User Guide

FOR

CWM100

Revision

Version	Date	Revision Description
1.0	Dec. 11, 2024	First Release
1.1	Dec. 20, 2024	Update the statement Add Antenna trace design
1.2	Dec. 24, 2024	Add the figure of trace design and WWAN antenna gain
1.3	Jan. 15, 2025	Add WLAN/BT antenna gain Add Pin distribution & Pin definition
1.4	Jan. 20, 2025	Add the dimension of CWM100 module

Outline

1. Notice

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2. Introduction

The CWM100 is a compact and versatile solution designed to enable high-speed wireless connectivity for a wide range of devices. It supports multiple cellular network standards, including 4G LTE, 3G, WLAN, Bluetooth and emerging technologies, ensuring seamless communication even in remote areas.
Key features of the CWM100 include:
High-Speed Data Transmission: Enables fast and reliable internet access for data-intensive applications.
Global Compatibility: Supports a wide range of frequency bands for worldwide coverage.
Compact Design: Fits into various devices without compromising space efficiency.
Versatile Integration: Easily integrates with IoT devices, industrial equipment, and mobile platforms.
Enhanced Security: Provides robust encryption protocols to secure data transmission.
This module is ideal for applications such as IoT solutions, industrial automation, smart cities, and mobile computing, delivering consistent connectivity to empower modern wireless communication needs.

3 Conformity Assessment Issues

FCC

Important Notice to OEM integrators

1. This module is limited to OEM installation ONLY.
2. This module is limited to installation in mobile or fixed applications, according to Part 2.1091(b).
3. The separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations
4. For FCC Part 15.31 (h) and (k): The host manufacturer is responsible for additional testing to verify compliance as a composite system. When testing the host device for compliance with Part
15 Subpart B, the host manufacturer is required to show compliance with Part 15 Subpart B while the transmitter module(s) are installed and operating. The modules should be transmitting and the evaluation should confirm that the module's intentional emissions are compliant (i.e. fundamental and out of band emissions). The host manufacturer must verify that there are no additional unintentional emissions other than what is permitted in Part 15 Subpart B or emissions are complaint with the transmitter(s) rule(s).
The Grantee will provide guidance to the host manufacturer for Part 15 B requirements if needed.

Important Note

notice that any deviation(s) from the defined parameters of the antenna trace, as described by the instructions, require that the host product manufacturer must notify to CASTLES that they wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by the USI, or the host manufacturer can take responsibility through the change in FCC ID (new

application) procedure followed by a Class II permissive change application.

End Product Labeling

When the module is installed in the host device, the FCC/IC ID label must be visible through a window on the final device or it must be visible when an access panel, door or cover is easily re-moved. If not, a second label must be placed on the outside of the final device that contains the following text: “Contains FCC ID: WIYCWM100001”
“Contains IC: 27350-CWM100001 “

Antenna Installation

(1) The antenna must be installed such that 20 cm is maintained between the antenna and users,
(2) The transmitter module may not be co-located with any other transmitter or antenna.
(3) Only antennas of the same type and with equal or less gains as shown below may be used with this module. Other types of antennas and/or higher gain antennas may require additional authorization for operation.

Antenna type	Band	Peak Gain (dBi)
PIFA	WCDMA B2	4
	WCDMA B4	3.8
	WCDMA B5	4.5
	LTE FDD B2	4
	LTE FDD B4	3.8
	LTE FDD B5	4.5
	LTE FDD B7	5.1
	LTE FDD B12	1.5
	LTE FDD B13	4.7
	LTE FDD B14	4.7
	LTE FDD B17	1.5
	LTE FDD B25	4
	LTE FDD B26	4.5
	LTE FDD B66	4
	LTE TDD B38	4.6
	LTE TDD B41	4.6
	WiFi 2.4G/BT	5.4
	WiFi 5G-Band1	5.5
	WiFi 5G-Band2	5.29
	WiFi 5G-Band3	6.52
	WiFi 5G-Band4	6.89

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC/IC authorization is no longer considered valid and the FCC ID/IC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC/IC authorization.

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

List of applicable FCC rules

This module has been tested and found to comply with part 22, part 24, part 27, part 90, 15.247 and 15.407 requirements for Modular Approval.

