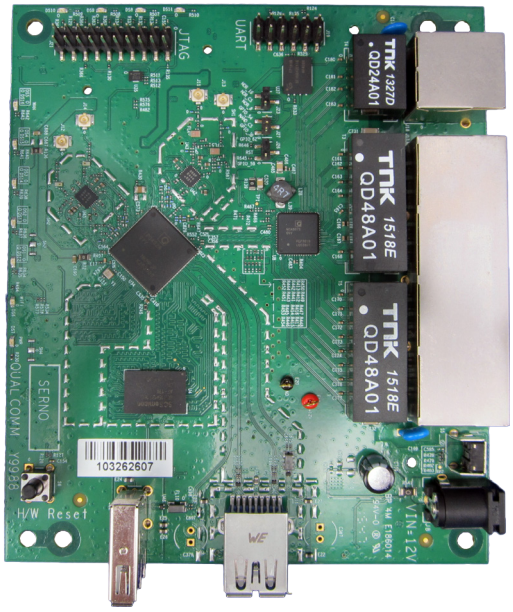
Multi-function IPQ4028 Embedded Board with on-board Wireless

600MHz CPU / 5x GE Port / Dual Band 802.11ac Wave 2



Model: AP-DK03

KEY FEATURES

- Qualcomm Atheros IPQ4028 Quad-core ARM (cortex-A7 NEON FPU) 600MHz CPU
- 128MB System Memory
- 32MB NOR Flash
- On-board 2.4GHz
- On-board 5GHz
- IEEE 802.11ac compliant & backward compatible with 802.11a/b/g/n
- 5x Gigabit Ethernet LAN RJ45 port with Auto MDI-X
- DC input 12V/2A

APPLICATIONS

- Optimized for 802.11ac Wave 2 Module Support
- 802.11ac/a/b/g/n Access Point
- Point-to-Point High Capacity Wireless Bridge
- Point-to-MultiPoint High Capacity Wireless Bridge
- Wireless Base Station
- Wireless Customer-Premises Equipment (CPE)

Specifications

Chipset	Board CPU: Qualcomm Atheros IPQ4028 600MHz
System Memory	128MB DDR3
NOR Flash	32MB
Wireless	Built-in 2.4GHz 802.11b/g/n, 2x U.FL connectors Built-in 5GHz 802.11ac/a/n, 2x U.FL connectors Total 4x U.FL connectors
Expansion	1x USB 3.0 1x USB 2.0
Interface	5x Gigabit Port (Auto MDI-X) 1x Serial Port via UART 12 Pin Connector[1] 1x JTAG 20 Pin Connector[2]
Reset Button	1x H/W Reset 1x S/W Reset
LED	7x LED Indicators
Power Over Ethernet	N/A
DC Power	1x DC Jack Connector: 12V/2A
Power Consumption	24 Watt (Max)
Operating System	QCA Reference Firmware
Certification	RoHS Compliance
Environmental	Temperature: Operating: -20°C to 70°C, Storage: -40°C to 90°C Humidity (non-condensing): Operating: 5% to 95%, Storage: Max. 90%
Dimensions (W x D x H)	155.5 x 113 x 23.5mm

1.The UART is a 12-pin header (TTL). A Serial Converter is available to change the TTL signals on the board to RS-232 signals for debugging.

2.The JTAG Port is a 14-pin header. A JTAG kit is for writing your self-developed loader and firmware directly.

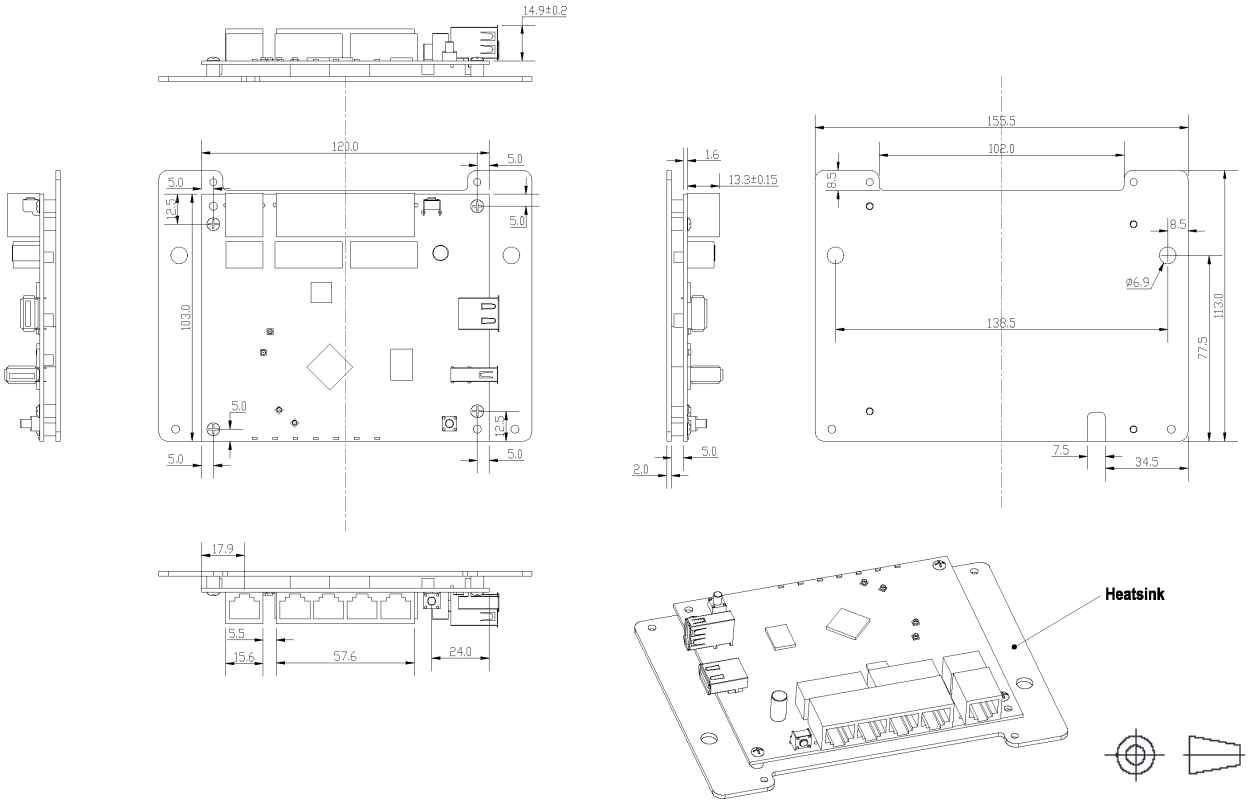
**Configurations are subject to change without notifications.*

