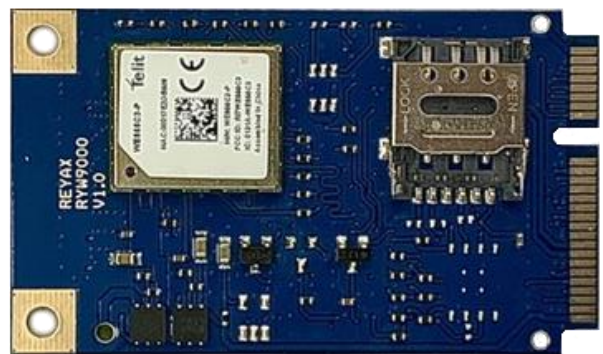


RYW9000 Series

4G CAT4 LTE / GNSS / Wi-Fi Hotspot Platform

Datasheet



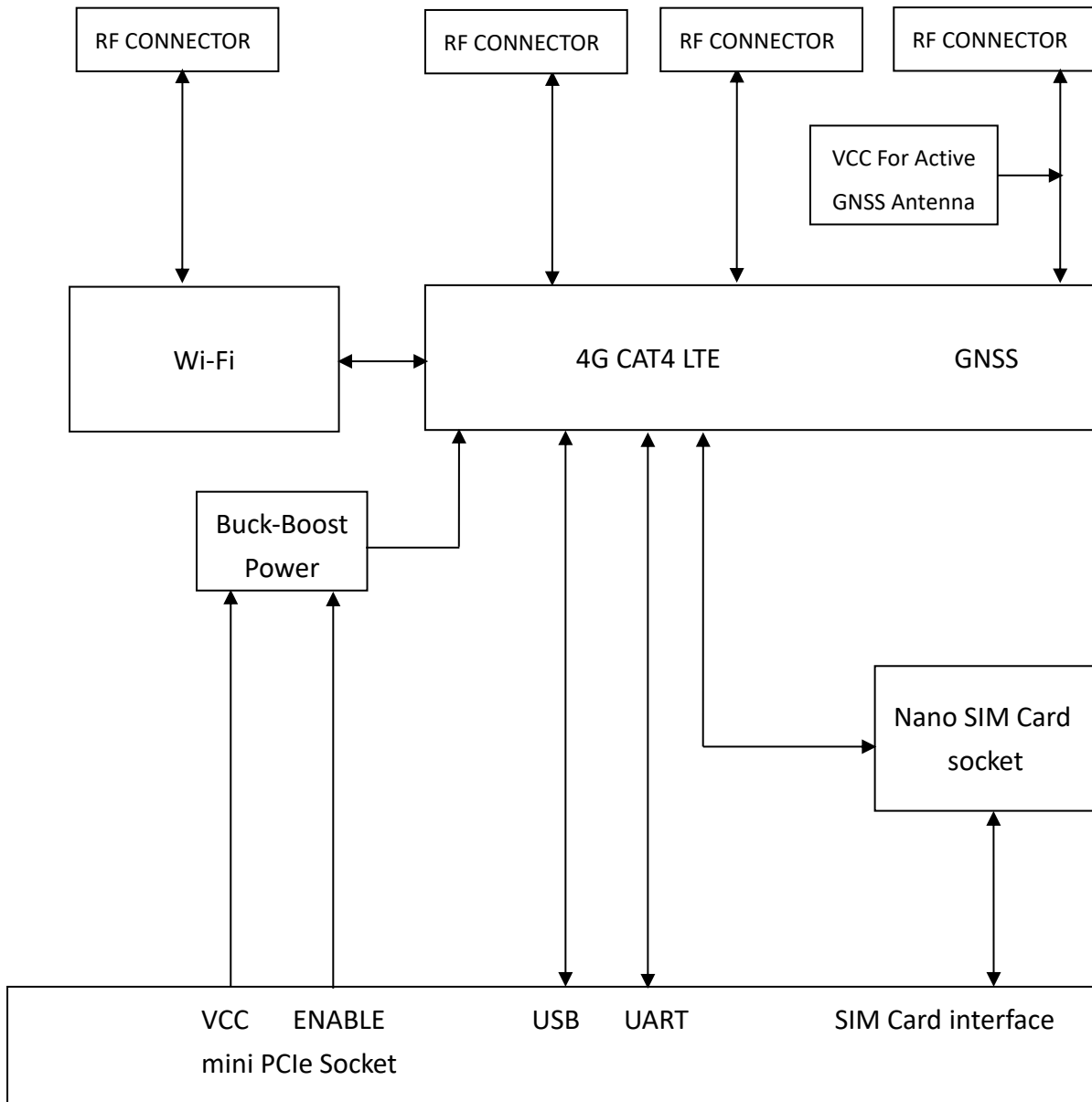
PRODUCT DESCRIPTION

The REYAX RYW9000 Mobile Hotspot helps you offer a solution to industrial and vehicle tracking needing communication, improved IT administration and support, and security.