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuity), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

This device is intended only for OEM integrators under the following conditions: (For module device use)

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

IC

Industry Canada Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

RSS-247 Section 6.4 (5) (6) (for local area network devices, 5GHz)

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
The maximum antenna gain permitted for devices in the bands 5250–5350 MHz and 5470–5725 MHz shall comply with the e.i.r.p. limit; and
The maximum antenna gain permitted for devices in the band 5725–5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

L'appareil peut interrompre automatiquement la transmission en cas d'absence d'informations à transmettre ou de panne opérationnelle. Notez que ceci n'est pas destiné à interdire la transmission d'informations de contrôle ou de signalisation ou l'utilisation de codes répétitifs lorsque cela est requis par la technologie.

Le dispositif utilisé dans la bande 5150-5250 MHz est réservé à une utilisation en intérieur afin de réduire le risque de brouillage préjudiciable aux systèmes mobiles par satellite dans le même canal;
Le gain d'antenne maximal autorisé pour les dispositifs dans les bandes 5250-5350 MHz et 5470-5725 MHz doit être conforme à la norme e.r.p. limite; et
Le gain d'antenne maximal autorisé pour les appareils de la bande 5725-5825 MHz doit être conforme à la norme e.i.r.p. les limites spécifiées pour un fonctionnement point à point et non point à point, selon le cas.

This device is intended only for OEM integrators under the following conditions: (For module device use)

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes: (Pour utilisation de dispositif module)

1) L'antenne doit être installée de telle sorte qu'une distance de 20 cm est respectée entre l'antenne et les utilisateurs, et
2) Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

Tant que les 2 conditions ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

IMPORTANT NOTE:

In the event that these conditions can not be met (for example certain laptop configurations or colocation with another transmitter), then the Canada authorization is no longer considered valid and the IC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

NOTE IMPORTANTE:

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains IC: 27350-CWM100001”.

Plaque signalétique du produit final

Ce module émetteur est autorisé uniquement pour une utilisation dans un dispositif où l'antenne peut être installée de telle sorte qu'une distance de 20cm peut être maintenue entre l'antenne et les utilisateurs. Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante:
"Contient des IC: 27350-CWM100001 ".

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual.

Manuel d'information à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui

intègre ce module.
Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

4 Antenna

Trace Design

The figure below shows the trace design:

