Brief Datasheet

PRODUCT： **CWFB201**

DESCRIPTION： 802.11a/b/g/n 2x2 Full Mini Card （ FMC ） AP Module

Approved Signatures	鉅景科技 股份有限公司
	Contact Person：

Description

Chipsip Solution is a small-sized, 802.11n AP board FMC (Full Mini Card Form Factor) that achieves a data rate up to 300Mbps. It is 6 times faster than the legacy 11abg.

This product supports AP/Bridge mode. It is ideal for multi-purpose installation to share wireless connection.
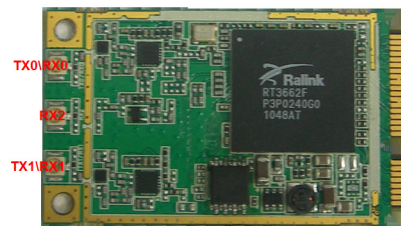
By supporting 64/128-bits WEP, TKIP, WPA, WPA2 and WPS, helps protect your data and privacy during transmission.

This module could be mounted on system board like IPTV, STB, Media Player, Femto, XDSL, Cable Modem, Industrial PC, Ethernet Switch, Printer Server, Connected TV, Smart Phone And Portable CPE For WiMAX/LTE

No could be configured as iNIC function to support driver loading from host platform

Features

- Ralink Chipset with interface with Fast Ethernet Turbo MII, Gigabit Ethernet GMII,, USB & UART….
- Boot from Flash
- Date Rate up to 300Mbps
- Security: 64/128-bits WEP, TKIP,WPA, WPA2, AES

Specification

Standard	IEEE 802.11 a/b/g/n
Wireless LAN	2T2R mode (5GHz 2x2 MIMO or 2.4GHz 2x2 MIMO)
Antenna	iPex Connector *2
52-pin Interface	GMII/ MII *1 (Turbo MII mode) USB*1 (Host mode) UART*1 GPIO Reset to Default VCC/GND
Frequency Range	802.11a 5.15~ 5.85GHz 802.11b/g 2.4~2.484GHz 802.11n 2.4~2.484GHz and 5.15GHz~ 5.85 GHz (Subject to local regulations)
Data Rate	802.11b: 1, 2, 5,5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: 6.5, 13, 19.5, 26, 39, 52, 58.5, 65Mbps

Transmit Power +/- 2dBm (EIRP)	11n HT40 MCS7 : +14dBm
	11b : +17dBm
	11gn :+15dBm
	11a : +13dBm
Receiver Sensitivity	11an/gn -66dBm at HT40 (MCS7)
	11an/gn -67dBm at HT20 (MCS15)
	11a/g -72dBm at 54Mpbs
	11b -80dBm at 11Mpbs
Range	Indoors: up to10~ 25 meters
Dimension	Full Mini Card (FMC)Form Factor 510x260x2.5mm
Certifications	FCC/CE by request

Software function

➢ **Network Features:**
   ✧ DHCP Client/Relay/Server
   ✧ Dynamic DNS
   ✧ NTP Client
   ✧ DNS Cache/Proxy
   ✧ Firewall
      1. MAC/IP/Port Filter
      2. Virtual Server
      3. DMZ
      4. Content Filter
➢ **WiFi:**
   ✧ 20MHZ/40MHZ bandwidth.
   ✧ Support Multiple SSID
   ✧ Clock rate up to 600MHz and High Throughput Modes.
   ✧ Support WPS
   ✧ High security with build-in: WEP 64/128, TKIP, WPA, WPA2, AES mixed,802.1x and 802.11i
   ✧ 802.1X Authentication with RADIUS Client
   ✧ QoS-WMM.WMM-PS