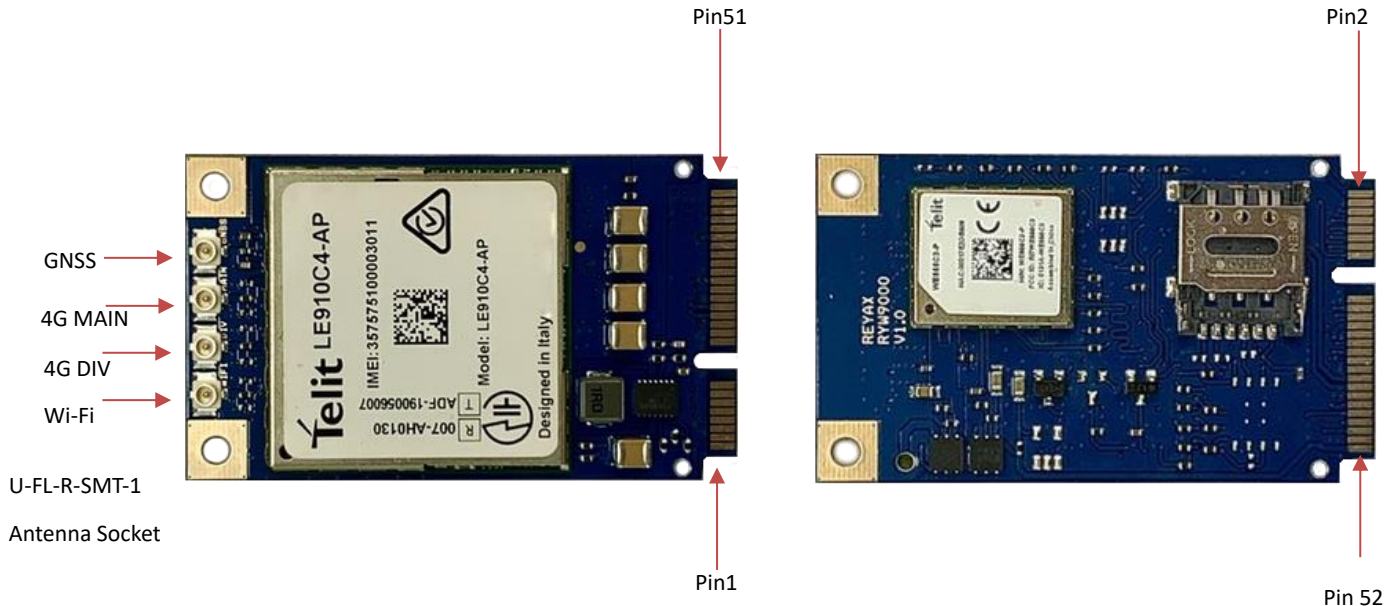
FEATURES

- TELIT LE910C4 4G CAT4 LTE & GNSS engine.
- TELIT WE866C6-P 2.4GHz Wi-Fi engine.
- Wi-Fi Function: Access point / Client mode.
- Build-in nano SIM card holder.
- HIROSE U.FL-R-SMT-1 RF CONNECTOR.
- Standard mini PCIe and plug PCB design.
- Mini PCIe Signal Type USB2.0.
- eSIM support option.

