Dual Band Wireless Embedded Board
Model: WPJ531

Features

- CompexWRT and OpenWRT firmware supported

- Qualcomm-Atheros 650MHz Networking Processor AR9531

- Support $2\times$ FE Port

- Integrated Power-over-Ethernet

Applications

- Dual Band, Dual Concurrent AP

- 8802.11b/g/n AP

- Point to Point

- Base Station

- CPE

- Support Third Party 3G/LTE Module and SIM holder(optional[1])

Technical Specifications

System Information	
Processor	Qualcomm-Atheros AR9531
System Memory	64MB DDR2
NOR Flash	16MB
PCIe Slot	9.2mm height miniPCIe slot
Antenna Connector	2 x U.F L
Extras	Serial Port[3], JTAG[4], Reset Button, Surge Arrestor, Watchdog Timer

Power Solutions	Low voltage	DC Jack Input: 9 -24V, Passive PoE: 24V
	High voltage	IEEE 802.3af module(Optional)[5],DC Jack input:36-48V, Passive PoE:48v, compatible with802.3af/802.3at PoE switches and injectors

ROHS Compliance	Yes
Humidity	Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Temperature Range	Operating: -20ºC to 70ºC Storage: -40ºC to 90ºC
Dimension	117 x 105 x 17 (mm)

2.4G On-board Radio	**Transmit Power**	Data Rate	2.4GHz (aggregate)	
		6M	25dBm	
		54M	20dBm	
		HT20 MCS0	24dBm	
		HT20 MCS7	20dBm	
		HT40 MCS0	22dBm	
		HT40 MCS7	20dBm	
	Receiver Sensitivity	Data Rate		
		6Mbps	-90dBm	
		54Mbps	-75dBm	
		HT20 MCS0	-90dBm	
		HT20 MCS7	-72dBm	
		HT40 MCS0	-88dBm	
		HT40 MCS7	-70dBm	

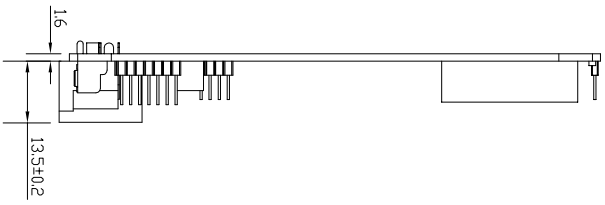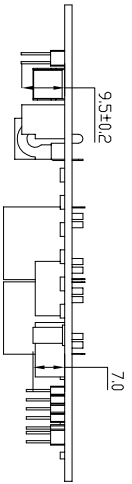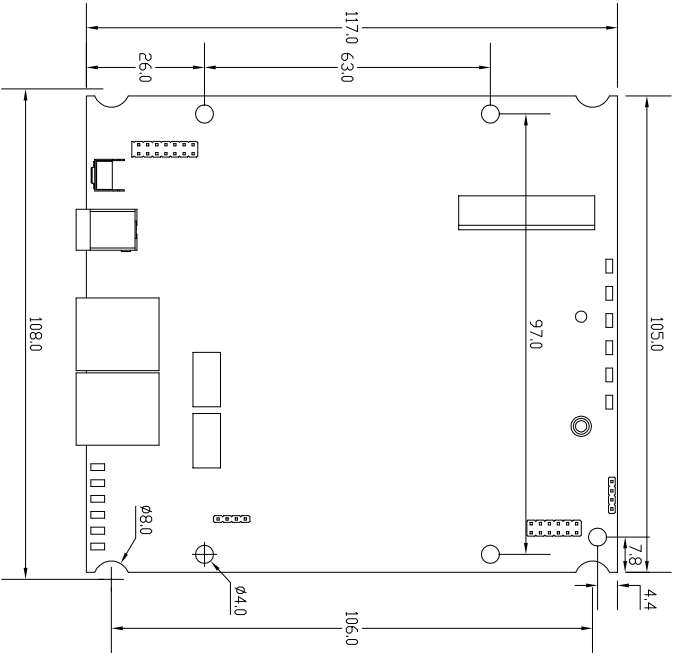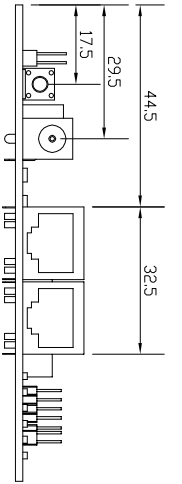| **Max of concurrent associations**	Encryption	Client Latency	TCP [each client upload and download randomly from 384Kbps to 768Kbps]		UDP [each client upload and download 2Mbps]	
	WPA2-PSK	<100ms	Single radio	Dual radio	Single radio	Dual radio
			40 clients	70clients (35 per radio)	20 clients	30clients (15 per radio)

1 miniPCIe slot with USB Co-layout,can support SIM holder
2 Depends on ordering configuration
3 Serial Port is a 4-pin header (TTL) + Serial Converter is available to change the TTL signals on board to RS232 signals
   for debugging.Configurations are subjec to change without notification
4 JTAG Port is a 14-pin header + JTAG kit is for writing your own developed loader and firmware directly
5 This is a factory option to turn WPJ531LV to WPJ531HV, It is compatible with 802.3af/802.3at PoE switches and injectors

117.0

26.0

63.0

108.0

97.0

105.0

9.5±0.2

7.0

Ø8.0

Ø4.0

106.0

7.8

4.4

17.5

29.5

44.5

32.5

1.6

13.5±0.2
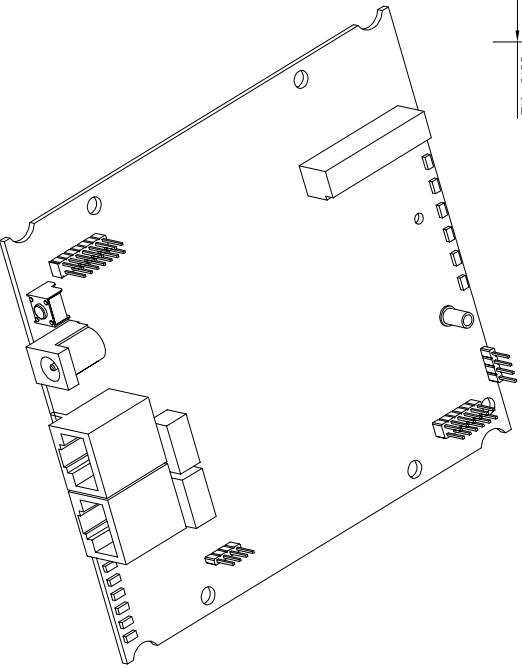
Federal Communications Commission (FCC) Interference Statement

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 generate, 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.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF exposure warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

European Union Regulatory Conformance

The equipment complies with the RF Exposure Requirement 1999/519/EC; Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0–300 GHz).

Changes or modifications to this product not authorized by our company could void the EMC compliance and negate your authority to operate the product. This product has demonstrated EMC compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

This equipment meets the following conformance standards:
EN 55022&24;
EN 301489-1/-17; EN 300328;
EN 62311;
EN 60950-1;

EU Declaration of Conformity
Hereby, Compex Systems Pte Ltd declares that this Wireless Access Point is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

CE0678①

Manufacturer: Compex Systems Pte Ltd
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The safety distance is 2.79cm for WIRELESS ACCESS POINT installed without any other radio equipment.