



WPQ951

Wi-Fi 7 (802.11be) Embedded Board

Hardware User Guide

Wi-Fi 7 / 802.11be	IPQ9550	3x M.2 E-Key	4x4 MU-MIMO
Tri-Band Support 2.4GHz + 5GHz + 6GHz	Qualcomm Alder Series	PCIe 3.0 Compatible	OFDMA Support

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1. Introduction

Thank you for choosing the Compex WPQ951. This document provides complete hardware integration guidance for engineers and system developers deploying the WPQ951 in embedded, industrial, and networking platforms.

The WPQ951 is a high-performance Wi-Fi 7 embedded board powered by Qualcomm's IPQ9550 'Alder' Series quad-core processor. It delivers robust networking capabilities through multiple Ethernet ports, M.2 expansion slots, and full Wi-Fi 7 (802.11be) compatibility when paired with suitable Wi-Fi radio modules.

Key Highlights

- Qualcomm IPQ9550 'Alder' Quad-Core ARM Cortex-A73 @ 1.5 GHz SoC for high-throughput network processing.
- Wi-Fi 7 (802.11be) ready, supports 4x4 MU-MIMO OFDMA when paired with compatible Wi-Fi radio modules.
- Multiple Ethernet interfaces: 2x 2.5GbE RJ45 ports and 1x 10GbE RJ45 port for high-speed LAN/WAN connectivity.
- 3x M.2 (NGFF) E-Key sockets with PCIe 3.0 and 1x M.2 B-Key socket with PCIe 3.0 for modular radio expansion.
- Generous onboard memory: 2 GB DDR4 RAM, 256 MB NAND Flash, 32 MB NOR Flash and 16 GB eMMC storage.
- Power over Ethernet (PoE): supports up to 802.3bt standard via the 10 Gbps Ethernet port.
- OpenWrt 19.07 firmware with LuCI web interface and full SSH CLI access.
- REACH and RoHS compliant for global deployment.

Intended Use

The WPQ951 is an engineering-grade embedded board intended for OEM/ODM integration and product development. Typical target applications include:

- Enterprise wireless access points and Wi-Fi 7 router platforms.
- Industrial IoT gateways and network automation controllers.
- Edge computing nodes requiring multi-gigabit connectivity.
- CPE (Customer Premises Equipment) and broadband gateway appliances.
- Network appliances, embedded routers, and software-defined networking platforms.

2. Package Contents

Verify the following items are included in the package before proceeding with installation:

Checklist

- 1 × WPQ951 embedded board

⚠ Note: External antennas, M.2 Wi-Fi radio modules, M.2 cellular modem modules, SIM cards, Ethernet cables, and power supply are not included unless specified in the order. Contact sales@compex.com.sg for accessory options.

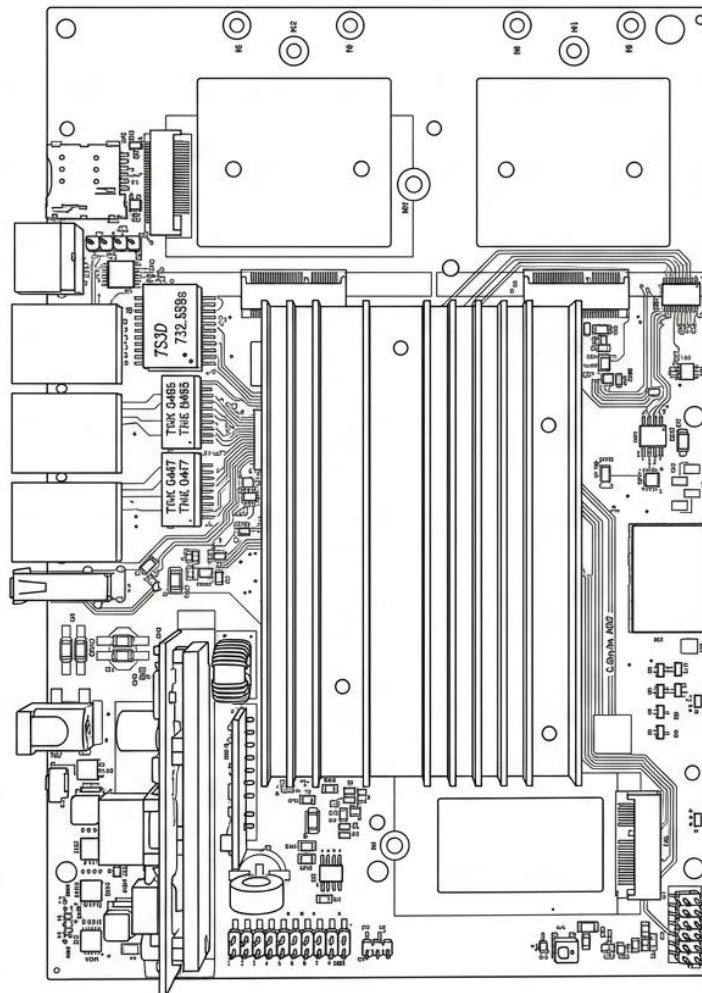
If any item is missing or damaged, contact Compex Technical Support (see Chapter 11) before proceeding.

