

Dual Band Gigabit Wireless Embedded Board

Model: WPJ558

Revision:1.05 IL
Date: 2015,05,12

Features

- CompexWRT and OpenWRT firmware supported
- Qualcomm-Atheros 700MHz Networking Processor AR9558
- 2.4GHz up to 28dBm aggregate power 3 x 3 on-board radio
- 3 x 3 On-board radio up to 450Mbps physical data rate
- Integrated Power-over-Ethernet
- Support 2 x Gigabit Ethernet Port
- Optional: support USB Extension

Applications

- Dual Band, Dual Concurrent AP
- 802.11ac+802.11bgn AP / 802.11an+802.11bgn AP
- Point to Point / Point to MultiPoint
- Base Station
- CPE
- Support Third Party 3G/LTE Module

Technical Specifications

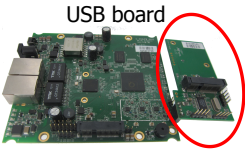
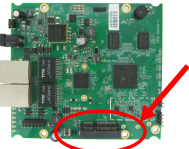
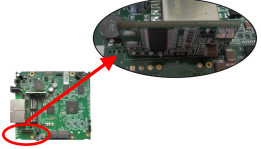
System Information						
Processor		Qualcomm-Atheros AR9558				
System Memory		128MB DDR2				
NOR Flash		16MB				
PCIe Slot		9.2mm height miniPCIe slot				
On-board radio power		28dBm(aggregate)				
Antenna Connector		3 x U.FL				
Ethernet		2 X Gigabit ports with Auto-MDI/X				
Extras		Serial Port ¹ , JTAG ² , Reset Button, Surge Arrestor, Watchdog Timer				
Power Solutions		Standard 802.3af PoE input ³				
Power Consumption		8.6W				
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)				
2.4G On-board Radio	Transmit Power	Data Rate			2.4GHz (aggregate)	
		6Mbps			28dBm	
		54Mbps			24dBm	
		HT20 MCS0			28dBm	
		HT20 MCS7			23dBm	
		HT40 MCS0			28dBm	
		HT40 MCS7			23dBm	
	Receiver Sensitivity	Data Rate			2.4GHz	
		HT20 MCS0			-94dBm	
		HT20 MCS7			-77dBm	
		HT40 MCS0			-93dBm	
		HT40 MCS7			-75dBm	
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 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








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

3 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

USB Extension (USB HUB BOARD-1.00-ST)		External board: can support 3 x USB 2.0 ports and 1 x miniPCIe-based USB 2.0 only interface (e.g. 3G modems)
3G/LTE Module		PCIe slot can Support Third Party 3G/LTE Module
PSE pass-thru module (P-PSE-M-6A03-SPL)		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

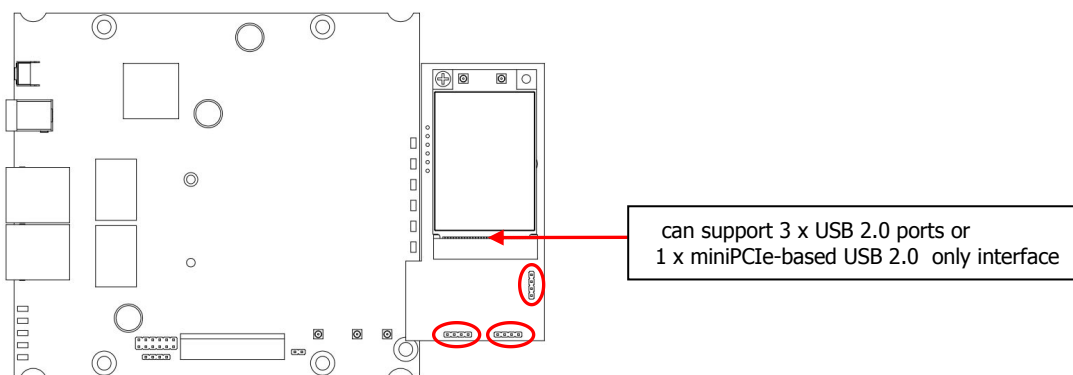
Related Products

802.11ac miniPCIe radio				Gigabit Power over Ethernet
Model	WLE600VX 	WLE600VX-itymp 	WLE600V5-27ESD 	<div>POE24125</div>  <div>- Output Voltage: 24VDC - Max Output Watts: 30W</div>
Max data rate	867Mbps			
Model	WLE900VX 	WLE900VX-itymp 	WLE900V5-27ESD 	
Max data rate	1.3Gbps			

