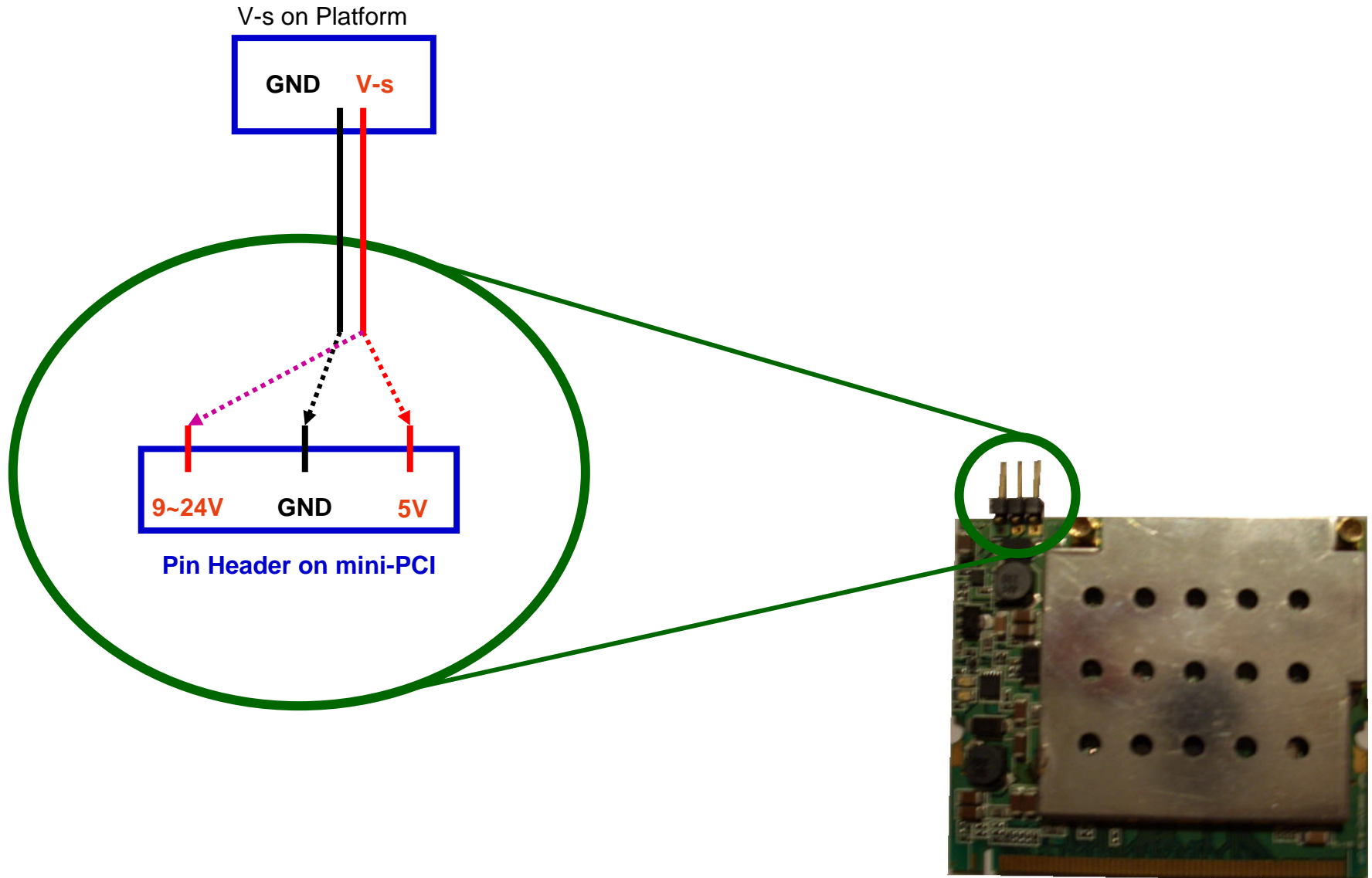
The power consumption
could be still from the PCI
slot

- 5V & 9 ~ 24V input voltage for most popular power circuit design
- Reduce Platform's **total power consumption** around **2.5 ~ 3.5 W**
- Tally with **EARTH FRIENDLY** concept

