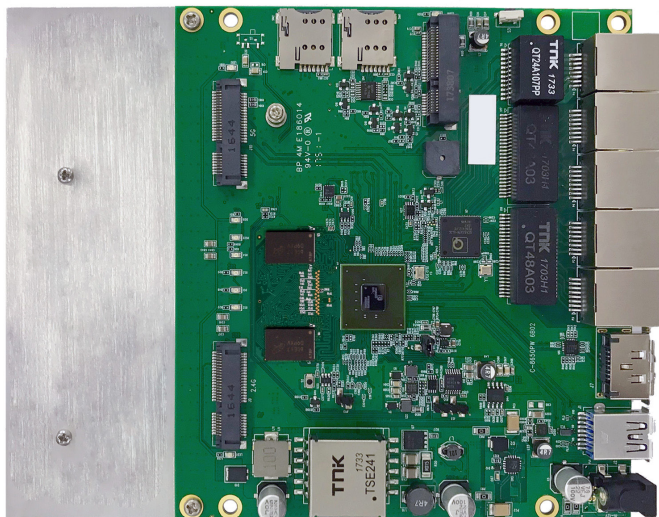# Multi-function IPQ8065 Embedded Board with 1.7GHz CPU
1x USB3.0 / Supports 4x4 802.11ac / 5x Gigabit LAN / 3x Mini PCIe 2.0 Slots

Model: WPQ865 6B02

KEY FEATURES

- Qualcomm Atheros IPQ8065 ARM Dual Core CPU
- 1GB DDR3 System Memory
- 5x Gigabit LAN RJ45 with Auto MDI-X
- 1x USB 3.0 Port
- 2x SIM Card Slot

