EWM-W130M Datasheet

CONTENTS

Revision History

Rev.	Date	History
1.0	2012/1/3	1. 1st release

1. Overview

802.11 b/g/n Single-Band Mini PCI Module

- Chipset: Ralink RT3062
- Host Interface: Mini PCI Type IIIA
- Antenna: 2 antennas to support 2T2R
- Output Power up to 17dBm
- Enhanced wireless security: 64/128-Bit WEP Key, WPA, WPA2
- Windows 2000/ XP/Vista/Win7, Linux2.6 above

2. Specification

Chipset	Ralink, RT3062 (MAC/BBP/RF)
Interface Type	Mini PCI Interface Type IIIA
Dimensions	59.75 x 44.6 x 3.55 (mm)
Weight	7g
Frequency Band	**802.11b** ISM band 2.400 ~ 2.484GHz (subject to local regulations) **802.11g** ISM band 2.400 ~ 2.484GHz (subject to local regulations) **802.11n draft** ISM band 2422 – 2452MHz (channel BW=40MHz) 2400 – 2483.5MHz (channel BW=20MHz)
Number of Channel	**802.11b** USA and Canada – 11 Most European countries – 13 Japan – 14 France – 4 **802.11g** USA and Canada – 11 Most European countries – 13 Japan – 14 **HT20** USA and Canada – 11 Most European countries – 13 Japan – 13 **HT40** USA and Canada – 3~9 Most European countries – 3~9
Spreading	**802.11b** Direct Sequence Spread Spectrum (DSSS) **802.11g** Orthogonal Frequency Division Multiplexing (OFDM) **HT20** Orthogonal Frequency Division Multiplexing (OFDM) Multiple-input/multiple-output (MIMO) **HT40** Orthogonal Frequency Division Multiplexing (OFDM) Multiple-input/multiple-output (MIMO)
Modulation	**802.11g** 64 QAM, 16 QAM, QPSK, BPSK **802.11b** CCK, DQPSK, DBPSK **HT20, HT40** 64 QAM, 16 QAM, QPSK, BPSK
Data Rate	**802.11b** 11, 5.5, 2, 1 Mbps per channel, auto fallback for extended range **802.11g** 54, 48, 36, 24, 18, 12, 9, 6 Mbps per channel, auto fallback for extended range **HT20** Refer to HT20 output power table **HT40** Refer to HT40 output power table
Antenna	Two antenna connectors, Two antenna port for TX/RX.
Transmitted power	**802.11b** 1Tx ~ 15 +/-1.5dBm@ch1~ch14 **802.11g** 1Tx ~ 14 +/-1.5dBm@ch1~ch14

	HT20 Please see the output power table for detail. tolerance: +/-1.5dBm **HT40** Please see the output power table for detail. tolerance: +/-1.5dBm
Receive Sensitivity	**Nominal Temp Range:** **802.11b (1Rx)** Typ. 1Mbps, -93dBm Typ. 2Mbps, -93dBm Typ. 5.5Mbps, -92dBm Typ. 11Mbps, -90dBm **802.11g (2Rx)** Typ. 6Mbps, -93dBm Typ. 9Mbps, -93dBm Typ. 12Mbps, -92dBm Typ. 18Mbps, -90dBm Typ. 24Mbps, -87dBm Typ. 36Mbps, -84dBm Typ. 48Mbps, -80dBm Typ. 54Mbps, -78dBm **HT20 (2Rx)** Typ. MCS=0, -93dBm Typ. MCS=1, -91dBm Typ. MCS=2, -88dBm Typ. MCS=3, -86dBm Typ. MCS=4. -83dBm Typ. MCS=5, -79dBm Typ. MCS=6, -77dBm Typ. MCS=7, -75dBm Typ. MCS=8, -91dBm Typ. MCS=9, -88dBm Typ. MCS=10, -86dBm Typ. MCS=11, -83dBm Typ. MCS=12, -80dBm Typ. MCS=13, -75dBm Typ. MCS=14, -74dBm Typ. MCS=15, -72dBm **HT40 (2Rx)** Typ. MCS=0, -90dBm Typ. MCS=1, -88dBm Typ. MCS=2, -85dBm Typ. MCS=3, -83dBm Typ. MCS=4, -80dBm Typ. MCS=5, -76dBm Typ. MCS=6, -74dBm Typ. MCS=7, -72dBm Typ. MCS=8, -88dBm Typ. MCS=9, -85dBm Typ. MCS=10, -83dBm Typ. MCS=11, -80dBm Typ. MCS=12, -77dBm Typ. MCS=13, -72dBm Typ. MCS=14, -71dBm Typ. MCS=15, -69dBm
Power consumption(peak)	**802.11b** Continue TX : 470mA@3.3V Continue RX : 250mA@3.3V **802.11g** Continue TX : 420mA@3.3V Continue RX : 250mA@3.3V **HT20** Continue TX : 530mA@3.3V Continue RX : 260mA@3.3V **HT40** Continue TX : 550mA@3.3V Continue RX : 290mA@3.3V

