



# Wireless Embedded Boards

# WIRELESS EMBEDDED BOARDS



Premium Solutions

# THE WPJ558



## 74k 700Mhz CPU

Powered by High powered Qualcomm Atheros AR9558 Premium Wireless System on Chip (WiSoC) based on the MIPS32 74K architecture



## 450Mbps 802.11n

WPJ558 features on-board single band 3x3 MIMO 2.4Ghz 802.11n Wireless with speeds up to 450Mbps



## 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\*



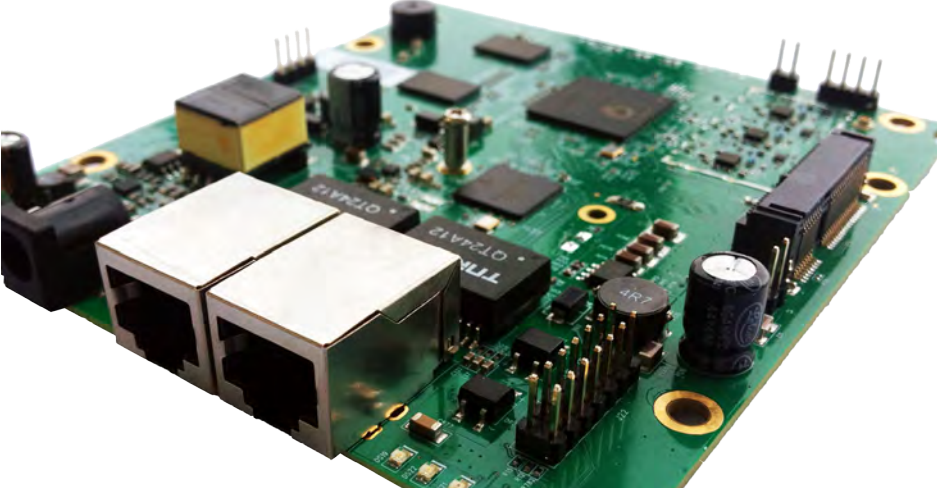
## Dual Gigabit LAN

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



## 802.3af/at PoE

WPJ558 support IEEE 802.3af/at Industry standard Power over Ethernet up to 56V



WPJ558 is an exceedingly powerful and impressive enterprise grade wireless embedded board based on the Qualcomm-Atheros QCA9558 CPU. It features a MIPS32 74K 700MHz network processor and integrates an internal on-board 3x3 MIMO radio and 1 miniPCI slot that supports a secondary high powered 3x3 radio or 802.11ac radio. Embedded with 128MB memory and 16MB Flash, WPJ558 provides the best possible platform for any suitable applications. WPJ558 on-board 2x Gigabit LAN port has integrated IEEE 802.3af and 802.3at Power over Ethernet (PoE) that allows WPJ558 to be compatible with Industry standard IEEE 802.3af or 802.3at compliant devices bring more flexibility.



## Technical Specifications

|                        |   |   |  |
|------------------------|---|---|--|
| <b>Processor</b>       | Qualcomm-Atheros AR9558   | <b>Humidity</b>                         | Operating: 5% to 95%<br>Storage: Up to 90%                               |
| <b>System Memory</b>   | 128MB DDR2  | <b>Temperature Range</b>                | Operating: -20°C to 70°C<br>Storage: -40°C to 90°C                       |
| <b>NOR Flash</b>       | 16MB  | <b>Dimension</b>                        | 117 x 105 x 17mm (W x D x H)   |
| <b>PCIe Slot</b>       | 9.2m height minPCIe slot  | <b>Extras</b>                           | LED Pin, Serial Port, JTAG, Reset Button, Surge Arrestor, Watchdog Timer |
| <b>Ethernet</b>        | 2 x GE Port with Auto MDI/X                                     | <b>Firmware</b>                         | CompexWRT or OpenWRT   |
| <b>Power</b>           | DC Jack 24 - 56V, Passive PoE 36 - 56V, and IEEE 802.3af/at PoE | <b>On-board Wireless</b>                | 3 x 3 MIMO 802.11n   |
| <b>PW Consumption</b>  | 8.6W  | <b>Operating Frequency</b>              | 2.4Ghz   |
| <b>RoHS Compliance</b> | Yes   | <b>Maximum Wireless Speed</b>           | 450Mbps  |
|                        |   | <b>On-board Radio Power</b>             | 28dBm (aggregate)  |
|                        |   | <b>On-board Radio Antenna Connector</b> | 3 x U.F.L  |

## Buzzer & LED Pin

Monitor WPJ558 performance and development with the on-board buzzer and LED Pin



# THE WPJ558

## MINIPCI-E SLOT X 1

Speeds up to 1.3Gbps



With 700Mhz high performance CPU, WPJ558 provide sufficient processing power to attain 802.11ac speeds up to 1300Mbps at 5Ghz paired with 3x3 MIMO WLE900V5-27 leveraging Next-gen high bandwidth 802.11ac transfers



WPJ558 is able to attain 802.11ac speeds up to 867Mbps at 5Ghz paired with 2x2 MIMO WLE600V5-27 leveraging high bandwidth transfers with optimal performance



## PoE Passthrough

WPJ558 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

## USB EXTENSION BOARD

3x USB + 1x MiniPCI-e

WPJ558 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

## WPJ558 BOARD DIMENSIONS

| Item Code            | Width  | Depth  | Height |
|----------------------|--------|--------|--------|
| WPJ558HV 6A05PCW8128 | 105 mm | 117 mm | 17 mm  |

## WPJ558 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  |

## WPJ558 ORDERING INFORMATION

| Item Code             | Firmware                          | Processor | Power Solutions                                      | NOR Flash | Memory |
|-----------------------|-----------------------------------|-----------|--|-----------|--------|
| WPJ558HV 6A05PCW8128  | CompexWRT                         | QCA9558   | DC: 24-56V, Passive PoE: 36-56V, IEEE 802.3af/at PoE | 16MB      | 128MB  |
| USB HUB BOARD-1.00-ST | USB Extension Board Add-on        |           |  |           |        |
| P-PSE-M-6A03-SPL      | PoE Passthrough PSE Module Add-on |           |  |           |        |

## WPJ558 PACKAGING INFORMATION

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