3. Hardware Overview

The WPQ951 is a fully integrated embedded networking platform based on the Qualcomm IPQ9550 SoC. All networking processing, including routing, switching and Wi-Fi stack management via installed radio modules is handled onboard.

3.1 Board Layout

The WPQ951 features the following major components and connectors:



SoC	Qualcomm IPQ9550 'Alder', Quad-Core ARM Cortex-A73 @ 1.5 GHz
Reference Design	Qualcomm AP.AL02.3
System Memory	2 GB DDR4 (2× 1 GB, 32-bit / 2× 16-bit interface)
Flash Storage	256 MB NAND Flash + 32 MB NOR Flash + 16 GB eMMC
M.2 Expansion	3× M.2 (NGFF) E-Key PCIe 3.0 + 1× M.2 (NGFF) B-Key PCIe 3.0
Ethernet Ports	2× 2.5GbE RJ45 + 1× 10GbE RJ45 (LAN/WAN)
USB	1× USB 2.0 Port
Serial / Debug	1× UART 4-Pin Connector + 1× JTAG 20-Pin Connector
Other I/O	1× LED 14-Pin Connector, 1× MINI DIN8P, 1× Reset Button
Dimensions (W×H×D)	205 mm × 140 mm × 27.8 mm

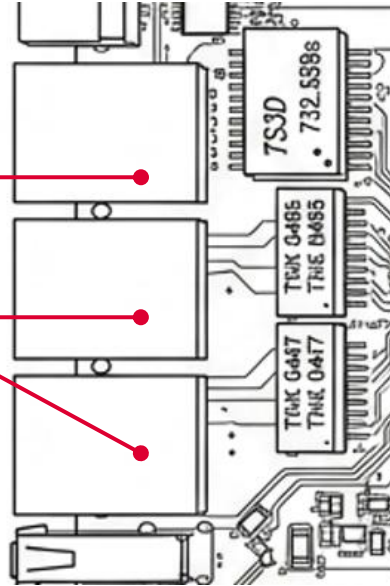
3.2 Connector Descriptions

Ethernet Port(RJ45)

- 2× 2.5GbE RJ45 ports for high-speed LAN/WAN connectivity.
- 1× 10GbE RJ45 port for high-speed uplink, supporting PoE 802.3bt (up to 90 W power delivery to connected devices).
- All ports support auto-MDI/MDIX and auto-negotiation.

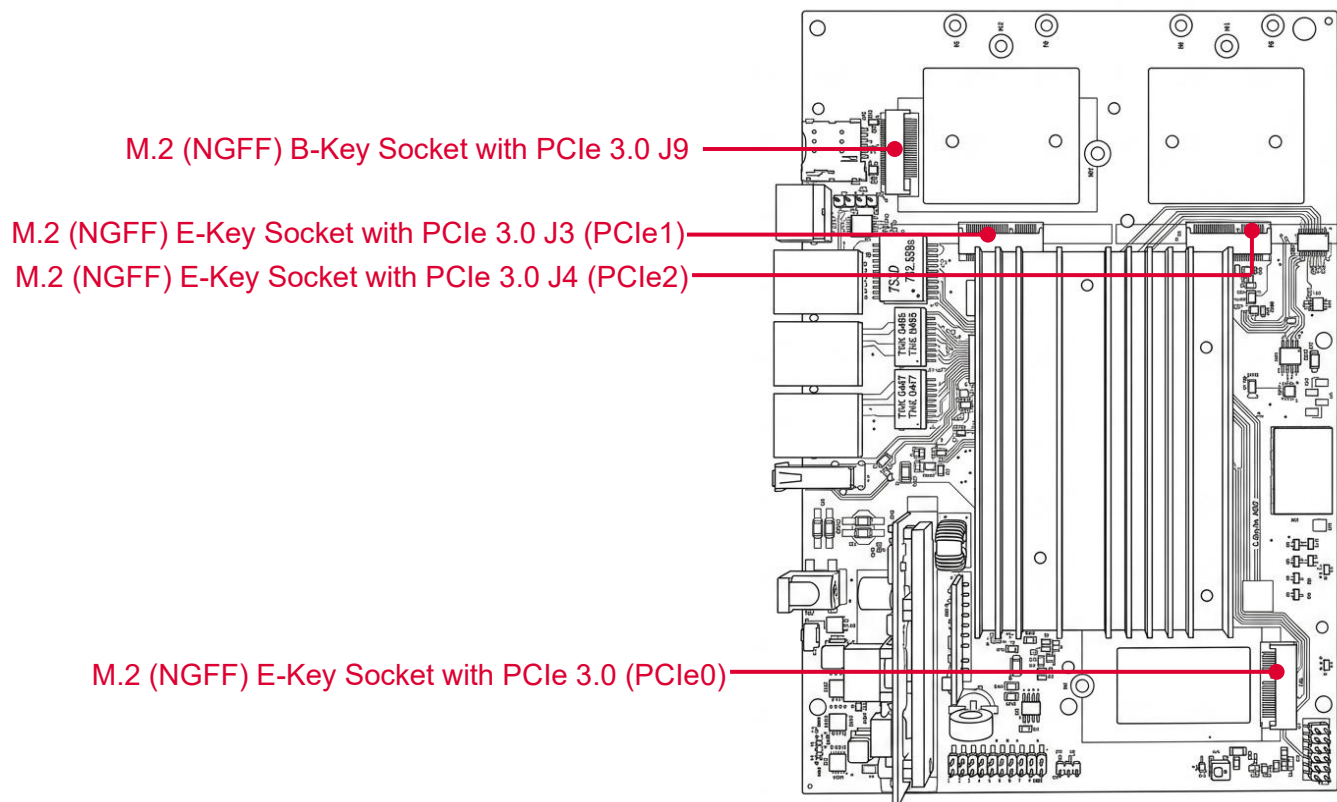
1x 10 Gbps Ethernet Port LAN/WAN RJ45
(PoE Supported)

