

### Description

DR-AP4029-M is a 2x2 2.4G&5G high power Radio AP Router which including  
1 x DR40X9(IPQ4019/IPQ4029) Board;  
4 x DRA25 Antenna;  
1 x Enclosure.

### DRA25 Antenna

#### Electrical Properties :

- Frequency Range:2.4~2.5&5.15~5.85GHz
- Impedance: 50Ω
- VSWR: 2.0 Max( ≤2.0)
- Gain(peak): 6±0.5dBi
- Polarization: Linear; Vertical

#### Physical Properties :

- Cable: RG- 141 Cable
- Connector: N-type PLUG
- Antenna CAP: ABS
- OperatingTemp: -40℃~+65℃
- Storage Temp: -40℃~+75℃
- CableTemp: <+250℃

### Enclosure

- IP67 Waterproof Level
- Support Wallys' PCBA Mainboard



## Absolute Maximum Rating

Parameter	Rating	Unit
Supply Voltage	24V~48	V
Operating Temperature Range	-40 to +70	°C
Storage Temperature Range	-45 to +105	°C
Operating Humidity Range	5 to +95 (non-condensing)	%
Storage Humidity Range	0 to +90 (non-condensing)	%

## Hardware Specifications

Symbol	Parameter
CPU	IPQ4029/IPQ4019
Antenna Connector	2 x 5G MMCX connectors;2x2.4G MMCX
10/100/1000Mbps Gigabit Ethernet	2 x RJ45
3G/4G connector	1 x minipcie 3G/4G connector support with two sim card
USB connector	1xUSB 3.0 connector
POE	24V~48V passive POE
DC Jack	24V~48V power supply
ROHS Compliance	Yes
Dimension	115mm x 105mm x 16mm
Max Power	48. 1V x 0. 180A= 8.658W
Nor Flash	2MB~32MB
Nand Flash	128MB
DDR	256MB~512MB

## Radio TX Specifications(5180MHz-5825MHz)

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
802. 11a	6 Mbps	27dBm	30dbm	±2dB
	54 Mbps	23dBm	26dbm	±2dB
802. 11n HT20	MCS0, MCS8	26dBm	29dbm	±2dB
	MCS7, MCS15	22dBm	25dbm	±2dB
802. 11n HT40	MCS0, MCS8	25dBm	28dbm	±2dB
	MCS7, MCS15	21dBm	24dbm	±2dB
802. 11ac	MCS0, MCS10,MCS20	25dBm	28dbm	±2dB
	MCS9,MCS19,MCS29	19dBm	22dbm	±2dB

## Radio RX Specifications(5180MHz-5825MHz)

Operating Mode	Data Rate	Sensitivity
802. 11a	6 Mbps	-96dBm
	54 Mbps	-78dBm
802. 11n HT20	MCS0, MCS8	-93dBm
	MCS7, MCS15	-73dBm
802. 11n HT40	MCS0, MCS8	-90dBm
	MCS7, MCS15	-70dBm
802. 11AC HT40	MCS0, MCS10,MCS20	-90dBm
	MCS9,MCS19,MCS29	-67dBm
802. 11AC HT80	MCS0, MCS10,MCS20	-88dBm
	MCS9,MCS19,MCS29	-62dBm

## Radio TX Specifications(2412MHz-2482MHz)

Operating Mode	Data Rate	Power		Tolerance
		1 Chain	2 Chains	
802. 11g	6 Mbps	27dbm	30dbm	±2dB
	54 Mbps	25dbm	28dbm	±2dB
802. 11n HT20	MCS0, MCS8	26dbm	29dbm	±2dB
	MCS7, MCS15	25dbm	28dbm	±2dB
802. 11n HT40	MCS0, MCS8	26dbm	29dbm	±2dB
	MCS7, MCS15	24dbm	27dbm	±2dB

## Radio RX Specifications(2412MHz-2482MHz)

Operating Mode	Data Rate	Sensitivity
802. 11g	6 Mbps	-96dBm
	54 Mbps	-78dBm
802. 11n HT20	MCS0, MCS8	-93dBm
	MCS7, MCS15	-73dBm
802. 11n HT40	MCS0, MCS8	-90dBm
	MCS7, MCS15	-70dBm

## Version

Item	Information
DR40X9- 1	CPU is IPQ4019
DR40X9-2	CPU is IPQ4029

## LED & GPIO header

Item	Information	Note
1	PWR LED	
2	Eth1 LED	
3	Eth2 LED	
4	2.4G LED	GPIO32
5	5G LED	GPIO50
6	Strength LED	GPIO36
7	Strength LED	GPIO39
8	NC	
9	GND	
10	Uart 1_TX	GPIO8
11	Uart 1_RX	GPIO9
12	NC	
13	NC	
14	NC	
15	GND	
16	PWR	

## Serial Port

Item	Information	Note
1	PWR	
2	Uart0 TX	
3	Uart0 RX	
4	GND	

## GPIO

Item	Information	Note
GPIO11	Control for the switch of SIM cards	