Standards	IEEE 802.11b, IEEE 802.11g i3standard, Wi-Fi compliant ,EWC 802.11n draft
Warranty	1 year
Environmental	Temperature Range: 0 ~ 55°C (Operating); -20 ~ 80°C (Storing) Operating Humidity: Operating Humidity 10% to 85% Non-Condensing Storage Humidity 5% to 90% Non-Condensing
Network Protocol	TCP/IP, IPX, NDIS4, and NDIS5x
Management Utility	Monitor Internet Access Status via UI
Supplied Driver	Windows 2000/ XP/Vista/Win7, Linux2.6 above
Operating Voltage	3.3V + 5%,

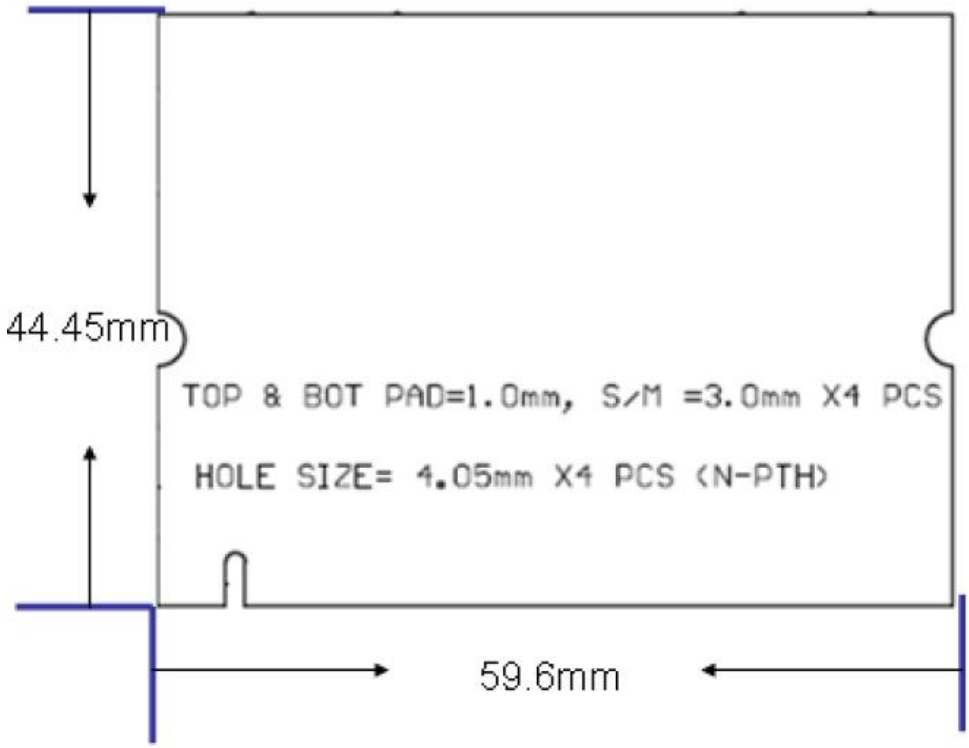
3. Pin Definition

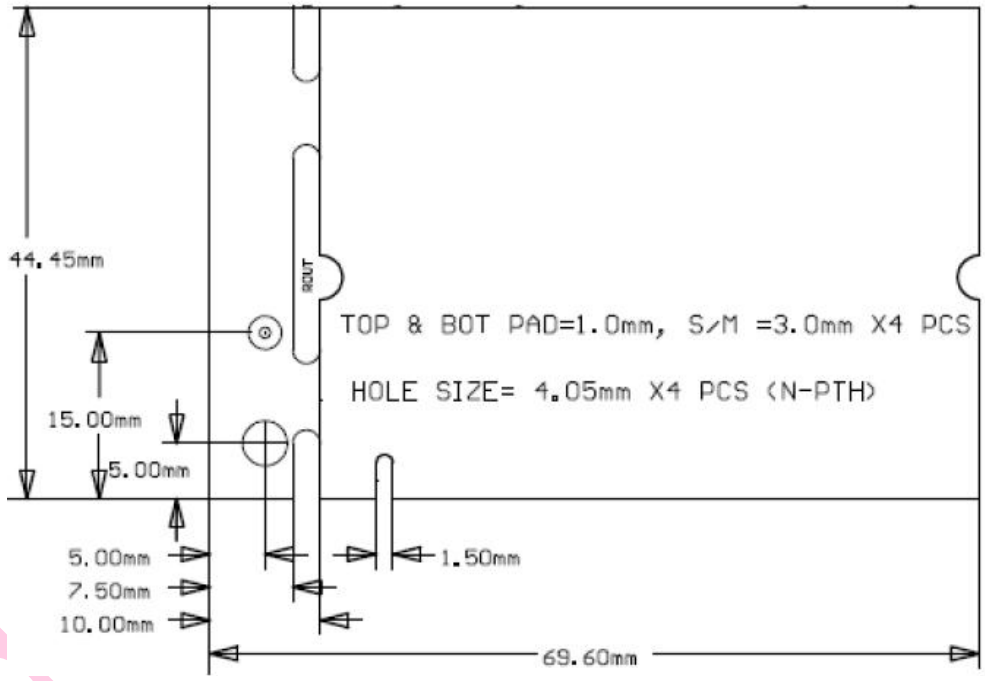
Pin No.	Standard Definition	Connect Signal
1	TIP	NC
2	RING	NC
3	8PMP-3_RD_P	NC
4	8PMJ-1_TD_P	NC
5	8PMJ-6_RD_N	NC
6	8PMJ-2_TD_N	NC
7	8PMJ-7_TERM3	NC
8	8PMJ-4	NC
9	8PMJ-8	NC
10	8PMJ-5	NC
11	LED1_G+	LD1P_ACT
12	LED2_Y+	LD2P_24G
13	LED1_G-	RFTXDIS#
14	LED2_Y-	LD2_YN5
15	CHSGND	GND
16	RESERVED	NC
17	INTB#	NC
18	5V	NC
19	3.3V	3.3VD
20	INTA#	INTAB
21	RESERVED	NC
22	RESERVED	NC
23	GND	GND
24	3.3VAUX	NC
25	CLK	CCLK
26	RST#	RST#
27	GND	GND
28	3.3V	3.3VD
29	REQ#	REQB
30	GNT#	GNTB
31	3.3V	3.3VD
32	GND	GND
33	AD[31]	AD31
34	PME#	NC
35	AD[29]	AD29
36	RESERVED	NC
37	GND	GND
38	AD[30]	AD30
39	AD[27]	AD27
40	3.3V	3.3VD

41	AD[25]	AD25
42	AD[28]	AD28
43	RESERVED	NC
44	AD[26]	AD26
45	C/BE3#	CBE3B
46	AD[24]	AD24
47	AD[23]	AD23