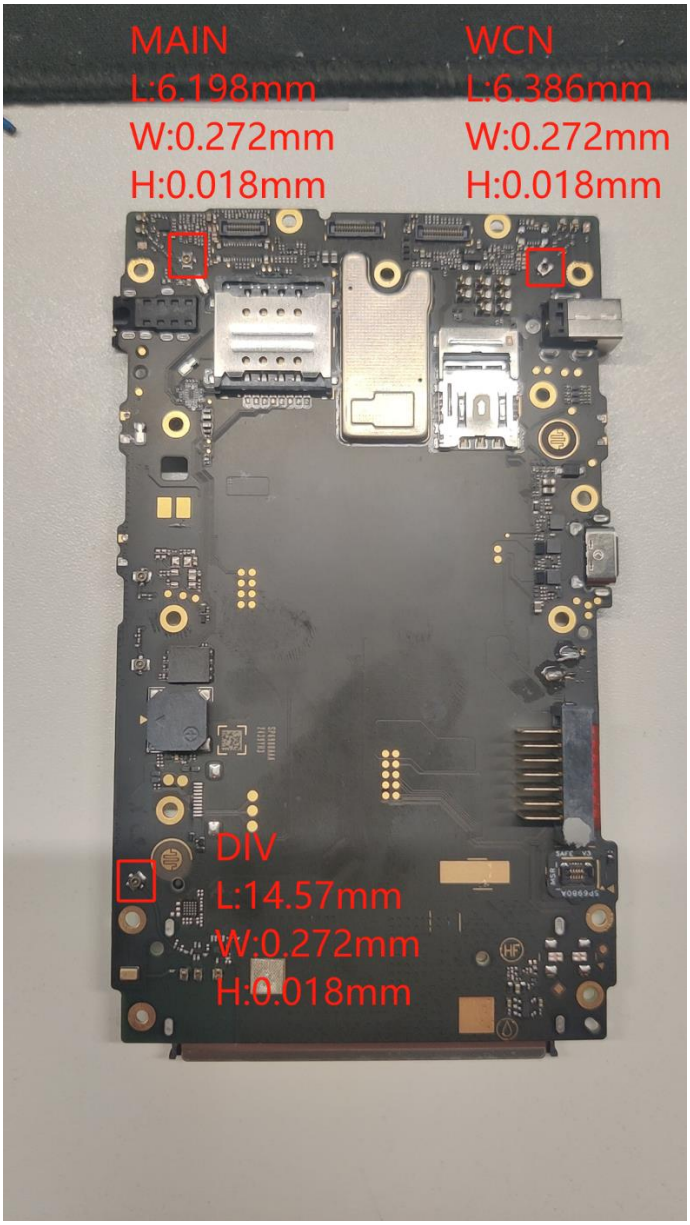
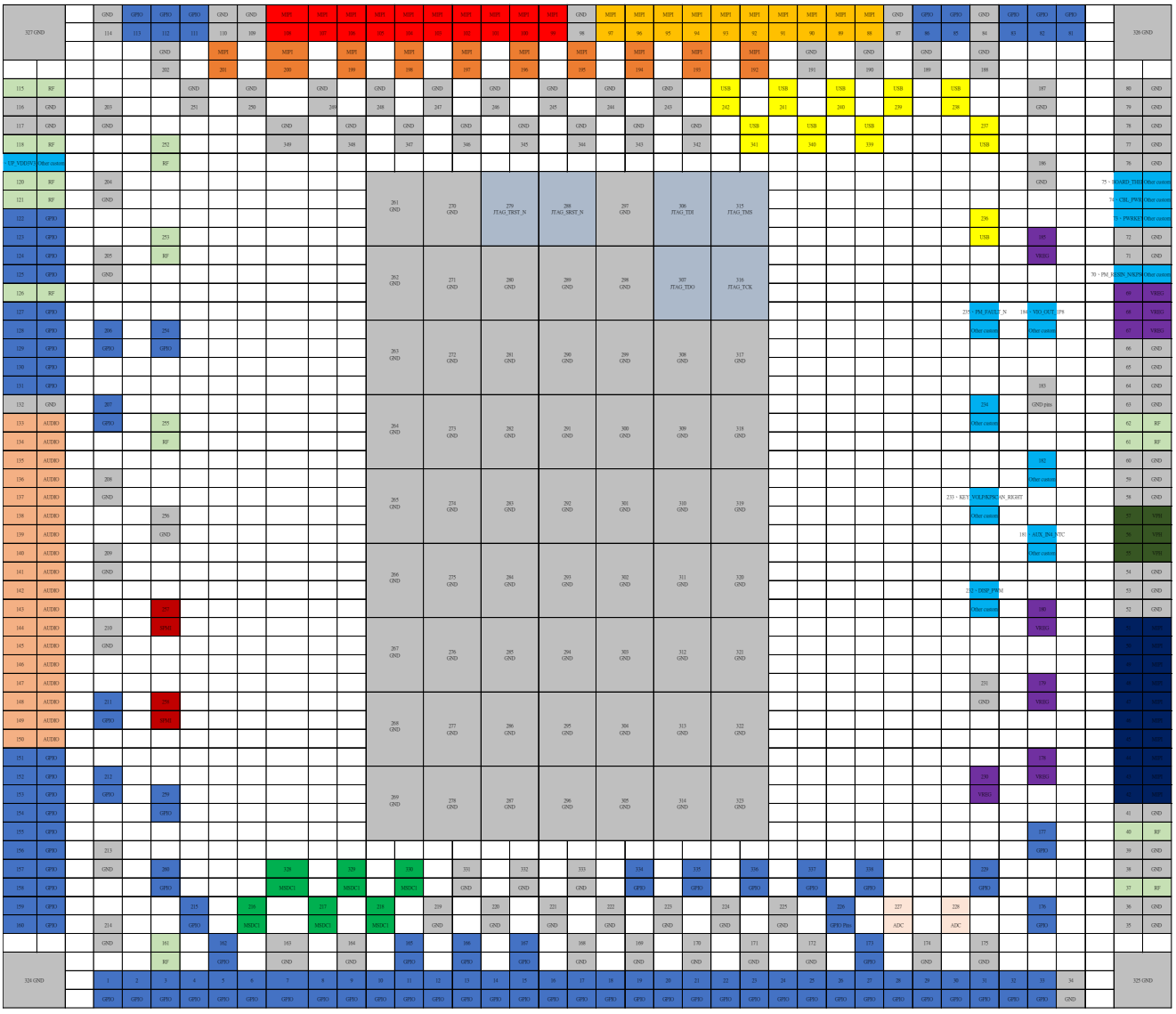