APPLICATIONS

- Optimized for 4x4 MU-MIMO 802.11ac Module Support
- Tri Band MU-MIMO 802.11g/n/ac Access Point
- Dual Concurrent MU-MIMO 802.11a/n/ac Access Point
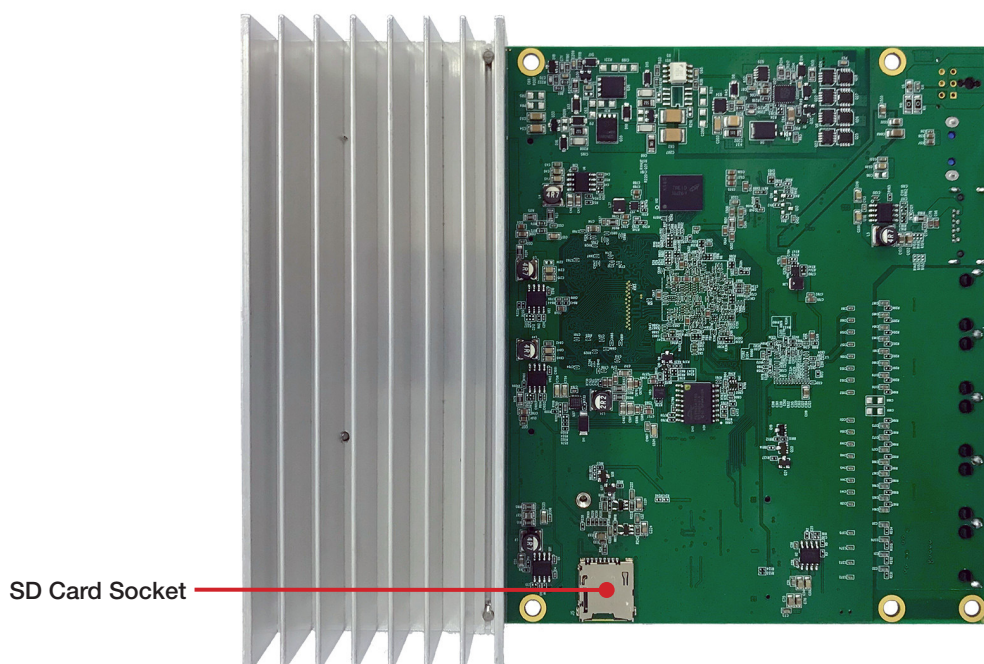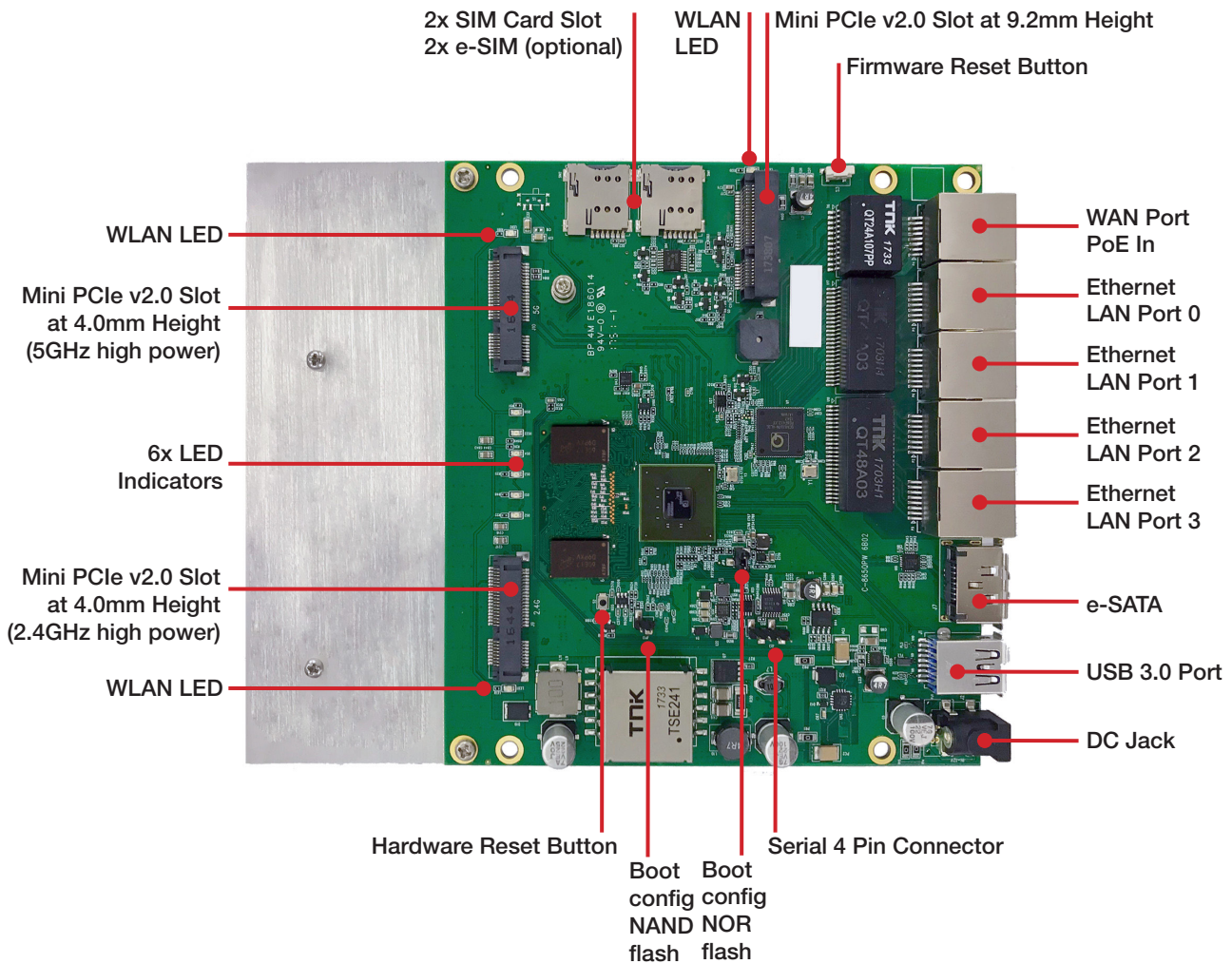- Wireless Base Station
- 3G/LTE AP