BLOCK DIAGRAM



PIN CONNECTOR



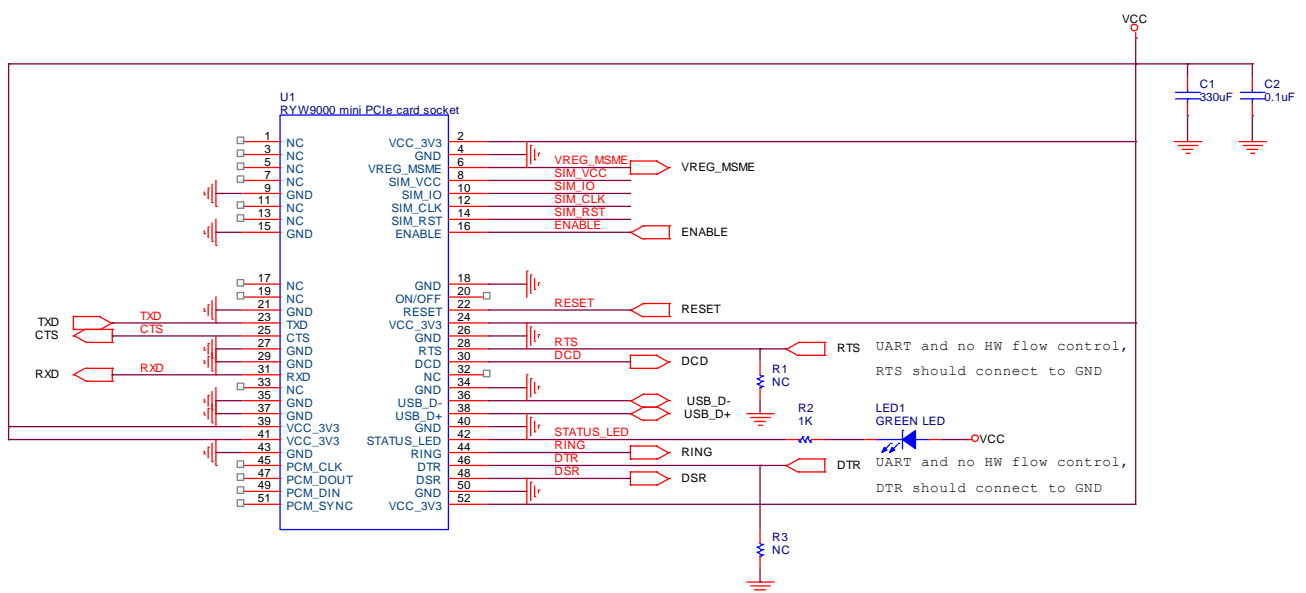
PIN DESCRIPTION

Pin	Name	Input/Output	Description
1	NC		Not connected
2	VCC	Power	Power Input
3	NC		Not connected
4	GND		Power Ground
5	NC		Not connected
6	VREG_MSME	Output	The pin is always HI while RYT9000 is working.
7	NC		Not connected
8	SIM_VCC		External SIM signal – Power supply for the SIM
9	GND		Power Ground
10	SIM_IO	Input/Output	External SIM signal – Data I/O
11	NC		Not connected
12	SIM_CLK	Output	External SIM signal – Clock
13	NC		Not connected
14	SIM_RST	Output	External SIM signal – Reset

15	GND		Power Ground
16	NC		Not connected
17	NC		Not connected
18	GND		Power Ground
19	NC		Not connected
20	NC		Not connected
21	GND		Power Ground
22	RESET	Input	Keep Low over 1 second to reset.
23	TXD	Input	Serial data input (TXD) from DTE (UART Version only)
24	VCC	Power	Power Input
25	CTS	Output	Output for Clear to send signal (CTS) to DTE (UART Version only)
26	GND		Power Ground
27	GND		Power Ground
28	RTS	Input	Input for Request to send signal (RTS) from DTE. If flow control is not used, the RTS must be connected to GND. (UART Version only)
29	GND		Power Ground
30	DCD	Output	Output for Data Carrier Detect (DCD) to DTE (UART Version only)
31	RXD	Output	Serial data output to DTE (UART Version only)
32	NC		Not connected
33	NC		Not connected
34	GND		Power Ground
35	GND		Power Ground
36	USB_DN	Input/Output	USB Data Negative
37	GND		Power Ground
38	USB_DP	Input/Output	USB Data Positive
39	VCC	Power	Power Input
40	GND		Power Ground

