

Dual Band Gigabit Wireless Embedded Board

Model: WPJ344

ac wave series

Features

- CompexWRT and OpenWRT firmware supported
- Qualcomm-Atheros 533MHz Networking Processor, WASP Series
- Dual Radio Solution (one 2x2 11n 2.4GHz on-board radio and one miniPCIe slot that supports all Compex WLE series, including 802.11ac radio)
- Integrated 48V 802.3af (alternative 24V PoE available)
- Support 2 x Gigabit Ethernet Port
- Optional: support USB Extension

Applications

- Dual Band, Dual Concurrent AP
- 802.11bgn AP
- Point to Point / Point to MultiPoint
- Base Station
- CPE

Technical Specifications

System Information						
Processor		Qualcomm-Atheros AR9344 MIPS 74Kc				
System Memory		128MB(64*2) DDR2				
NOR Flash		8MB (max 16MB optional) ¹				
MiniPCI Slot		1 x 9.2mm MiniPCIe slot				
Ethernet		2 Gigabit ports with Auto-MDI/X				
Extras		Serial Port ² , JTAG ³ , Reset Button, Surge Arrestor, Watchdog Timer				
Power Solutions	High voltage	DC Jack Input:24-48V, Passive PoE: 24-48V, IEEE 802.3af/at PoE Standard 802.3af PoE input:(Optional) ⁴				
	Low voltage	DC Jack Input: 9-24V, Passive PoE: 12-24V				
Power Consumption		7W				
RoHS Compliance		Yes				
Humidity		Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing)				
Temperature Range		Operating:-20°C to 70°C Storage: -40°C to 90°C				
Dimension		117 x 105 x 17 (mm)				
2.4GHz On-board Radio	Transmit Power	Data Rate		Aggregate Power		
		1M		25dBm		
		11M		23dBm		
		6M		25dBm		
		54M		22dBm		
		HT20 MCS0		25dBm		
		HT20 MCS7		22dBm		
		HT40 MCS0		25dBm		
	HT40 MCS7		22dBm			
	Receiver Sensitivity	Data Rate				
		6M		-90dBm		
		54M		-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]	
			Single radio	Dual radio	Single radio	Dual radio
	WPA2-PSK	<100ms	40 clients	70clients (35 per radio)	20 clients	30clients (15 per radio)

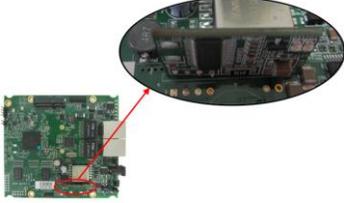
1 Depends on Order Configurations

2 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 subject to change without notification

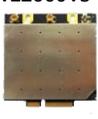
3 JTAG Port is a 14-pin header + JTAG kit is for writing your own developed loader and firmware directly

4 In this mode, it can be powered from 802.3af/3at PoE switches and PoE injectors. It is able to return a PD classification of 0. The DC jack can accept a voltage range of 24V to 56V but the PoE input needs a minimum voltage of 36V

Optional configuration

<p>USB Extension (USB HUB BOARD-1.00-ST)</p>	 <p>USB board</p>	<p>External board: can support 3 x USB 2.0 ports and 1 x miniPCIe-based USB 2.0 only interface (e.g. 3G modems)</p>
<p>PSE pass-thru module (P-PSE-M-6A03-SPL)</p>		<p>PSE pass-thru module: Optional module to allow power to pass through the 2nd Ethernet port to an IEEE 802.3af/at compatible device, such as a surveillance camera</p>