Figure 1. The trance design of CWM100 module

5 Pin Distribution



6 Pin Definition

GPIO pin	GPIO number	GPIO INT	ADC	PWM	UART	SPI	I2C	UIM	RST	Other
2	GPIO_98									DMIC_CLK_1

3	GPIO_102	✓								
5	LPI_GPIO_25				✓					
6	GPIO_71	✓			✓	✓				
7	GPIO_105	✓								
9	LPI_GPIO_22									SNSR_I3C_SDA
10	GPIO_68									OTG_EN
12	GPIO_110						✓			
13	GPIO_111				✓					
14	GPIO_99									DMIC_DATA_1
15	GPIO_103	✓								
16	GPIO_106			✓						
17	GPIO_76							UIM1_DATA		
18	GPIO_77							UIM1_CLK		
19	GPIO_78							UIM1_RESET		
20	GPIO_79							UIM1_PRESENT		
21	GPIO_65								CAM3_RST_N_CONN2	
22	GPIO_66									AN_I2C0_SDA
23	GPIO_17					FP_SPI_CS_N				
24	GPIO_14					FP_SPI_MISO				
25	GPIO_15					FP_SPI_MOSI				
26	GPIO_16					FP_SPI_CLK				
27	GPIO_84	✓								
28	GPIO_85									
29	GPIO_3					NFC_SPI_CS_N				
30	GPIO_0					NFC_SPI_MISO				
31	GPIO_1					NFC_SPI_MOSI				
32	GPIO_2					NFC_SPI_CLK				
33	GPIO_82								LCD0_RST_N	
81	GPIO_18								CAM0_RST_N	
82	GPIO_28	✓								
83	GPIO_27	✓								
85	GPIO_21									CAM_MCLK1
86	GPIO_20									CAM_MCLK0

111	GPIO_31									NFC_DWL_REQ
112	GPIO_19								CAM1_RST_N_CONN2	
122	GPIO_58									RFFE3_CLK
124	GPIO_26								PM8008_RST_N	
125	GPIO_25	✓								
127	GPIO_88									SD_CARD_DET_N
128	GPIO_29						✓			
129	GPIO_30						✓			
130	GPIO_23						✓			
131	GPIO_22						✓			
151	GPIO_73							UIM2_CLK		
152	GPIO_74							UIM2_RESET		
153	GPIO_72							UIM2_DATA		
154	GPIO_75	✓						UIM2_PRESENT		
155	GPIO_67									MUX_SEL
157	GPIO_13					✓				
158	GPIO_12					✓				
159	GPIO_6						✓			
160	GPIO_7						✓			
162	GPIO_55									RFFE2_DATA
165	GPIO_104									LPI_MI2S2_DATA0
166	GPIO_101									LPI_MI2S1_DATA1
176	GPIO_108									MI2S_MCLK1_A
177	GPIO_100									LPI_MI2S1_DATA0
211	GPIO_81									CAM_PDN0
215	GPIO_56									RFFE2_CLK
229	GPIO_86									TS_RESET_N
254	GPIO_24	✓							CAM2_RST_N	
259	GPIO_76	✓						UIM1_DATA		
260	GPIO_89									USB_PHY_PS
336	GPIO_4						✓			
337	GPIO_5						✓			
338	GPIO_69					✓				NFC_EN
1	GPIO_107			✓						
4	LPI_GPIO_26	✓								
8	LPI_GPIO_21						✓			
11	GPIO_109						✓			
113	GPIO_32									N4603_AIM_ON_1V8