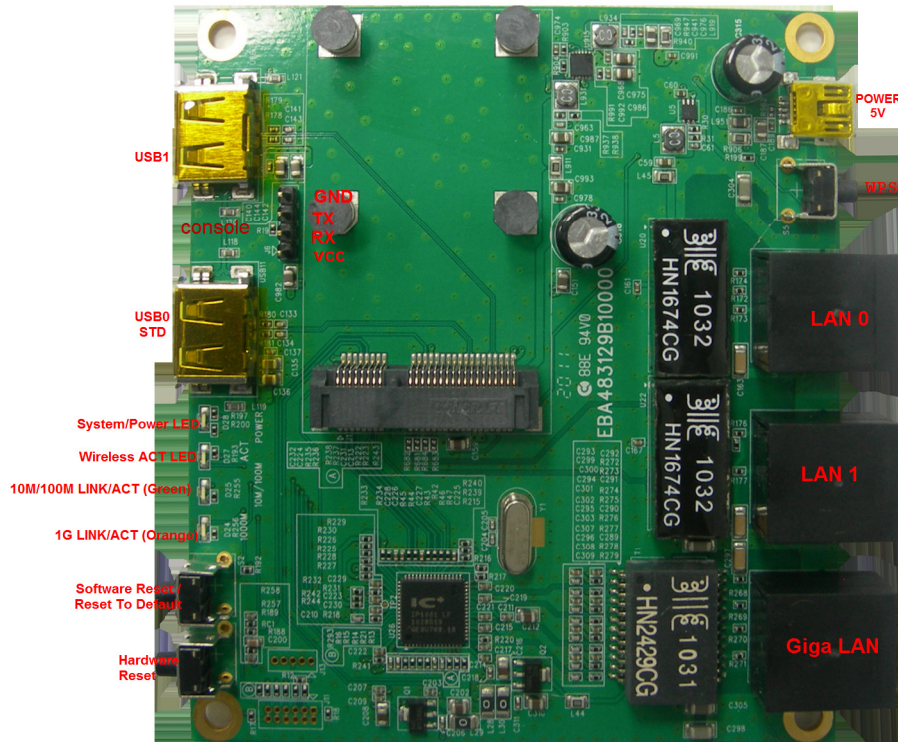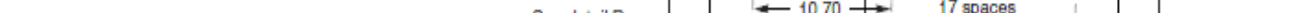# Golden Finger & Connector Information :

