



# Wireless Embedded Boards



# WIRELESS EMBEDDED BOARDS



Mainstream Solutions

## THE WPJ344



WPJ344 is a powerful and robust enterprise grade wireless embedded board based on the Qualcomm Atheros AR9344 CPU. It features a MIPS32 74K 533MHz network processor and integrates a 23dbm 2.4Ghz 2x2 on-board radio and 1 miniPCIe slot that supports high powered 3x3 radio or 802.11ac radio. Embedded with 128MB memory and 16MB Flash, WPJ344 is able to provide the efficiency and power required for any suitable applications. WPJ344 on-board 2x Gigabit LAN has integrated IEEE 802.3af/at Power over Ethernet (PoE) feature that can be powered by any Industry standard IEEE 802.3af/at PoE Switch



### 74k 533Mhz CPU

Powered by Qualcomm Atheros AR9344 Premium Wireless System on Chip (WiSoC) based on the MIPS32 74K architecture



### 2.4Ghz 2x2 802.11n

WPJ344 features on-board single band 2x2 2.4Ghz 802.11n Wireless with speeds up to 300Mbps



### 128MB+16MB Flash

With 128MB NOR Memory available on-board paired with the 16MB Flash allows wide range of applications for development



### MiniPCI-e Slot

Further expansion of Wireless Capabilities with the MiniPCI-e Slot, also support Cellular Card\*



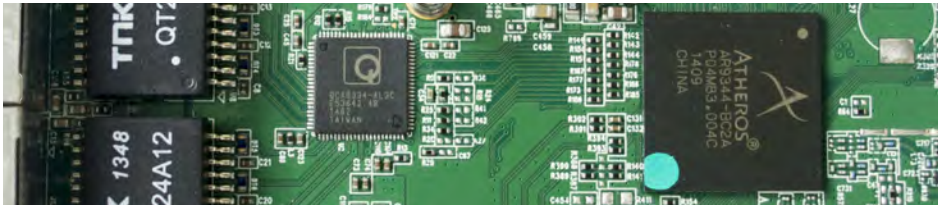
### Dual Gigabit LAN

With Dual on-board GE or 10/100/1000 RJ45 LAN Ports, allowing a WAN & LAN configuration or Dual LAN as well.



### IEEE 802.3af/at

WPJ344 support IEEE 802.3af/at Industry standard Power over Ethernet up to 56V



## Technical Specifications

<b>Processor</b>	Qualcomm-Atheros AR9344	<b>Firmware</b>	ComplexWRT or OpenWRT
<b>System Memory</b>	128MB DDR2	<b>On-board Wireless</b>	2 x 2 MIMO 802.11n
<b>NOR Flash</b>	16MB	<b>Operating Frequency</b>	2.4Ghz
<b>PCIe Slot</b>	9.2m height minPCIe slot	<b>Maximum Wireless Speed</b>	300Mbps
<b>Ethernet</b>	2 x GE Port with Auto MDI/X	<b>On-board Radio Power</b>	26dBm (aggregate)
<b>Power</b>	DC Jack & Passive PoE or IEEE 802.3af/at*	<b>On-board Radio Antenna Connector</b>	2 x U.F.L
<b>Power Consumption</b>	7.2W		
<b>RoHS Compliance</b>	Yes		
<b>Humidity</b>	Operating: 5% to 95% Storage: Up to 90%		
<b>Temperature Range</b>	Operating: -20°C to 70°C Storage: -40°C to 90°C		
<b>Dimension</b>	95 x 105 x 18mm (W x D x H)		
<b>Extras</b>	LED Pins, Serial Port, JTAG, Reset Button, Surge Arrestor, Watchdog Timer		



### Buzzer & LED Pin

Monitor WPJ344 performance and development with the on-board buzzer and LED Pin



# WPJ344 EXPANSION



**Passive PoE Model**  
WPJ344 is available with integrated IEEE 802.3af and 802.3at Support or 24V Passive PoE

IEEE 802.3af/at Model:

- **WPJ344HV-PB2\***
- DC Jack 24 - 56V
- 24V Passive PoE
- IEEE 802.3af/at PoE

24V Passive PoE Model:

- **WPJ344HV-PB1\***
- DC Jack 12 - 24V
- 24V Passive Power Over Ethernet

\*Configuration between both modes are toggled by a Jumper on the board



## PoE Passthrough

WPJ344 support an additional PSE Module Upgrade to allow the secondary on-board Ethernet port to provide Power to a secondary PoE Device (e.g IP Camera) Provide 48V at 420mAh of Power. Part no: P-PSE-M-6A03-SPL



**MINIPCI-E SLOT X 1**  
Add 802.11ac Radio



WPJ344 support a whole range of Compex 802.11ac miniPCI-e Radio Modules to enable Dual Band 11ac support for speeds up to 1300Mbps.



**USB EXTENSION BOARD**  
3x USB + 1x MiniPCI-e

WPJ344 support an USB Extension board that provide additional 3x USB2.0 Ports and 1x MiniPCI-e slot, such as 3G/4G Radio Module. Part no: USB HUB BOARD-1.00-ST

## WPJ344 BOARD DIMENSIONS

Item Code	Width	Depth	Height
WPJ344HV 6A06PCW16FBR-BP1	105 mm	117 mm	17 mm
WPJ344HV 6A06PCW16FBR-BP2	105 mm	117 mm	17 mm

## WPJ344 EXTERNAL WIRELESS MODULE COMPATIBILITY

Model	Wireless Band	Operating Frequency	Channels	Connector
Compex WLE900VX	802.11a/b/g/n/ac	2.4Ghz or 5Ghz	3 x 3 MIMO	3 x U.FL
Compex WLE600V5-27	802.11a/n/ac	5Ghz	2 x 2 MIMO	2 x MMCX
Compex WLE900V5-27	802.11a/n/ac	5Ghz	3 x 3 MIMO	2 x MMCX

## WPJ344 ORDERING INFORMATION

Item Code	Firmware	Jumper Position	Power Solutions	NOR Flash	Memory
WPJ344HV 6A06PCW16FBR-BP1	CompexWRT	J11 / J17	DC Jack 12 - 24V + 24V Passive PoE	16MB	128MB
WPJ344HV 6A06PCW16FBR-BP2	CompexWRT	J15 / J16	DC Jack 24 - 48V + PoE 802.3af/at		
USB HUB BOARD-1.00-ST	USB Extension Board Add-on				
P-PSE-M-6A03-SPL	PoE Passthrough PSE Module Add-on				

## WPJ344 PACKAGING INFORMATION

Carton Dimension	Dimension	Weight	Dimensional Weight
Packaging Box (50pcs)	871 x 320 x 190mm	7.28kg	11kg