2x 2.5 Gbps Ethernet Port LAN/WAN RJ45



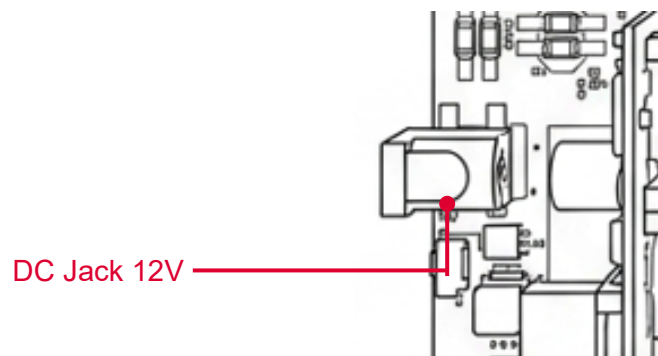
M.2 (NGFF) Expansion Slots

- 3× M.2 E-Key sockets with PCIe 3.0 — designed for Wi-Fi radio modules (e.g. Wi-Fi 7 cards).
- 1× M.2 B-Key socket with PCIe 3.0 — for additional expansion such as cellular or storage modules.
- Supports Wi-Fi 7 radio modules for 4×4 MU-MIMO OFDMA tri-band operation.



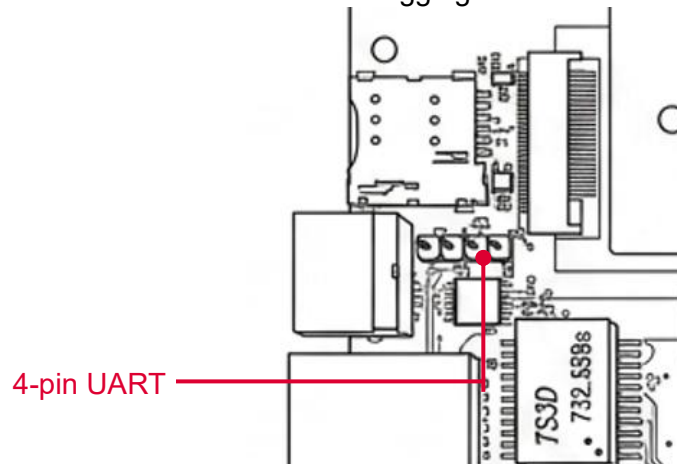
Power Connector

- 1× DC Jack Connector, 12V input.
- PoE power input supported via the 10GbE Ethernet port (802.3bt standard).