Pin definions of Mini Card could be used for standard mini PCI-e in PC/NB as well. Leverage unsed pins for WiFi, Ethernet, control and VCC signals.
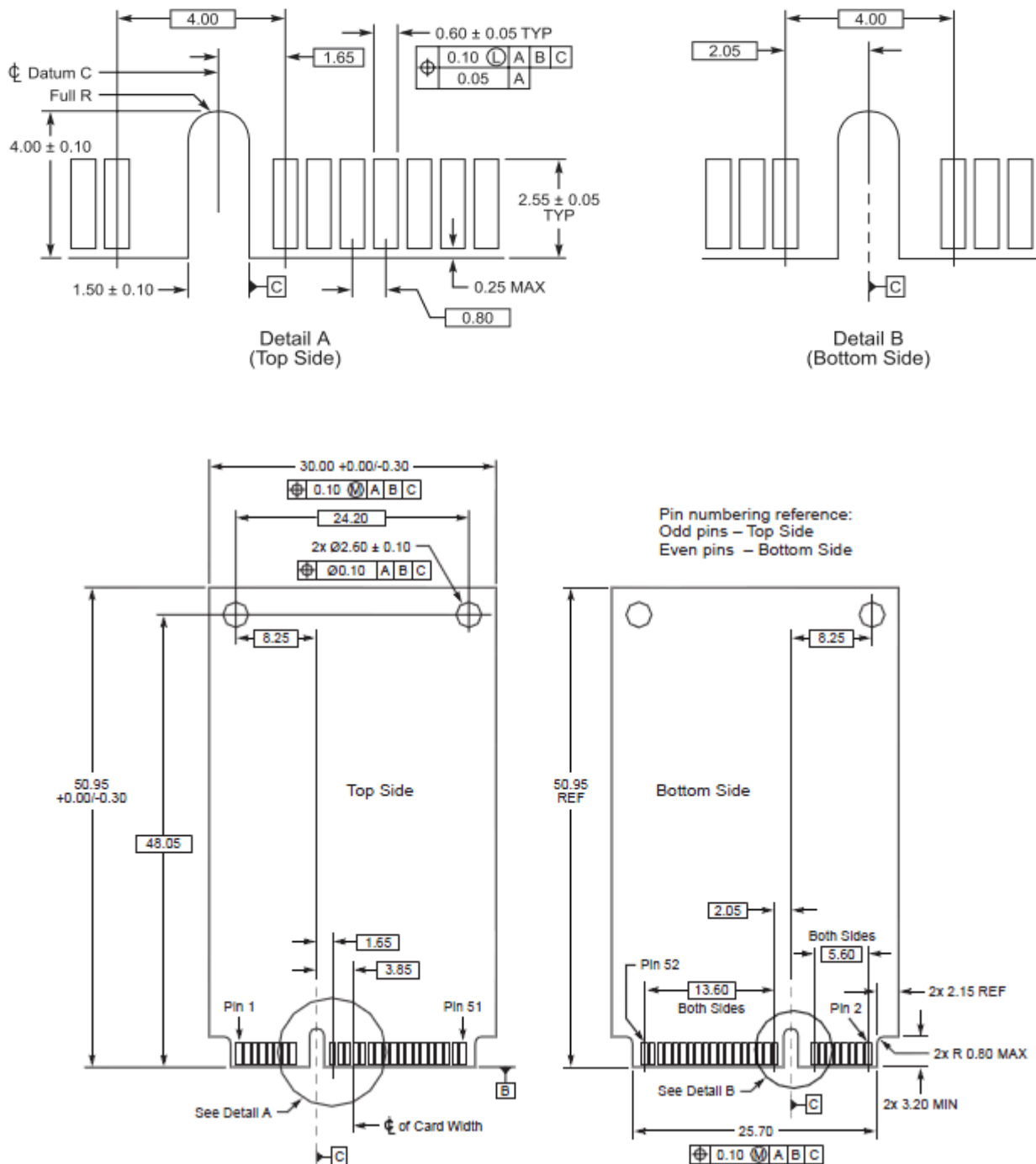
PIN DEFINITION

Pin Number	Signal	Pin Number	Signal
51	UART_RX	52	+3.3Vaux
49	UART_TX	50	GND
47	A/G band	48	+1.26V
45	WPS_PBC/Reset to default	46	NC
43	GND	44	NC
41	+3.3Vaux	42	WLAN_LED
39	+3.3Vaux	40	GND
37	GND	38	USB0_DP
35	GND	36	USB0_DN
33	MII_TXCLK	34	GND
31	MII_TXEN	32	NC
29	GND	30	NC
27	GND	28	+1.26V
25	MII_TXD0	26	GND
23	MII_TXD1	24	+3.3Vaux
21	GND	22	PERST#　(HW RST_N)
19	MII_TXD2	20	WPS LED
17	MII_TXD3	18	GND
—	Mechanical Key	—	Mechanical Key
15	GND	16	NC
13	MII_RXCLK	14	NC
11	MII_RXDV	12	AP/client (SW RST)
9	GND	10	MII_MDIO
7	MII_RXD0	8	MII_MDC
5	MII_RXD1	6	+1.26V
3	MII_RXD2	4	GND
1	MII_RXD3	2	3.3Vaux