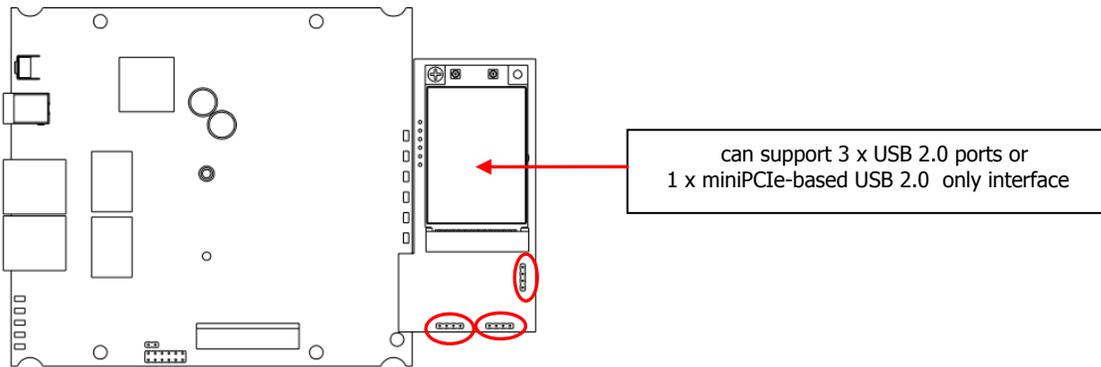
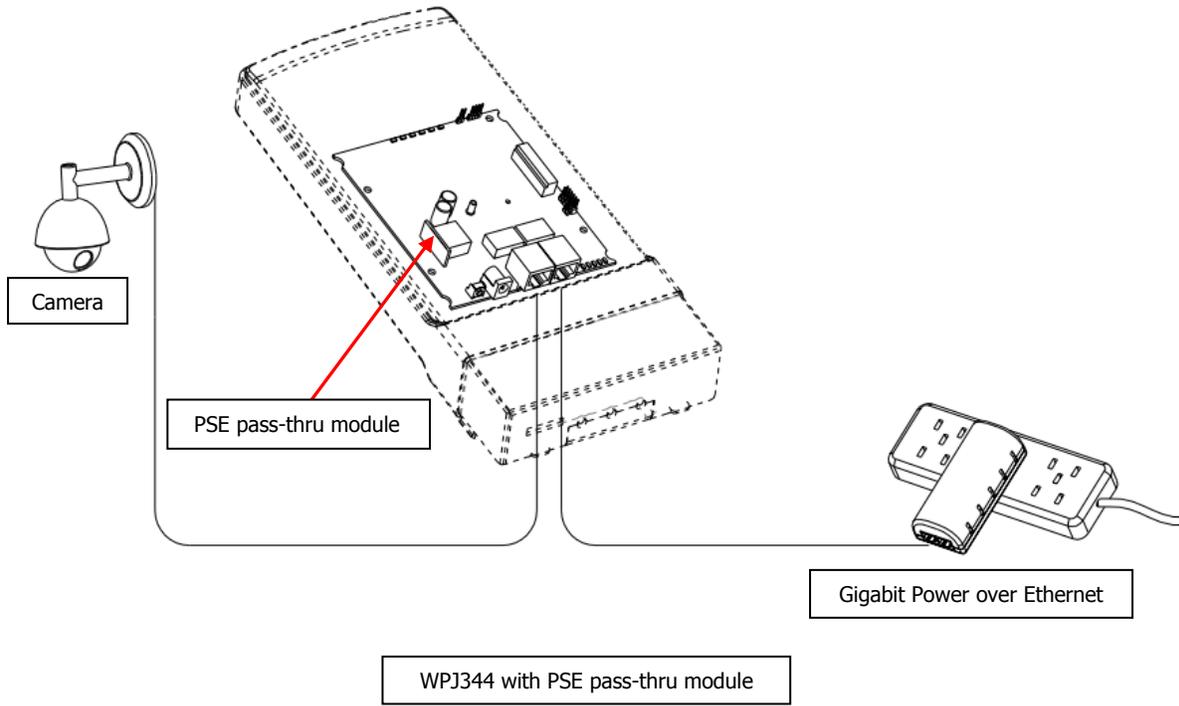
Related Products

802.11ac 5GHz miniPCIe			Gigabit Power over Ethernet
<p>WLE900VX</p> 	<p>WLE600V5-23</p> 	<p>WLE900V5-23</p> 	<p>POE2408</p>  <p>- Output Voltage: 24VDC - Max Output Watts: 19W</p>