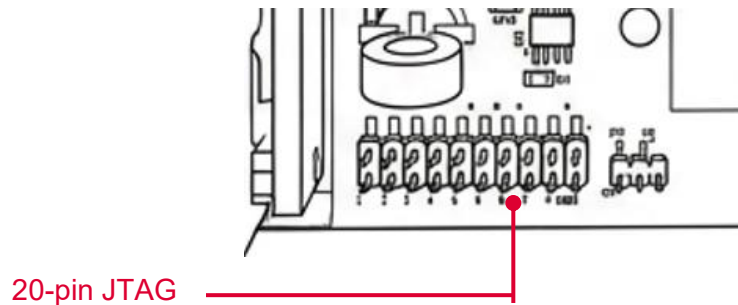
UART Debug Interface

- UART: 4-pin TTL header for serial console access. A Serial Converter (TTL to RS-232) is available for standard serial debugging.



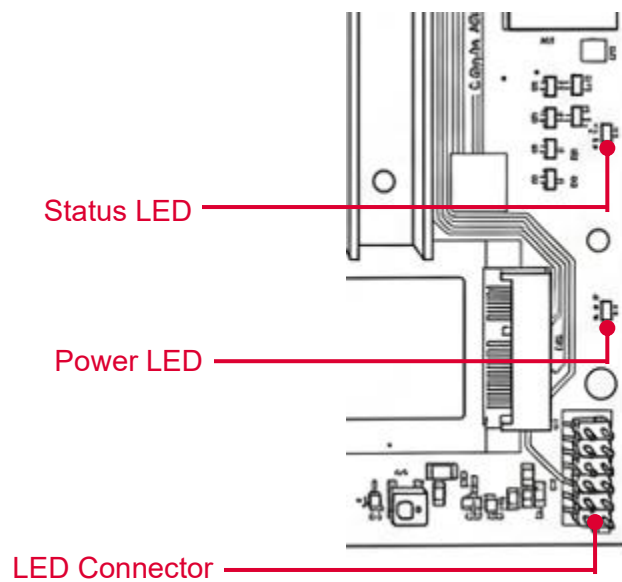
JTAG Debug Interface

- JTAG: 20-pin header for low-level firmware programming and hardware debugging.



3.3 LED Indicators

Color	Description
Power LED	Solid On: Board powered and operational
Status LED	Green: System is initializing/booting (initial power-on state). Yellow: Indicates successful handover to the OS kernel (occurs approximately 20s after power-on).
LED Connector	14-pin LED connector for additional external LED panel integration



3.4 Hardware Pinouts

Ethernet Port Pin Assignment (RJ45 10G)

Pin	Signal	Pin	Signal
1	10G_2_N_CH0	6	10G_2_P_CH2
2	10G_2_P_CH0	7	10G_2_N_CH3
3	10G_2_N_CH1	8	10G_2_P_CH3
4	10G_2_P_CH1	9	GND
5	10G_2_N_CH2	10	GND

Ethernet Port Pin Assignment (RJ45 2x 2.5G Port)

Pin	Signal	Pin	Signal
1	2.5G_1_N_CH0	1	2.5G_2_N_CH0
2	2.5G_1_P_CH0	2	2.5G_2_P_CH0
3	2.5G_1_N_CH1	3	2.5G_2_N_CH1
4	2.5G_1_N_CH2	4	2.5G_2_N_CH2
5	2.5G_1_P_CH2	5	2.5G_2_P_CH2
6	2.5G_1_P_CH1	6	2.5G_2_P_CH1
7	2.5G_1_N_CH3	7	2.5G_2_N_CH3
8	2.5G_1_P_CH3	8	2.5G_2_P_CH3
9	GND	9	GND
10	GND	10	GND

LED Pin Assignment

Pin	Signal	Pin	Signal
1	LED1_R_L	2	DVDD_3V3
3	LED1_G_L	4	DVDD_3V3
5	LED2_R_L	6	DVDD_3V3
7	LED2_G_L	8	DVDD_3V3
9	LED1_B_L	10	DVDD_3V3
11	SW_RST	12	GND
13	LED2_B_L	14	DVDD_3V3

USB 2.0 Port Pin Assignment

Pin	Signal	Pin	Signal
1	DVDD_USB	2	USB0_CONN_DM
3	USB0_CONN_DP	4	GND
5	GND	6	GND
7	GND	8	GND

JTAG Interface Pin Assignment

Pin	Signal	Pin	Signal
1	DVDD_1V8	2	DVDD_1V8
3	JTAG_TRSTN	4	NC
5	JTAG_TDI	6	GND
7	JTAG_TMS	8	GND
9	JTAG_TCK	10	GND
11	DVDD_1V8	12	GND
13	JTAG_TDO	14	GND
15	JTAG_SRSTN	16	GND
17	GND	18	GND
19	GND	20	GND

UART Pin Assignment

Pin	Signal
1	DVDD_3V3
2	UART_TXD1
3	UART_RXD1
4	GND

MINI_DIN8 Pin Assignment

Pin	Signal
1	NC
2	NC
3	DIN8_TX
4	NC
5	DIN8_RX
6	DTR_IN
7	NC
8	NC
9	GND
10	GND
11	GND

M.2 Slot Pin Assignment (PCIe1)