41	VCC	Power	Power Input
42	STATUS_LED	Output	Status indicator LED, Open drain output.
43	GND		Power Ground
44	RING	Output	Output for Ring Indication (RI) to DTE <i>(UART Version only)</i>
45	NC		Not connected
46	DTR	Input	Input for Data Terminal Ready (DTR) from DTE <i>(UART Version only)</i>
47	NC		Not connected
48	DSR	Output	Output for Data Set Ready (DSR) to DTE <i>(UART Version only)</i>
49	NC		Not connected
50	GND		Power Ground
51	NC		Not connected
52	VCC	Power	Power Input

UART INTERFACE APPLICATION SCHEMATIC REFERENCE : MINI PCIE CARD



SPECIFICATION

Mode	4G & GNSS Engine	2G	HSPA+	LTE FDD
RYW94AP	LE910C4-AP		1, 5, 6, 8, 19	1, 3, 5, 8, 9, 18, 19, 26, 28
RYW94EU	LE910C4-EU	3, 8	1, 3, 8	1, 3, 7, 8, 20, 28A
RYW94NF	LE910C4-NF		2, 4, 5	2, 4, 5, 12, 13, 14, 66, 71
RYW94LA	LE910C4-LA	2, 3, 5, 8	1, 2, 4, 5	1, 2, 3, 4, 5, 7, 28
RYW94CN	LE910C4-CN	3, 8	1, 8	1, 3, 5, 8, 38, 39, 40, 41M

Item	Min.	Typ	Max.	Unit	Description
TELIT LE910C4 Series					
LTE FDD Category		4			
Downlink Speed		150		Mbps	
Uplink Speed		50		Mbps	
GNSS					
GNSS Center Frequency		1575.42 1602.5625		MHz	GPS Glonass
Navigation Update Rate		1		Hz	
Accuracy	0.8			M	CEP
Cold Start	30			Sec.	
Warm Start	23			Sec.	

Hot Start	1.1			Sec.	
Tracking Sensitivity		-160		dBm	
Cold Starts Sensitivity		-145		dBm	
Hot Starts Sensitivity		-147		dBm	
Wi-Fi					
Wi-Fi IEEE802.11 version	a/b/g/n/ac				
Supported Data Rate	802.11a (5GHz): 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11b (2.4GHz): 1, 2, 5.5, 11Mbps 802.11g (2.4GHz): 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n (2.4GHz/5GHz): • 20Mhz BW: Up to 72.2Mbps using short GI (MCS0-7) • 40Mhz BW: Up to 144.4Mbps using short GI (MCS0-7) 802.11ac (5GHz): HT20 (MCS0-8), VHT40 (MCS0-9), VHT80 (MCS0-9)				
Transmission Power	802.11a / 54Mbps: 14 dbm 802.11b / 11Mbps: 18 dbm 802.11g / 54Mbps: 15 dbm 802.11n / HT20 (MCS7): 15 dbm 802.11ac / HT20 (MCS0): 15.5 dbm 802.11ac / VHT40 (MCS9): 11 dbm 802.11ac / VHT80 (MCS9): 10.5 dbm				

General					
Item	Min.	Typ	Max.	Unit	Description
Operating Voltage Power Input	3	3.3	5.5	V	VCC
VIH	1.25	1.8	1.95	V	High level input voltage
VIL			0.6	V	Low-level input voltage
VOH	1.4	1.8		V	High level output voltage
VOL			0.45	V	Low level output voltage
USB Interface					V2.0
Operating Temperature Range	-40 -30	25	+85 +85	°C	4G LTE Wi-Fi
Dimension					mini PCIe Standard 50.95mm*30mm
Antenna Connector		4			U.FL-R-SMT-1
Weight		11		g	

HOTSPOT BASIC AT COMMAND

4G :

AT+COPS?