48	IDSEL	IDSEL
49	GND	GND
50	GND	GND
51	AD[21]	AD21
52	AD[22]	AD22
53	AD[19]	AD19
54	AD[20]	AD20
55	GND	GND
56	PAR	PAR
57	AD[17]	AD17
58	AD[18]	AD18
59	C/BE2#	CBE2B
60	AD[16]	AD16
61	IRDY#	IRDYB
62	GND	GND
63	3.3V	3.3VD
64	FRAME#	FRAMEB
65	CLKRUN#	CLKRUNB
66	TRDY#	TRDYB
67	SERR#	SERRB
68	STOP#	STOPB
69	GND	GND
70	3.3V	3.3VD
71	PERR#	PERRB
72	DEVSEL#	DEVSELB
73	C/BE1#	CBE1B
74	GND	GND
75	AD[14]	AD14
76	AD[15]	AD15
77	GND	GND
78	AD[13]	AD13
79	AD[12]	AD12
80	AD[11]	AD11
81	AD[10]	AD10
82	GND	GND
83	GND	GND
84	AD[9]	AD9
85	AD[08]	AD8

86	C/BE0#	CBE0B
87	AD[07]	AD7
88	3.3V	3.3VD
89	3.3V	3.3VD
90	AD[06]	AD6
91	AD[05]	AD5
92	AD[04]	AD4
93	RESERVED	NC
94	AD[02]	AD2
95	AD[03]	AD3
96	AD[00]	AD0
97	5V	NC
98	RSVD_WIP	RFTXDIS#
99	AD[01]	AD1
100	RSVD_WIP	NC
101	GND	GND
102	GND	GND
103	AC_SYNC	NC
104	M66EN	GND
105	AC_SD_IN	NC
106	AC_SD_OUT	NC
107	AC_BIT_CLK	NC
108	AC_CODEC_ID0#	NC
109	AC_CODEC_ID1#	NC
110	AC_RST#	NC
111	MOD_AUD_MON	NC
112	RESERVED	NC
113	AUD_GND	NC
114	GND	GND
115	SYS_AUDO	NC
116	SYS_AUD_IN	NC
117	SYS_AUDOGND	NC
118	SYS_AUD_IN_GND	GND
119	AUD_GND	NC
120	AUD_GND	NC
121	RESERVED	NC
122	MPCIACT#	MPACT#
123	VCC5A	NC
124	3.3VAUX	NC

4. PCBA Mechanical Drawing





Appendix: Part Number Table

Product	Advantech PN
802.11 b/g/n, Ralink RT3062, 2T2R, (Type IIIA)	EWM-W130M01E