Top Side		Bottom Side	
1	GND	2	VDD_3V3
3	NC	4	VDD_3V3
5	NC	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	WSI_DAT_IN_PCIE1
15	VDD_XPA_5V	16	NC
17	VDD_XPA_5V	18	GND
19	VDD_XPA_5V	20	WSI_CLK_IN_PCIE1
21	VDD_XPA_5V	22	NC
23	VDD_XPA_5V		
Mechanical key E			
33	GND	32	WSI_DAT_OUT_PCIE1
35	PCIe1_TX0_P	34	GND
37	PCIe1_TX0_N	36	WSI_CLK_OUT_PCIE1
39	GND	38	GND
41	PCIe1_RX0_P	40	NC
43	PCIe1_RX0_N	42	NC
45	GND	44	NC
47	PCIe1_REFCLK_P	46	NC
49	PCIe1_REFCLK_N	48	NC
51	GND	50	NC
53	CLKREQ_3P3_N	52	PERST_3P3
55	WAKE_3P3_N	54	NC
57	GND	56	WDIS_PCIE1
59	NC	58	NC
61	NC	60	NC
63	GND	62	NC
65	NC	64	NC
67	NC	66	NC
69	GND	68	NC
71	NC	70	GND
73	NC	72	VDD_3V3
75	GND	74	VDD_3V3

M.2 Slot Pin Assignment (PCIe2)

Top Side		Bottom Side	
1	GND	2	VDD_3V3
3	NC	4	VDD_3V3
5	NC	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	WSI_DAT_IN
15	VDD_XPA_5V	16	PCIe2_LED1
17	VDD_XPA_5V	18	GND
19	VDD_XPA_5V	20	WSI_CLK_IN
21	VDD_XPA_5V	22	NC
23	VDD_XPA_5V		
Mechanical key E			
33	GND	32	WSI_DAT_OUT_Pcie2
35	PCIe2_TX0_P	34	GND
37	PCIe2_TX0_N	36	WSI_CLK_OUT_Pcie2
39	GND	38	GND
41	PCIe2_RX0_P	40	NC
43	PCIe2_RX0_N	42	NC
45	GND	44	NC
47	PCIe2_REFCLK_P	46	NC
49	PCIe2_REFCLK_N	48	NC
51	GND	50	NC
53	CLKREQ_3P3_N	52	PERST_3P3
55	WAKE_3P3_N	54	NC
57	GND	56	WDIS_Pcie2
59	PCIe2_TX1_P	58	NC
61	PCIe2_TX1_N	60	NC
63	GND	62	NC
65	PCIe2_RX2_P	64	NC
67	PCIe2_RX2_N	66	NC
69	GND	68	NC
71	NC	70	GND
73	NC	72	VDD_3V3
75	GND	74	VDD_3V3

M.2 Slot Pin Assignment (PCIE0)

Top Side		Bottom Side	
1	GND	2	VDD_3V3
3	NC	4	VDD_3V3
5	NC	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	GND
13	NC	14	WSI_DAT_IN_PCIE0
15	VDD_XPA_5V	16	GND
17	VDD_XPA_5V	18	GND
19	VDD_XPA_5V	20	WSI_CLK_IN_PCIE0
21	VDD_XPA_5V	22	GND
23	VDD_XPA_5V		
Mechanical key E			
33	GND	32	WSI_DAT_OUT_PCIE0
35	PCIE0_TX0_P	34	GND
37	PCIE0_TX0_N	36	WSI_CLK_OUT_PCIE0
39	GND	38	GND
41	PCIE0_RX0_P	40	NC
43	PCIE0_RX0_N	42	NC
45	GND	44	BT_PRIORITY
47	PCIE0_REFCLK_P	46	BT_WLAN_ACTIVE
49	PCIE0_REFCLK_N	48	BT_ACTIVE
51	GND	50	NC
53	CLKREQ_3P3_N	52	PERST_3P3
55	WAKE_3P3_N	54	NC
57	GND	56	WDIS_PCIE0
59	NC	58	NC
61	NC	60	NC
63	GND	62	NC
65	NC	64	NC
67	NC	66	NC
69	GND	68	NC
71	NC	70	GND
73	NC	72	VDD_3V3
75	GND	74	VDD_3V3

M.2 Slot Pin Assignment (B Key)