AT+CIREG?

AT+CGDCONT?

AT+CGCONTRDP=

AT#SGACT=1,1

AT#PING=8.8.8.8

'Confirm the MT's IMS registration information

'Confirm current settings for each defined context

'PDP Context Read Dynamic Parameters

'Context Activation

'Send PING request

Wi-Fi :

AT#SGACT=1,0

AT#WLANSTART=0

AT#WLANMODE=0

AT#WLANSSID="REYAX"

AT#WLANSECURITY=2,0,2,1234567890

AT#WLANSTART=1

AT#WLANAPCLIST

'Disable Wi-Fi

'Set command change WLAN mode

'Set SSID

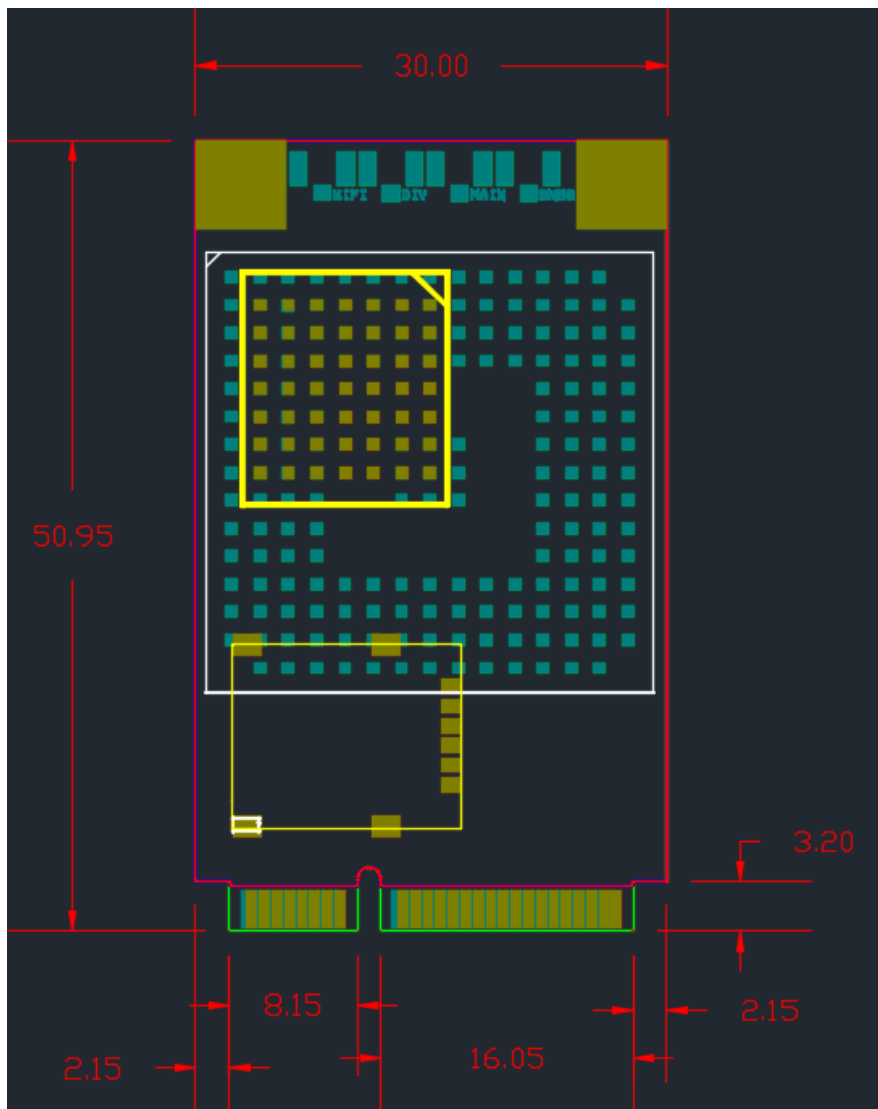