118	GPIO_48									DIV ANT_TUN_CTL1
120	GPIO_49									DIV ANT_TUN_CTL2
121	GPIO_51									MAIN ANT_TUN_CTL1
123	GPIO_33	✓								
126	GPIO_52									MAIN ANT_TUN_CTL2
156	GPIO_93									SP_LEVEL_IC_EN
161	GPIO_34	✓								
167	GPIO_112									LCD_BIASP_EN
173	GPIO_97	✓								
206	GPIO_36									POGO_EN
207	GPIO_35									EINT_ACC
212	GPIO_96									AUD_PA_EN
226	GPIO_95									FORCED_USB_BOOT
252	GPIO_50									B11/21_DRX_SW1_MAINCTL0
253	GPIO_47									B3_B2(B25)_DRX_SW2_DIVCTL0
255	GPIO_46									RF_ANT_DPDT_CTL
334	GPIO_80									EINT_CTP_AP
335	GPIO_70					TP_SPI_SS_AP				

GND pin	pin function	GND pin	pin function
34	GND	276	GND
35	GND	277	GND
36	GND	278	GND
38	GND	280	GND
39	GND	281	GND
41	GND	282	GND
52	GND	283	GND
53	GND	284	GND
54	GND	285	GND
58	GND	286	GND
59	GND	287	GND
60	GND	289	GND
63	GND	290	GND
64	GND	291	GND
65	GND	292	GND
66	GND	293	GND
71	GND	294	GND
72	GND	295	GND

76	GND	296	GND
77	GND	297	GND
78	GND	298	GND
79	GND	299	GND
80	GND	300	GND
84	GND	301	GND
87	GND	302	GND
98	GND	303	GND
109	GND	304	GND
110	GND	305	GND
114	GND	308	GND
116	GND	309	GND
117	GND	310	GND
132	GND	311	GND
163	GND	312	GND
164	GND	313	GND
168	GND	314	GND
169	GND	317	GND
170	GND	318	GND
171	GND	319	GND
172	GND	320	GND
174	GND	321	GND
175	GND	322	GND
183	GND	323	GND
186	GND	324	GND
187	GND	325	GND
188	GND	326	GND
189	GND	327	GND
190	GND	331	GND
191	GND	332	GND
202	GND	333	GND
203	GND	342	GND
204	GND	343	GND
205	GND	344	GND
208	GND	345	GND
209	GND	346	GND
210	GND	347	GND
213	GND	348	GND
214	GND	349	GND
219	GND	57	
220	GND		

221	GND
222	GND
223	GND
224	GND
225	GND
231	GND
243	GND
244	GND
245	GND
246	GND
247	GND
248	GND
249	GND
250	GND
251	GND
256	GND
261	GND
262	GND
263	GND
264	GND
265	GND
266	GND
267	GND
268	GND
269	GND
270	GND
271	GND
272	GND
273	GND
274	GND
275	GND

MIPI pins	pin definition	pin function
42	MIPI_DSI0_D2P	LCM MIPI
43	MIPI_DSI0_D2N	LCM MIPI
44	MIPI_DSI0_D3N	LCM MIPI
45	MIPI_DSI0_D3P	LCM MIPI
46	MIPI_DSI0_CKP	LCM MIPI
47	MIPI_DSI0_CKN	LCM MIPI