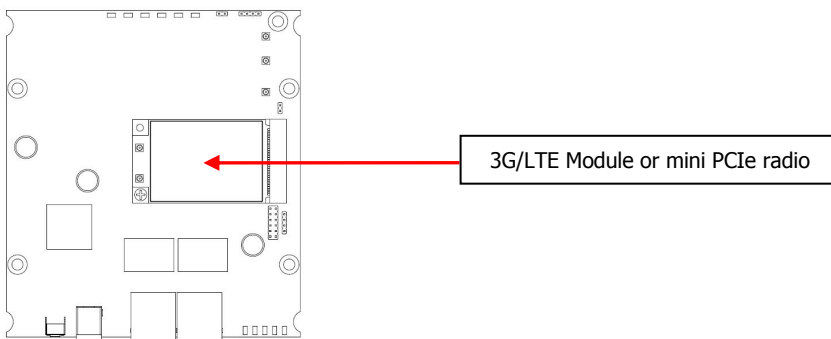
Complex embedded board extended applications list

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	Optional (PSE pass-thru module)	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

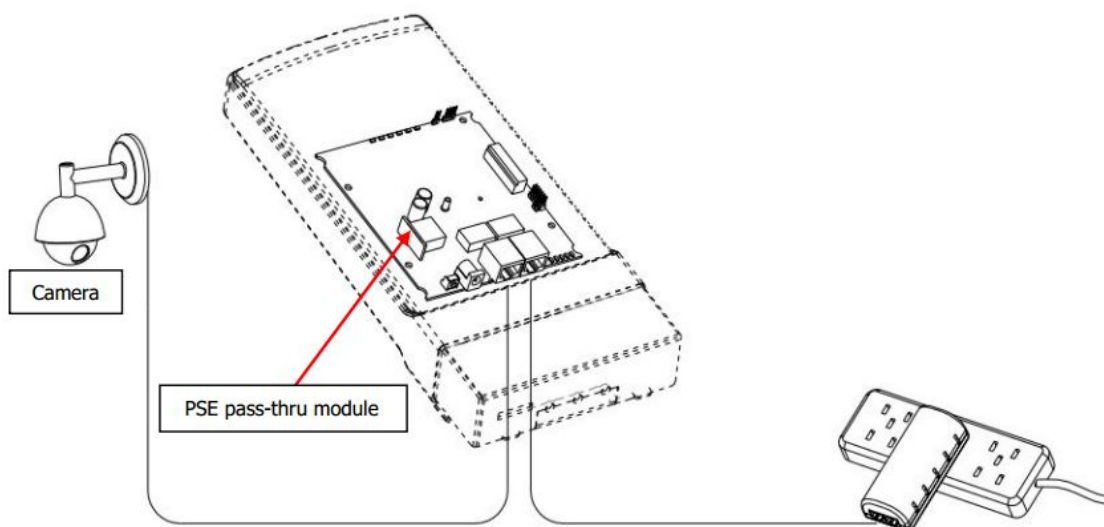
Product application:



WPJ558 with USB External board

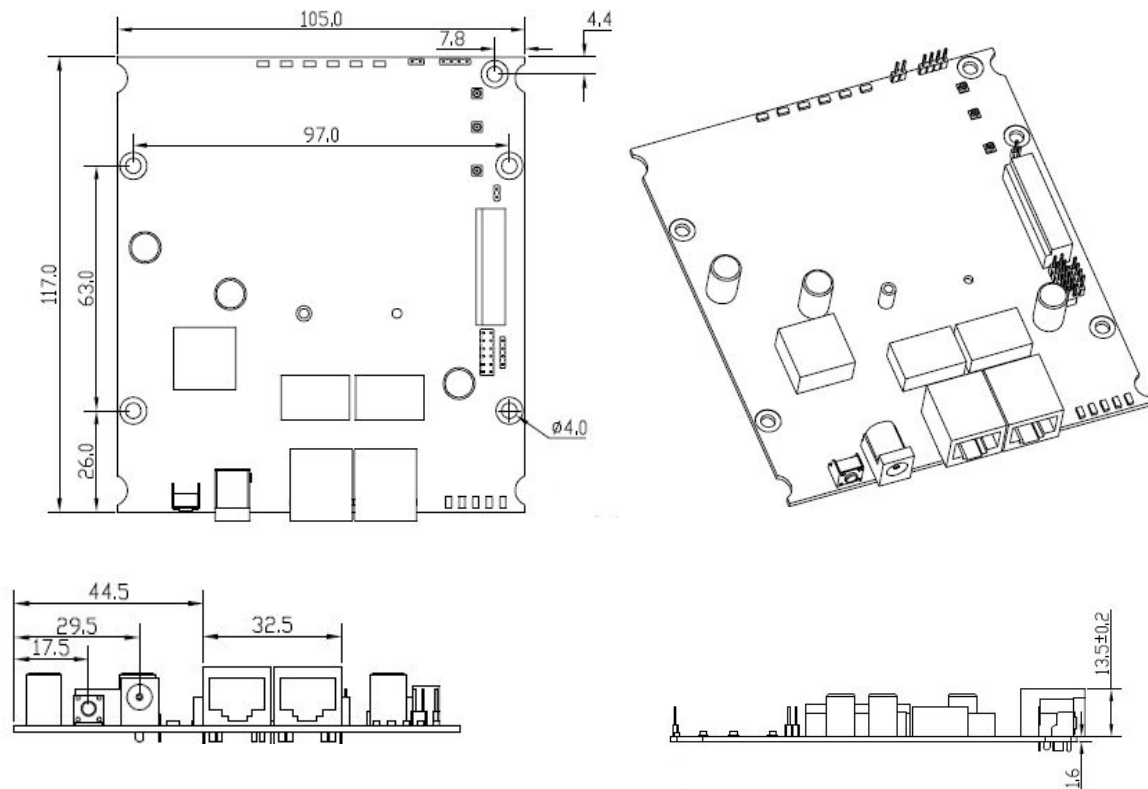


PCIe slot can Support mini PCIe radio or Third Party 3G/LTE Module

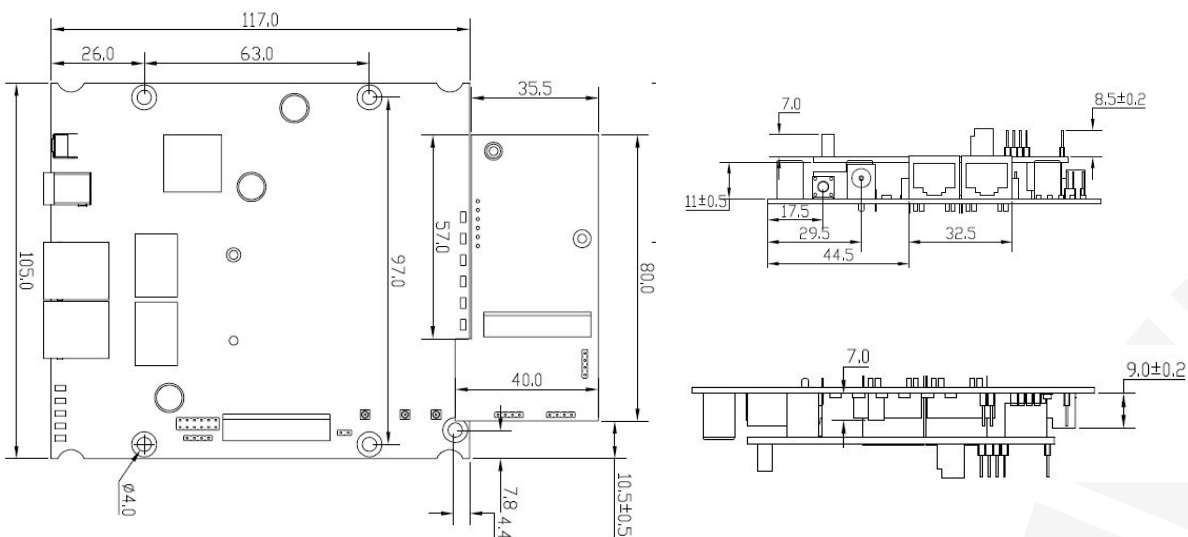


WPJ 558 with PSE pass-thru module

Dimension Drawing



Dimension Drawing with USB external board



Ordering Information

Item Code	Version	Processor	L/H voltage Power Solutions	NOR Flash	Memory	Socket Height
WPJ558HV 6A05PCW8128	Compex-WRT	QCA9558	High Voltage (48V)	8MB	128MB	9.2mm
USB HUB BOARD-1.00-ST	USB External board					
P-PSE-M-6A03-SPL	PoE pass-Thru module					
Carton Dimension	Dimension		Weight		Dimensional Weight	
Packing BOX (50pcs)	871*320*190mm		7.08 kg		11 Kg	