Specifications

Chipset	Qualcomm Atheros Dual Core Krait ARMv7 CPU IPQ8065 1.7GHz CPU
Reference Design	Qualcomm Atheros AP161
System Memory	1GB (2x 512MB) DDR3
NAND Flash	256MB
NOR Flash	32MB
Expansion	1x Mini PCI Express v2.0 Slot at 9.2mm Height 2x Mini PCI Express v2.0 Slot at 4.0mm Height 2x SIM Card Slot (Optional 2x e-SIM) 1x SD Card Socket
Interface	5x Gigabit Ethernet LAN RJ45 Port (Auto MDI-X) 1x eSATA Port 1x USB 3.0 Port 1x Serial Port 4 Pin Connector[1]
Reset Button	1x F/W Reset Button, 1x H/W Reset Button
LED	9x LED Indicators
Power Over Ethernet	1x IEEE 802.3af/at POE, 36~57V, up to 70W (4-pair power feed) on WAN Port
DC Power	1x DC Jack Connector: 12V, 4A
Operating Voltage	5V, 3.3V
Power Consumption	4.5W (Board Only)
Supported Operating System	CompexWRT or OpenWRT[2]/LEDE
RoHS Compliance	Yes
Environmental	Temperature: Operating: -20ºC to 70ºC, Storage: -40ºC to 90ºC Humidity: Operating: 5% to 95%, Storage: Max. 90%, non-condensing
Dimensions (W x H x D)	PCBA 137 x 148 x 17.5 mm, Heatsink 60 x 148 x 30 mm
Other Features	Surge Suppressor, Watchdog Timer, Buzzer

1. The Serial Port is a 4-pin header (TTL). A Serial Converter is available to change the TTL signals on board to RS-232 signals for debugging.

2. For more information on OpenWRT, please refer to the Firmware / Software Section on Page 3.

Configurations are subject to change without notifications.

Component and Connector Map

2x SIM Card Slot
2x e-SIM (optional)

WLAN LED

Mini PCIe v2.0 Slot at 9.2mm Height

Firmware Reset Button

WLAN LED

Mini PCIe v2.0 Slot
at 4.0mm Height
(5GHz high power)

6x LED Indicators

Mini PCIe v2.0 Slot
at 4.0mm Height
(2.4GHz high power)

WLAN LED

WAN Port
PoE In

Ethernet LAN Port 0

Ethernet LAN Port 1

Ethernet LAN Port 2

Ethernet LAN Port 3

e-SATA

USB 3.0 Port

DC Jack

Hardware Reset Button

Boot config NAND flash

Boot config NOR flash

Serial 4 Pin Connector

SD Card Socket

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Customization Options

The WPQ864 can be customized for volume applications. Contact our sales representatives for more information.

Custom Embedded Board layout

For more customization, contact us at sales@compex.com.sg

Firmware / Software

The WPQ865 is shipped with CompexWRT firmware.
SDKs with QCA binary drivers are available for software developers.

Supported Operating System	• CompexWRT • OpenWRT[1] • LEDE

1. OpenWRT SDK is available without any technical support by Compex unless otherwise stated.

Ordering Options

Item Code	Firmware	Processor	Power Solutions	Mini PCIe Slots Height	Memory
WPQ865 6B02PR32F1GBR-TE	OpenWRT	IPQ8065	DC: 12V, 4A IEEE 802.3af/at POE	1 at 9.2mm, 2 at 4.0mm	1GB
SUA3004RWEF			EU DC 12V, 4A DC adapter		
SUA3004RWUF			US DC 12V, 4A DC adapter		
POEGAT25			Gigabit IEEE802.3at 25W PoE Injector		
Serial Port Converter			Serial 4 Pin to COM Port bridge		

Packaging Information

Packaging Type	Dimensions	Weight	Dimensional Weight
Carton Box (5 units)	422 x 410 x 240 mm	5.0kg	8.5kg

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