48	MIPI_DSI0_D1N	LCM MIPI
49	MIPI_DSI0_D1P	LCM MIPI
50	MIPI_DSI0_D0N	LCM MIPI
51	MIPI_DSI0_D0P	LCM MIPI
88	MIPI_CSI1_CLK_P	Front camera MIPI
89	MIPI_CSI1_CLK_N	Front camera MIPI
90	MIPI_CSI1_DATA0_P	Front camera MIPI
91	MIPI_CSI1_DATA0_N	Front camera MIPI
92	MIPI_CSI1_DATA1_N	Front camera MIPI
93	MIPI_CSI1_DATA1_P	Front camera MIPI
94	MIPI_CSI1_DATA3_N	Front camera MIPI
95	MIPI_CSI1_DATA3_P	Front camera MIPI
96	MIPI_CSI1_DATA2_N	Front camera MIPI
97	MIPI_CSI1_DATA2_P	Front camera MIPI
99	RDP0	Dock sweeping MIPI
100	RDN0	Dock sweeping MIPI
101	RCP	Dock sweeping MIPI
102	RCN	Dock sweeping MIPI
103	RDP1	Dock sweeping MIPI
104	RDN1	Dock sweeping MIPI
105	RDN3	Dock sweeping MIPI
106	RDP3	Dock sweeping MIPI
107	RDP2	Dock sweeping MIPI
108	RDN2	Dock sweeping MIPI
192	RCN_B	Rear camera MIPI
193	RCP_B	Rear camera MIPI
194	RDP1_B	Rear camera MIPI
195	RDN1_B	Rear camera MIPI
196	RDP2_B	Rear camera MIPI
197	RDN2_B	Rear camera MIPI
198	RDP3_B	Rear camera MIPI
199	RDN3_B	Rear camera MIPI
200	RDP0_B	Rear camera MIPI
201	RDN0_B	Rear camera MIPI
VPH pins	pin definition	pin function
55	VPH_PWR	VPH_PWR
56	VPH_PWR	VPH_PWR
57	VPH_PWR	VPH_PWR
VREG pins	pin definition	pin function
67	VREG_L22A_2P96	SD card power supply signal
68	VREG_L20A_1P8	esim power supply

69	VREG_L19A_1P8	SIM card power supply signal
178	VREG_L9A_1P8	The system supplies 1.8V power
179	VREG_L5A_2P96	The system supplies 2.96V power
180	VREG_S7A_2P04	The system supplies 2.04V power
185	VREG_L15A_3P08	The system power supply is 3.08V
230	VREG_L24A_2P96	sar power supply
ADC pins	pin definition	pin function
227	ADC_BOARDID0	ADC（board id）
228	ADC_BOARDID1	ADC（board id）
SPMI pins	pin definition	pin function
257	SPMI_DATA	SPMI
258	SPMI_CLK	SPMI
AUDIO pins	pin definition	pin function
133	AU_LOLP	Headphone amplifier input
134	AU_LOLN	Headphone amplifier input
135	AUX_OUT_P	AUX amplifier output signal
136	AUX_OUT_M	AUX amplifier output signal
142	AU_MICBIAS2	MIC signal
143	AU_MICBIAS0	MIC signal
144	AU_MICBIAS1	MIC signal
145	AU_VIN1_N	Headphone input signal
146	AU_VIN1_P	Headphone input signal
147	AU_VIN0_N	Headphone input signal
148	AU_VIN0_P	Headphone input signal
149	AU_VIN2_N	Headphone input signal
150	AU_VIN2_P	Headphone input signal
137	HPH_L	Earphone left track
138	HPH_REF	Headphone simulatively
139	HPH_R	Earphone right track
140	CDC_MBHC_L	Earphone track detection
141	MBHC_HSDET_G	Earphone type detection

RF pins	pin definition	pin function
37	DIV_ANT_50R	Diversity signal line
40	TXM_ANT_MAIN_50R	Main gathering signal line
61	PMIC_RF_CLK	WCN_CLK signal cable
62	VREG_L21A_2P704	Antenna tuner and sar power supply
115	WIFI_ANT	WCN signal line
118	DIV ANT_TUN_CTL1	Diversity antenna tuner logic control 1
120	DIV ANT_TUN_CTL2	Diversity antenna tuner logic control 2