Distinguished Design – 3-1



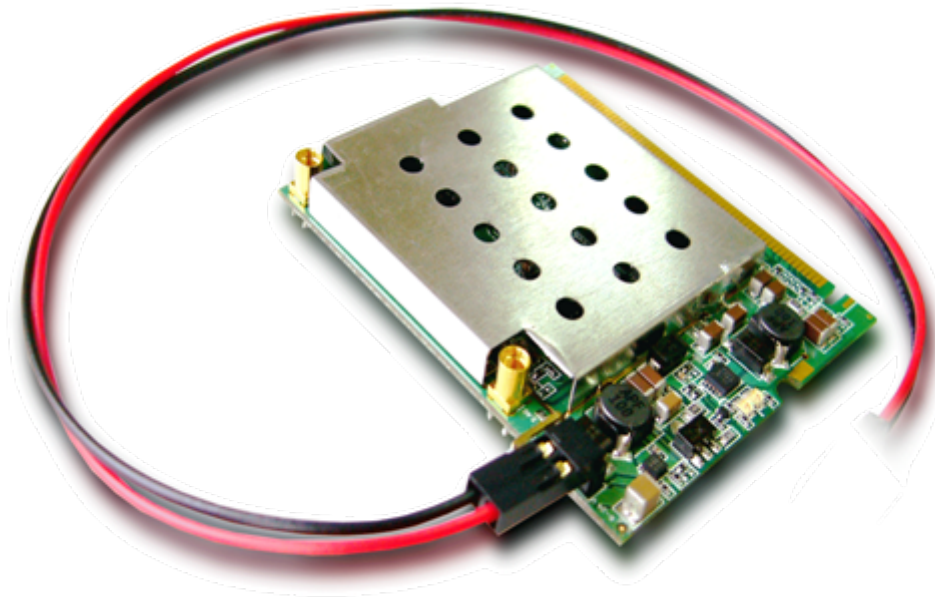
Item	Description	Item	Description
V-s	DC Source voltage from adapter or POE	I-m	Max current of system from mini_PCI
SR-3.3	Buck (V-s to 3.3 V)	I-pa	Max current of PA on mini_PCI
SR-5	Boost (3.3 to 5 V) or Buck (V-s to 5 V)	I-5	Output current of SR-5
E-3.3	Efficiency of SR-3.3	I-3.3	Output current of SR-3.3
E-5	Efficiency of SR-5	I-s	Output current of adapter or POE
I-p	Max current of system from Platform	P-s	Power consumption of adapter or POE



Test Result

V-s (V)	Type of power Source	E-5 (%) (efficiency)	E-3.3 (%) (efficiency)	I-p (mA)	I-m (mA)	I-pa (mA)	I-5 (mA)	I-3.3 (mA)	I-s (mA)	P-s (W)	ΔP (W)
24	Normal	80	75	1000	400	1000	1000	3294	604	14.5	
	Mode 1	85	85	1000	400	1000	1000	1400	472	11.3	-3.2
12	Normal	80	80	1000	400	1000	1000	3294	1132	13.6	
	Mode 1	85	90	1000	400	1000	1000	1400	918	11.0	-2.6
9	Normal	80	80	1000	400	1000	1000	3294	1510	13.6	
	Mode1	85	90	1000	400	1000	1000	1400	1224	11.0	-2.6
5	Normal	80	80	1000	400	1000	1000	3294	2718	13.6	
	Mode 2	NC	90	1000	400	1000	0	1400	2027	10.1	-3.5

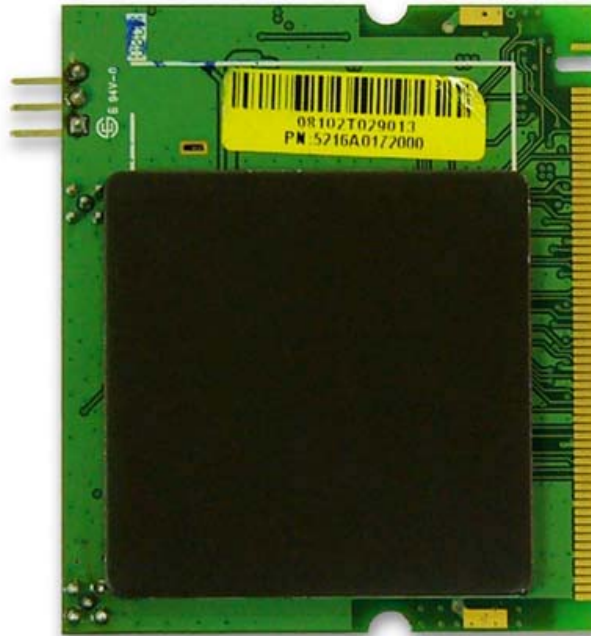
ESD Protection up to 16 kV



Make the module & platform more reliable and stable

Improvement on the heat issue –

MTBF reliability certified and operating temperature improved



Heat sink to protect key components

Thank You.