Complex embedded board extended applications list

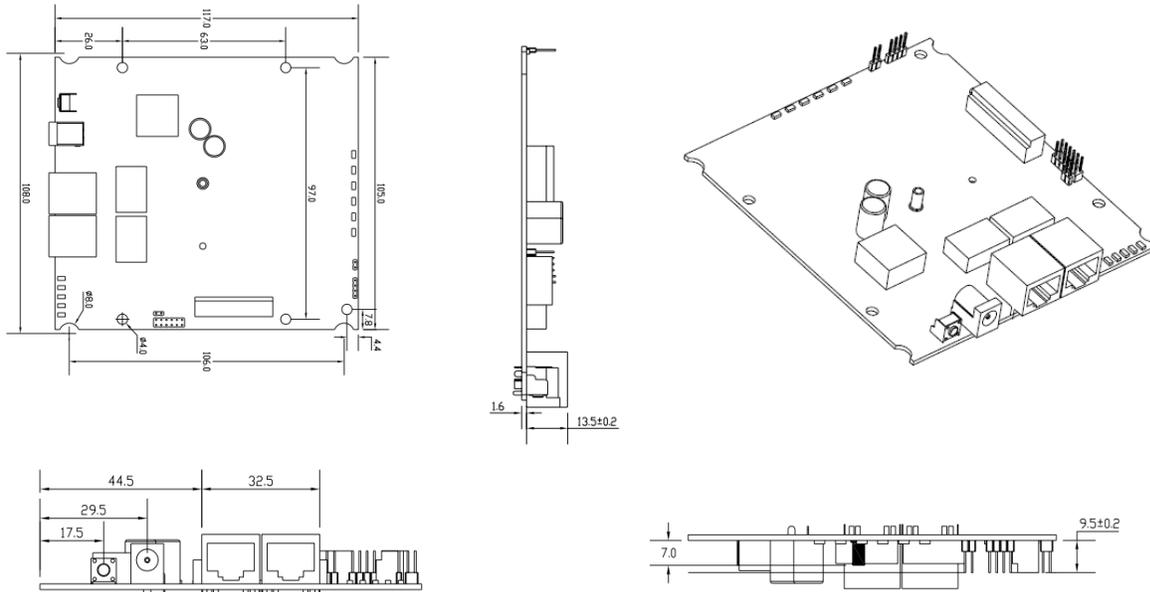
Model	Extended applications			
	USB signal	USB External board (USB HUB BOARD-1.00-ST)	802.3af PoE pass-thru	802.3af PoE power supply
WPJ344	Support 1× USB 2.0 port	support 3 x USB 2.0 ports and 1 x miniPCIe-based USB 2.0 only interface	Optional (PSE pass-thru module)	support
WPJ558	Support 1× USB 2.0 port or PCIe slot Support Third Party 3G/LTE Module	support 3 x USB 2.0 ports and 1 x miniPCIe-based USB 2.0 only interface		support
WPJ342	Support 1× USB 2.0 port or PCIe slot Support Third Party 3G/LTE Module			Optional (802.3af module)
WPJ531	Support 1× USB 2.0 port or PCIe slot Support Third Party 3G/LTE Module			Optional (802.3af module)
WP546	Support 2× USB 2.0 port		Optional (PSE pass-thru module)	support
WP543	Support 2× USB 2.0 port			support

Product application:

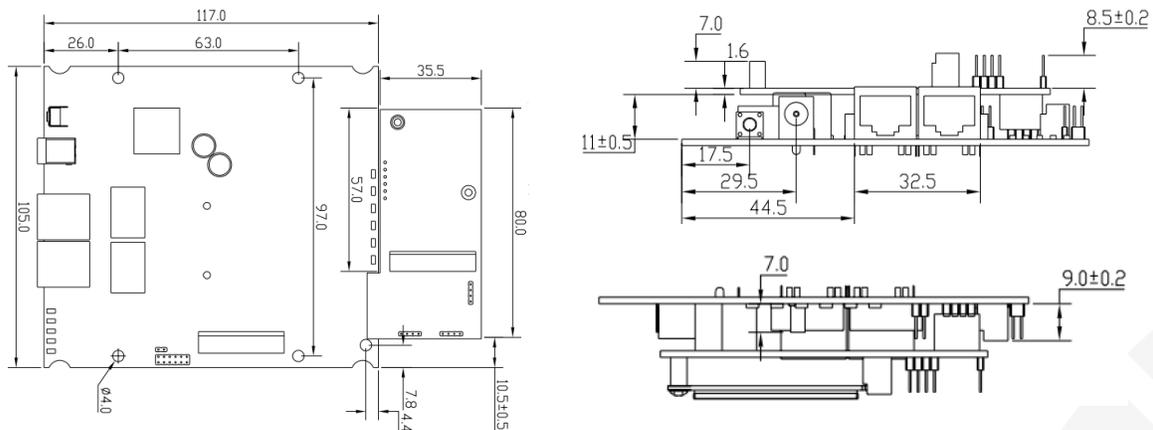


WPJ344 with USB External board

Dimension Drawing



Dimension Drawing with USB external board



Ordering Information

Item Code	Version	PSE module	L/H voltage	Power	NOR Flash	Memory
WPJ344HV 6A06PC8128BR	CompexWRT	NO	High Voltage (48V)		8MB	128MB
WPJ344LV 6A06PC8128BR	CompexWRT	NO	Low Voltage (24V)			
WPJ344HV 6A6BCW8128BRPSE	CompexWRT	Yes	High Voltage (48V)		16MB	128MB
WPJ344LV 6A6BCW8128BRPSE	CompexWRT	Yes	Low Voltage (24V)			
WPJ344HV 6A06PC16128BR	CompexWRT	NO	High Voltage (48V)		16MB	128MB
WPJ344LV 6A06PC16128BR	CompexWRT	NO	Low Voltage (24V)			
P-PSE-M-6A03-SPL		PoE pass-Thru module				
USB HUB BOARD-1.00-ST		USB External board				

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.