121	MAIN ANT_TUN_CTL1	Master set antenna tuner logic control 1
126	MAIN ANT_TUN_CTL2	Master set antenna tuner logic control 2
161	SAR_INT	sar sensor interrupts signal line
252	B11/21_DRX_SW1_MAINCTL0	Main set antenna tuner Logic Control 0 /B11/21 Diversity Switch Logic control (multiplexing)
253	B3_B2(B25)_DRX_SW2_DIVCTL0	Diversity antenna tuner Logic Control 0 /B3_B2(B25) Diversity switch Logic control (multiplexing)
255	RF_ANT_DPDT_CTL	gpio logical control port
Other custom pins	pin definition	pin function
70	PM_RESIN_N/KPSCAN_LEFT	Scan right button
73	PWRKEY	Power switch
74	CBL_PWR_N	Charge detection
75	BOARD_THERMAL	Motherboard NTC
119	UP_VDD3V3_EN	The MCU power supply is enabled
181	AUX_IN4_NTC	POGO temperature detection
182	GPIOHUB1_INT/SCANNER_VDD33_EN	Enable GPIO extended chip
184	VIO_OUT_1P8	SPMI signal control
232	DISP_PWM	Backlight PWM control signal
233	KEY_VOLP/KPSCAN_RIGHT	Right scan key
234	GPIOHUB1_RSTN/SCANNER_ILLUM_EN	GPIO extended chip reset/dock ILLUM sweep enabled
235	PM_FAULT_N	PMIC fault signal
JTAG pins	pin definition	pin function
279	JTAG_TRST_N	JTAG signal
288	JTAG_SRST_N	JTAG signal
306	JTAG_TDI	JTAG signal
307	JTAG_TDO	JTAG signal
315	JTAG_TMS	JTAG signal
316	JTAG_TCK	JTAG signal
USB pin	pin definition	pin function
162	USB_SEL	USB switch
236	USB_DM	USB DM signal
237	USB_DP	USB DP signal
238	USB0_SS_TX1_M	USB_SS signal
239	USB0_SS_TX1_P	USB_SS signal
240	USB0_SS_RX1_M	USB_SS signal
241	USB0_SS_TX0_P	USB_SS signal
242	USB0_SS_TX0_M	USB_SS signal
260	USB_PHY_PS	Select a USB physical port
339	USB0_SS_RX1_P	USB 3.0

340	USB0_SS_RX0_P	USB 3.0
341	USB0_SS_RX0_M	USB 3.0
MSDC1 pins	pin definition	pin function
216	MSDC1_CMD	SD card CMD signal
217	MSDC1_DAT2	SD card data signal
218	MSDC1_DAT3	SD card data signal
328	MSDC1_CLK	SD CLK signal
329	MSDC1_DAT0	SD data signal
330	MSDC1_DAT1	SD data signal

7 Appendix

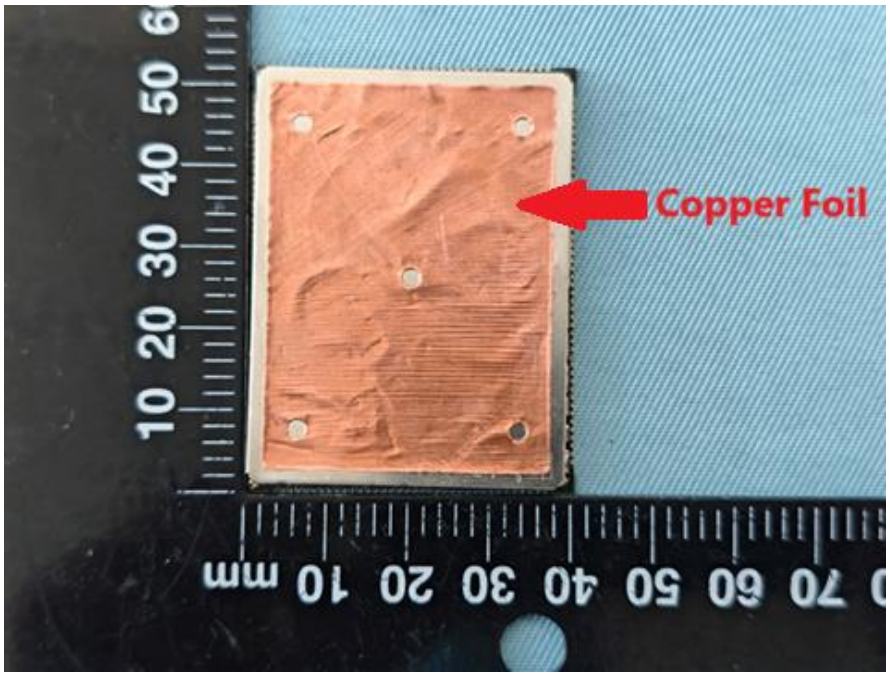


Figure 2. The dimension of CWM100 Module