Top Side		Bottom Side	
1	NC	2	VDD_3V3
3	GND	4	VDD_3V3
5	GND	6	Full_Card_Power_Off
7	USB_DP	8	3G_WAN_DISABLE
9	USB_DM	10	NC
11	GND		
Mechanical key B			
21	NC	20	W_DISABLE_N
23	NC	22	VDD_3V3
25	NC	24	NC
27	GND	26	GPS_DISABLE
29	USB0_SS_RXN	28	PLA_S2
31	USB0_SS_RXP	30	SIM_RST
33	GND	32	SIM_CLK
35	USB0_SS_TXN	34	SIM_I/O
37	USB0_SS_TXP	36	SIM_VCC
39	GND	38	NC
41	NC	40	SIM2_CD
43	NC	42	SIM2_I/O
45	GND	44	SIM2_CLK
47	NC	46	SIM2_RST
49	NC	48	SIM2_VCC
51	GND	50	PCIE1_RSTn
53	NC	52	PCIE1_CLK_REQ
55	NC	54	PCIE1_WAKE
57	GND	56	NC
59	NC	58	NC
61	NC	60	NC
63	NC	62	NC
65	NC	64	NC
67	5G_RESET_N	66	SIM_CD
69	NC	68	NC
71	GND	70	VDD_3V3
73	GND	72	VDD_3V3
75	NC	74	VDD_3V3

4. Radio Module Specifications

4.1 Wi-Fi Capability

The WPQ951 board does not include an onboard Wi-Fi radio chipset. Wi-Fi 7 capability is provided by installing compatible Wi-Fi radio modules into the M.2 E-Key slots.

Wi-Fi Standard	IEEE 802.11be (Wi-Fi 7) via M.2 radio module — backward compatible with 802.11ax/ac/n/a/g/b
Frequency Bands	Depends on installed module — supports 2.4 GHz, 5 GHz, 6 GHz (tri-band)
MIMO Configuration	Up to 4×4 MU-MIMO per band (module-dependent)
OFDMA	DL/UL OFDMA supported (module-dependent)
M.2 Slots for Wi-Fi	3× M.2 E-Key PCIe 3.0 slots
Security	WPA3-Personal, WPA3-Enterprise, OWE, WPA2 (backward compatible)
Operating Modes	AP, Station (Client)

4.2 Notes & Recommendations

- For Wi-Fi 7 operation, install Qualcomm-compatible M.2 Wi-Fi 7 radio modules into the E-Key slots.
- For 6 GHz band operation, verify local regulatory approval in your target market before deployment.
- Ensure the M.2 module thermal requirements are met — attach heatsinks where required.
- Wi-Fi performance depends on the installed M.2 radio module specifications. Compex recommends qualified Qualcomm Wi-Fi 7 radio modules for optimal compatibility and performance.

5. Mechanical Specifications

5.1 Board Dimensions

Dimensions (W × H × D)	205 mm × 140 mm × 27.8 mm
PCB Thickness	Standard (multi-layer PCB)

5.2 Environmental Ratings

Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +90°C
Relative Humidity (Operating)	5% to 95%, non-condensing
Relative Humidity (Storage)	Max 90%, non-condensing

5.3 Mounting & Installation Notes

- Allow sufficient clearance around the board for airflow and RF management.
- Route Ethernet and antenna cables away from high-frequency signal traces.
- Use appropriate standoffs for mechanical stability.
- For M.2 Wi-Fi radio modules, ensure adequate RF antenna routing to external antenna connectors.

6. Power Specifications

6.1 Power Requirements

Input Voltage	12 V DC (via DC Jack Connector)
PoE Input	802.3bt standard via 2.5GbE Ethernet port
Power Consumption (Board only, Max)	8.5 W
PoE Output Capability	Up to 802.3bt class (via 10GbE port)

6.2 Power Delivery Protection

- Over-Voltage Protection: Protects against supply voltage surges above rated input.
- Over-Current Protection: Automatically limits current draw to safe levels.
- Reverse Polarity Protection: Guards against incorrect power connection polarity.
- Short Circuit Protection: Prevents PCB damage from momentary short circuits.
- ESD Protection: TVS diodes on all external-facing interface pins.

6.3 Notes & Recommendations

- Use a regulated 12 V DC power supply with adequate current rating for the board and installed M.2 modules.
- Ensure the supply can deliver stable voltage under peak load conditions.
- When using PoE, verify the PoE source meets 802.3bt requirements.

7. Installation & Integration

Follow these steps carefully to set up or install the WPQ951.

7.1 Pre-Installation Checklist

- Verify package contents (Section 2).
- Ensure a 12 V DC regulated power supply with sufficient current capacity is available.
- Prepare M.2 Wi-Fi radio modules and antenna pigtail cables if Wi-Fi operation is required.
- Prepare Ethernet cables (Cat5e minimum; Cat6A or Cat8 recommended for 10GbE).
- Ground yourself with an ESD wrist strap before handling the board.