RF Performance Table

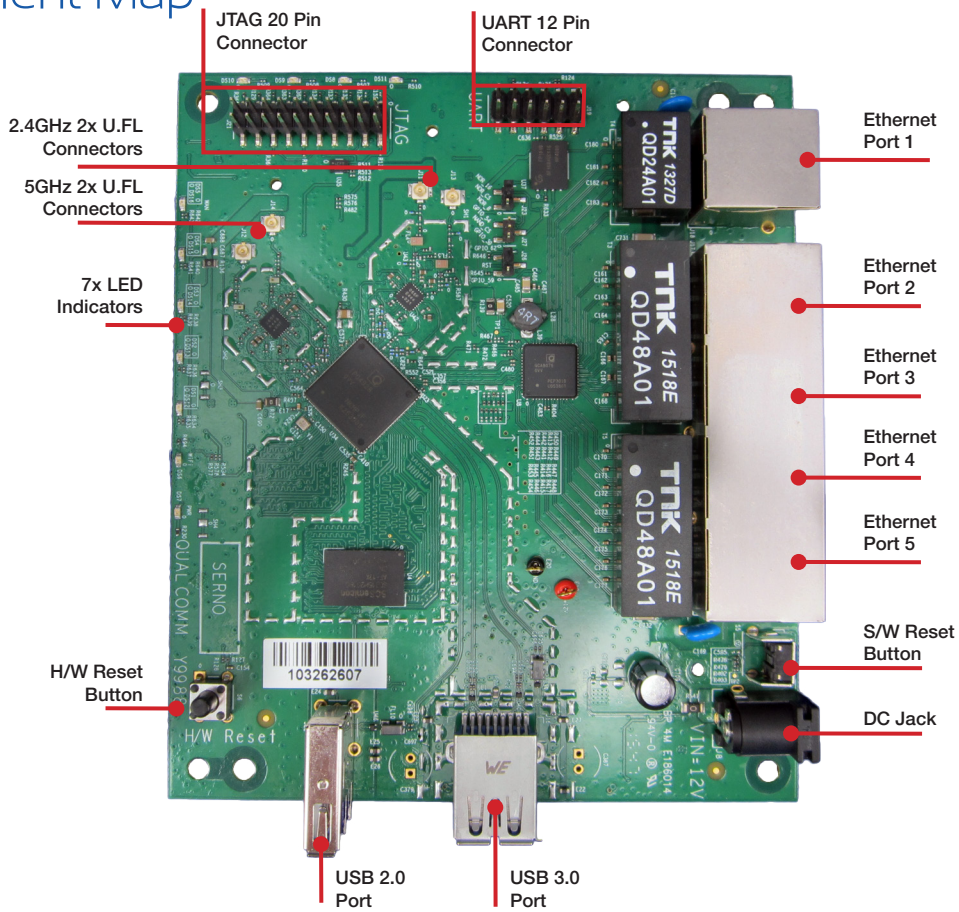
	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
2.4GHz 802.11b/g	1Mbps	TBA	TBA	±2dB
	6Mbps	TBA	TBA	±2dB
	54Mbps	TBA	TBA	±2dB
2.4GHz 802.11ac HT20	MCS 0	TBA	TBA	±2dB
	MCS 1	TBA	TBA	±2dB
	MCS 2	TBA	TBA	±2dB
	MCS 3	TBA	TBA	±2dB
	MCS 4	TBA	TBA	±2dB
	MCS 5	TBA	TBA	±2dB
	MCS 6	TBA	TBA	±2dB
	MCS 7	TBA	TBA	±2dB
	MCS 8	TBA	TBA	±2dB
2.4GHz 802.11ac HT40	MCS 0	TBA	TBA	±2dB
	MCS 1	TBA	TBA	±2dB
	MCS 2	TBA	TBA	±2dB
	MCS 3	TBA	TBA	±2dB
	MCS 4	TBA	TBA	±2dB
	MCS 5	TBA	TBA	±2dB
	MCS 6	TBA	TBA	±2dB
	MCS 7	TBA	TBA	±2dB
	MCS 8	TBA	TBA	±2dB
	MCS 9	TBA	TBA	±2dB
5GHz 802.11a	6Mbps	TBA	TBA	±2dB
	54Mbps	TBA	TBA	±2dB
5GHz 802.11n/ac HT20	MCS 0	TBA	TBA	±2dB
	MCS 1	TBA	TBA	±2dB
	MCS 2	TBA	TBA	±2dB
	MCS 3	TBA	TBA	±2dB
	MCS 4	TBA	TBA	±2dB
	MCS 5	TBA	TBA	±2dB
	MCS 6	TBA	TBA	±2dB
	MCS 7	TBA	TBA	±2dB
	MCS 8	TBA	TBA	±2dB
5GHz 802.11n/ac HT40	MCS 0	TBA	TBA	±2dB
	MCS 1	TBA	TBA	±2dB
	MCS 2	TBA	TBA	±2dB
	MCS 3	TBA	TBA	±2dB
	MCS 4	TBA	TBA	±2dB
	MCS 5	TBA	TBA	±2dB
	MCS 6	TBA	TBA	±2dB
	MCS 7	TBA	TBA	±2dB
	MCS 8	TBA	TBA	±2dB
	MCS 9	TBA	TBA	±2dB
5GHz 802.11n/ac HT80	MCS 0	TBA	TBA	±2dB
	MCS 1	TBA	TBA	±2dB
	MCS 2	TBA	TBA	±2dB
	MCS 3	TBA	TBA	±2dB
	MCS 4	TBA	TBA	±2dB
	MCS 5	TBA	TBA	±2dB
	MCS 6	TBA	TBA	±2dB
	MCS 7	TBA	TBA	±2dB
	MCS 8	TBA	TBA	±2dB
	MCS 9	TBA	TBA	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