'Set WLAN security parameters

'Enable Wi-Fi

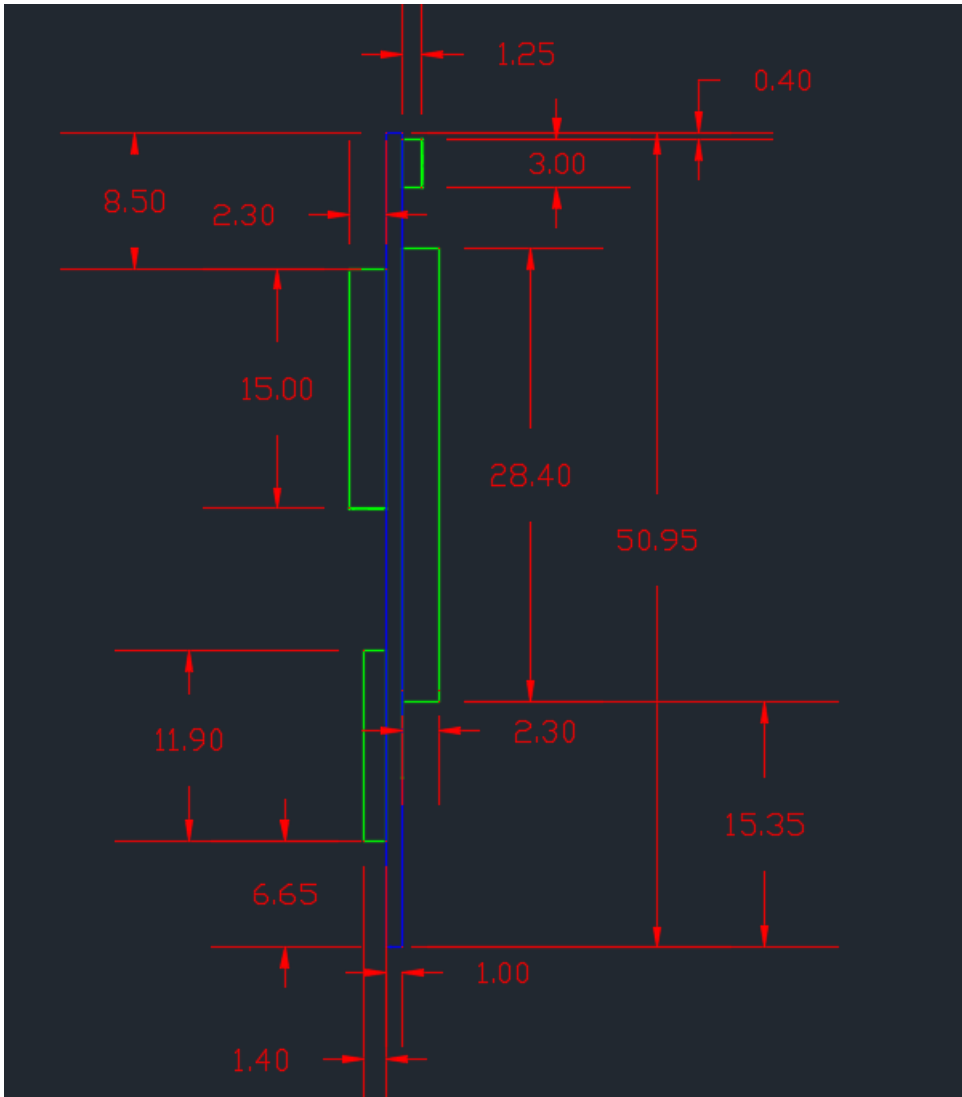
'Return Wi-Fi Client Information

*Please refer to the TELIT AT Commands Manual

DIMENSIONS



Unit:mm



Unit:mm

Ordering No.	4G & GNSS Engine	Wi-Fi Engine
RYW94AP	LE910C4-AP	WE866C6-P
RYW94EU	LE910C4-EU	WE866C6-P
RYW94NF	LE910C4-NF	WE866C6-P
RYW94LA	LE910C4-LA	WE866C6-P
RYW94CN	LE910C4-CN	WE866C6-P

ORDER INFORMATION



Taiwan: sales@reyax.com

China: sales@reyax.com.cn

http://reyax.com