7.2 M.2 Module Installation

- Power off the board and disconnect all cables before installing M.2 modules.
- For the E-Key socket: insert the M.2 Wi-Fi radio module at a 30° angle, press down, and secure with the M.2 mounting screw. Connect antenna pigtail cables to the U.FL connectors on the M.2 module as per the module's documentation.
- Attach heatsinks or thermal pads to the SoC and any M.2 modules if operating in high-ambient-temperature environments (>50°C).

7.3 Power Connection

- Connect a 12 V DC regulated power supply to the DC Jack connector on the board. Observe correct polarity.
- Alternatively, connect a PoE 802.3bt-compliant source via one of the 10GbE RJ45 ports.
- Apply power. The Power LED should illuminate within 3 seconds. Boot completes within approximately 60 seconds.

7.4 Ethernet Connection

- Connect Ethernet cables to the 2.5GbE or 10GbE RJ45 ports as required for your network topology.
- Once connected, the Ethernet interfaces will be available for network configuration.
- Configure IP addressing — static or DHCP — as required (see Section 8 for default settings).
- Verify link LEDs for each Ethernet port to confirm connectivity.

8. Configuration

The WPQ951 runs an OpenWrt 19.07-based firmware stack and is configured via the LuCI web-based management interface or SSH/serial console command line.

8.1 Default Settings

Default Management IP	192.168.1.1
Default Subnet	192.168.1.0/24
webUI Port	80 (HTTP) / 443 (HTTPS)
Default Username	root
Default Password	(blank)
SSH Access	Port 22 (enabled by default)
UART Baud Rate	115200 bps, 8N1
Default Mode	Router / Access Point
Firmware	OpenWrt 19.07

8.2 Wireless Configuration

Wireless settings must be configured via SSH or serial console command line using UCI commands or by directly editing the configuration files.

- Via SSH: Connect using PuTTY or any SSH client, entering the IP address 192.168.1.1 and port 22.
- Via Serial Console: Connect via the Serial Interface at 115200 bps, 8N1 using a TTL serial converter.
- Wireless configuration files are located at /etc/config/wireless.
- Use UCI commands to modify wireless settings, for example:

```
uci set wireless.wifi0.disabled='0'
```

```
uci set wireless.wifi0.htmode='EHT40'
```

```
uci commit wireless
```

```
wifi
```
- Use `iw dev` to verify radio status after applying changes.

9. Troubleshooting

Power LED not lit	Check 12 V DC power supply voltage and polarity. Verify DC jack connection is secure. Confirm supply provides sufficient current for board and installed modules.
Ethernet link not established	Verify Ethernet cable is fully seated in RJ45 port. Confirm link partner supports the relevant speed (2.5G or 10G). Try a different cable.
Cannot access web interface	Confirm host PC IP is set to 192.168.1.x/24. Disable any VPNs or firewall rules blocking 192.168.1.1. Verify Ethernet link LED is active.
Wi-Fi SSIDs not visible	Check M.2 Wi-Fi module is correctly seated and antenna cables are attached. Confirm module has completed boot (~60 sec). Use iw dev or uci show wireless commands to verify that the wireless radio settings are correctly enabled.
Poor Wi-Fi throughput	Verify antenna orientation and placement. Avoid metal obstructions near antennas. Ensure correct channel and bandwidth settings.
Module overheating	Attach heatsinks to SoC and M.2 modules. Ensure adequate airflow clearance. Verify ambient temperature is within operating range (-20 to +70°C).
PoE device not powering	Confirm PoE source is 802.3bt compliant. Verify the 10GbE port is connected to the PoE-enabled upstream port.
Firmware upgrade fails	Do not power off during update. Use a wired Ethernet connection for firmware upload. Reset to factory defaults before upgrading if previously modified.
Factory Reset	To restore factory default settings: •Press and hold the RESET button for 10 seconds while the module is powered on. •Alternatively, via SSH or serial console, run: <code>rm -rf /overlay/*</code> <code>reboot</code> The board will reboot and restore all settings to factory defaults. This process takes approximately 60 seconds.

10. Safety Precautions

Electrical Safety

- Disconnect power before installing or removing M.2 modules or connecting cables.
- Never exceed the rated input voltage (12 V DC). Overvoltage will permanently damage the board.
- Verify power supply polarity before connecting. Reverse polarity damage is not covered under warranty.
- Keep the board away from conductive materials that may cause short circuits.

RF / Antenna Safety

- Never operate Wi-Fi radio modules without antennas or 50 Ω termination loads on all U.FL ports.
- Maintain a minimum safety distance of 20 cm from the antennas during normal operation.
- For 6 GHz operation, ensure regulatory approval and proper certification for your target market.
- Do not modify antennas or RF circuitry. Unauthorized modifications will void regulatory compliance.