2.4GHz 802.11b/g	1Mbps	TBA	±2dB
	6Mbps	TBA	±2dB
	54Mbps	TBA	±2dB
2.4GHz 802.11ac HT20	MCS 0	TBA	±2dB
	MCS 1	TBA	±2dB
	MCS 2	TBA	±2dB
	MCS 3	TBA	±2dB
	MCS 4	TBA	±2dB
	MCS 5	TBA	±2dB
	MCS 6	TBA	±2dB
	MCS 7	TBA	±2dB
	MCS 8	TBA	±2dB
2.4GHz 802.11ac HT40	MCS 0	TBA	±2dB
	MCS 1	TBA	±2dB
	MCS 2	TBA	±2dB
	MCS 3	TBA	±2dB
	MCS 4	TBA	±2dB
	MCS 5	TBA	±2dB
	MCS 6	TBA	±2dB
	MCS 7	TBA	±2dB
	MCS 8	TBA	±2dB
	MCS 9	TBA	±2dB
5GHz 802.11a	6Mbps	TBA	±2dB
	54Mbps	TBA	±2dB
5GHz 802.11n/ac HT20	MCS 0	TBA	±2dB
	MCS 1	TBA	±2dB
	MCS 2	TBA	±2dB
	MCS 3	TBA	±2dB
	MCS 4	TBA	±2dB
	MCS 5	TBA	±2dB
	MCS 6	TBA	±2dB
	MCS 7	TBA	±2dB
	MCS 8	TBA	±2dB
5GHz 802.11n/ac HT40	MCS 0	TBA	±2dB
	MCS 1	TBA	±2dB
	MCS 2	TBA	±2dB
	MCS 3	TBA	±2dB
	MCS 4	TBA	±2dB
	MCS 5	TBA	±2dB
	MCS 6	TBA	±2dB
	MCS 7	TBA	±2dB
	MCS 8	TBA	±2dB
	MCS 9	TBA	±2dB
5GHz 802.11n/ac HT80	MCS 0	TBA	±2dB
	MCS 1	TBA	±2dB
	MCS 2	TBA	±2dB
	MCS 3	TBA	±2dB
	MCS 4	TBA	±2dB
	MCS 5	TBA	±2dB
	MCS 6	TBA	±2dB
	MCS 7	TBA	±2dB
	MCS 8	TBA	±2dB
	MCS 9	TBA	±2dB

Mechanical Dimensions



Component Map



Firmware / Software

The AP-DK03 is shipped with QCA Reference firmware.

Supported Operating System	• QCA Reference Firmware

1. QCA Reference Firmware is available without any technical support by Compex unless otherwise stated.

Packaging Information

Packaging Type	Dimensions	Nett Weight	Gross Weight
Carton Box (5 units)	422 x 410 x 240 mm	4.34 kg	4.95 kg