Evaluation Test Board

Mini Card Connector

24.60

0.40

4x 5.80

⊕ 0.15 D E

Component keep out area for card hold down solution

4x 5.80

⊕ 0.15 D E

48.05

₵ Datum E

2x 1.70 MIN

2x 1.70 MIN

8.65 REF

₵ of inserted card key

25.00

23.90

See detail D

10.70

17 spaces at 0.80 = 13.60

0.70 REF

3

Ø 1.10 ± 0.05 2

⊕ Ø 0.15 D E

2x 3.50

2x 3.20

⊕ 0.20 Ⓛ D E

2x 2.30

10.30

27.15

⊕ 0.20 Ⓛ D E

2.15

C

Notes:

1 Datum D is the top surface of PCB.

2 The horizontal axis for the pattern is established by a line through the center of the Ø 1.60 and Ø 1.10 holes. The vertical axis is 90° to the horizontal axis, through the center of datum E.

3 Location of inserted card edge is aligned with ₵ of holes.

Mechanical Dimension:

Detail A
(Top Side)

Detail B
(Bottom Side)

Pin numbering reference:
Odd pins – Top Side
Even pins – Bottom Side

Top Side

Bottom Side
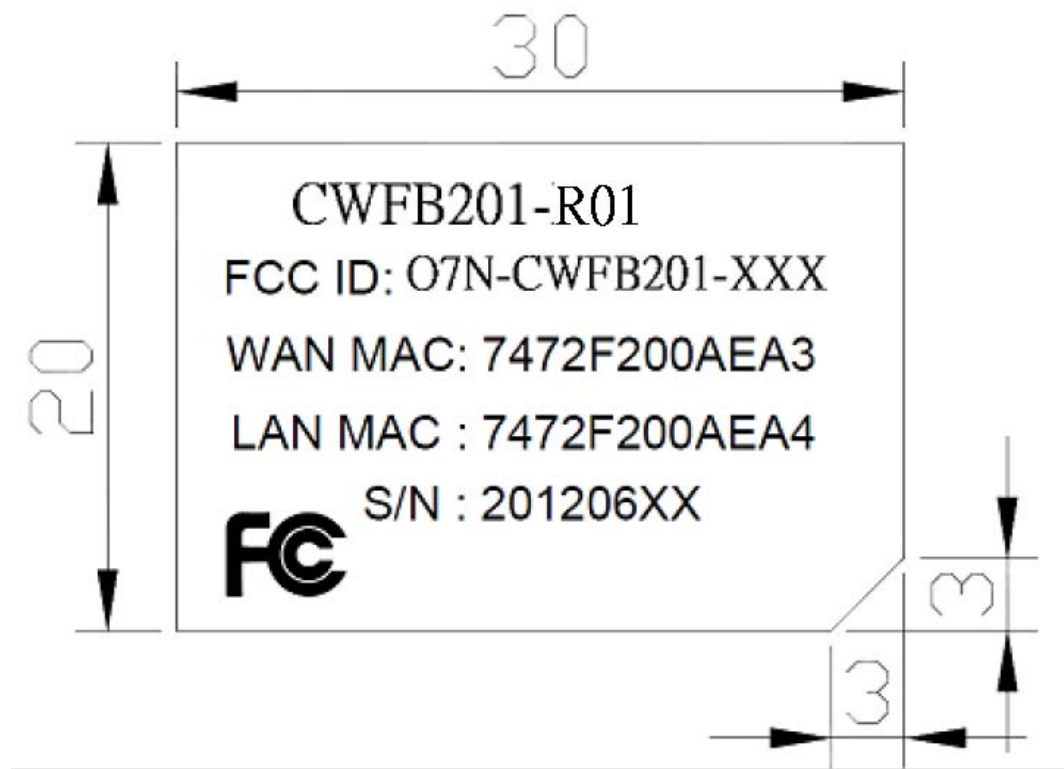
Labeling

The RF module for controller labeled as below.

The label that is placed on the module is too small to hold the required FCC information, then that information appear in the user manual for this device. In addition, the" Contains FCC ID: O7N-CWFB201-XXX" label also must be placed on the outside of the end product system.