Thermal Safety

- Operating the board above 70°C ambient temperature may cause thermal shutdown or permanent damage. Ensure adequate cooling is installed.
- Do not obstruct ventilation around the board.
- Allow the board to cool down before handling after extended operation.

ESD Precautions

- Handle the board only at a properly grounded ESD workstation.
- Wear an ESD wrist strap connected to ground at all times when handling the board.
- Store the board in its original ESD protective bag when not in use.
- Avoid touching PCB traces, IC pads, or connector pins directly.

11. Technical Support

Compex Systems Pte Ltd provides engineering and technical support for the WPQ951. For technical assistance, integration support, or to report a hardware issue, please contact:

Company	Compex Systems Pte Ltd
Headquarters	Singapore
Sales Enquiries	sales@compex.com.sg
Technical Support	https://compex.com.sg/support-downloads/
Website	https://compex.com.sg
Product Page (WPQ951)	https://compex.com.sg/shop/embedded-board/802-11be-embedded-board/WPQ951/
Qualcomm Design Centre	Qualcomm Authorized Design Centre (ADC) since 2014

Before contacting support, please:

- Review this user guide and the Troubleshooting section (Section 9).
- Note the firmware version (visible in webUI: System > Software).
- Record the MAC address of the board (visible on PCB label or in webUI).
- Describe the issue with steps to reproduce, observed symptoms, and host platform details.

For sample requests, pre-production evaluations, or OEM/ODM partnership enquiries, contact the Compex sales team at sales@compex.com.sg.

12. Full Specifications

Model Number	WPQ951
SoC	Qualcomm IPQ9550 'Alder', Quad-Core ARM Cortex-A73 @ 1.5 GHz
Reference Design	Qualcomm AP.AL02.3
System Memory	2 GB DDR4 (2× 1 GB, 32-bit / 2× 16-bit interface)
NAND Flash	256 MB
NOR Flash	32 MB
eMMC	16 GB
Wi-Fi Standard	IEEE 802.11be (Wi-Fi 7) via M.2 module — backward compatible to 802.11a/b/g/n/ac/ax
MIMO	Up to 4×4 MU-MIMO OFDMA (module-dependent)
M.2 E-Key Slots	3× M.2 (NGFF) E-Key with PCIe 3.0,
M.2 B-Key Slot	1× M.2 (NGFF) B-Key with PCIe 3.0
Ethernet Ports	2× 2.5GbE RJ45 + 1× 10GbE RJ45 (LAN/WAN)
USB	1× USB 2.0
Serial Debug	1× UART 4-Pin Header (TTL)
JTAG	1× JTAG 20-Pin Header
Other Connectors	1× MINI DIN8P, 1× Reset Button, 1× 14-Pin LED Connector
LED Indicators	2× onboard LED indicators
Power Interface	1× DC Jack (12 V), 802.3bt via 10GbE port
Max Power Consumption	8.5 W (board only)
Dimensions (W×H×D)	205 mm × 140 mm × 27.8 mm
Operating Temperature	-20°C to +70°C (Operating), -40°C to +90°C (Storage)
Humidity	5–95% non-condensing (operating); Max 90% (storage)
OS / Firmware	OpenWrt 19.07 (LuCI web interface + SSH CLI)
Certification	REACH & RoHS Compliant
Ordering Code	WPQ951 6A02NR32F2GB-TE

13. Regulatory Information

Declaration of Conformity

The WPQ951 is designed to comply with applicable regional regulatory requirements. End-product manufacturers are responsible for obtaining all necessary regulatory certifications (e.g., FCC, CE, IMDA) for their final product in each target market. The WPQ951 is provided as an embedded module for OEM/ODM integration and does not carry end-product regulatory approval.

6GHz Band Restrictions

Operation in the 6 GHz frequency band (when enabled via an installed M.2 radio module) is subject to national regulatory authority approval. Manufacturers must ensure compliance with local regulations before enabling 6 GHz radio operation. Unauthorized use of restricted frequency bands may be illegal and could cause harmful interference to other services.

REACH & RoHS Compliance

This product is manufactured in compliance with REACH Regulation (EC) No 1907/2006 and RoHS Directive 2011/65/EU (amended by 2015/863/EU). These regulations restrict the use of hazardous substances in electrical and electronic equipment.

Disposal & Recycling

Do not dispose of this product in unsorted municipal waste. This product is subject to the Waste Electrical and Electronic Equipment (WEEE) Directive. At the end of its service life, return the product to an authorized recycling facility or contact Compex Systems for take-back options.

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