

MIMO OAP Series

Access-Point Wireless Multi-Function Dual Band 2x2 MiMo N600 Outdoor



Model: BR-OAP42

KEY FEATURES

- Qualcomm Atheros 560MHz Processor AR9342
- IEEE 802.11a/b/g/n compliant
- 2.4GHz and 5GHz concurrent radios
- 2.4GHz 26dBm and 5GHz 26dBm aggregate power
- Data rates of up to 300Mbps in 802.11n 40 MHz channels
- Antenna Alignment Site Survey - LEDs/Buzzer
- Distance Adjustment for long range transmission
- Built-in 2 x 7dBi 2.4GHz antenna Omni Dipole array
- Built-in 17dBi 5GHz Directive antenna Dual-polarization
- Weatherproof Casing

APPLICATIONS

- Simultaneously:
Access-Point & Point-to-Point / Point-to-MultiPoint
- Only:
Access-Point
Point-to-Point / Point-to-MultiPoint

Specifications

Chipset	Board CPU: Qualcomm Atheros AR9342 560MHz Radio Card: Qualcomm Atheros AR9283 (2.4GHz)
System Memory	64MB DDR2
NOR Flash	16MB
Wireless Standard	2.4/5GHz 802.11a/b/g/n
Speed Wireless	300Mbps@2.4GHz - 300Mbps@5GHz
Tx Power	26dBm@2.4/5GHz
Antenna	5GHz: Integrated 17dBi Dual-polarization Directive 2.4GHz: Integrated 2 x 7dBi Dipole Omnidirectional
Interface	2x Fast Ethernet Port (Auto MDI-X)
Reset Button	Yes
LED	Indicators: Power LED, LAN Activity, 4x Signal Indicator
Power Over Ethernet (on LAN0)	Passive PoE 24V
DC Power	No DC jack connector
Power Consumption	7.5W (Max)
Operating System	Bredlo O.S
Certification	FCC and CE Certified, RoHS Compliance
Environment	Temperature: Operating: -20°C to 70°C, Storage: -40°C to 90°C Humidity (non-condensing): Operating: 5% to 95%, Storage: Max. 90%
Enclosure Type	Weatherproof and IP53 Compliant
Dimensions	278.5 x 122.2 x 94.5 mm

RF Performance Table On-board Radio (5 GHz)

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
5GHz 802.11a	6Mbps	23dBm	26dBm	±2dB
	9Mbps	23dBm	26dBm	±2dB
	12Mbps	23dBm	26dBm	±2dB
	18Mbps	23dBm	26dBm	±2dB
	24Mbps	23dBm	26dBm	±2dB
	36Mbps	21dBm	24dBm	±2dB
	48Mbps	19dBm	22dBm	±2dB
	54Mbps	18dBm	21dBm	±2dB
5GHz 802.11n HT20	MCS 0	22dBm	25dBm	±2dB
	MCS 1	21dBm	24dBm	±2dB
	MCS 2	21dBm	24dBm	±2dB
	MCS 3	21dBm	24dBm	±2dB
	MCS 4	20dBm	23dBm	±2dB
	MCS 5	19dBm	22dBm	±2dB
	MCS 6	18dBm	21dBm	±2dB
	MCS 7	16dBm	19dBm	±2dB
5GHz 802.11n HT40	MCS 0	21dBm	24dBm	±2dB
	MCS 1	20dBm	23dBm	±2dB
	MCS 2	20dBm	23dBm	±2dB
	MCS 3	20dBm	23dBm	±2dB
	MCS 4	19dBm	22dBm	±2dB
	MCS 5	18dBm	21dBm	±2dB
	MCS 6	17dBm	20dBm	±2dB
	MCS 7	16dBm	19dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	-94dBm	±2dB
	9Mbps	-94dBm	±2dB
	12Mbps	-92dBm	±2dB
	18Mbps	-91dBm	±2dB
	24Mbps	-90dBm	±2dB
	36Mbps	-85dBm	±2dB
	48Mbps	-80dBm	±2dB
	54Mbps	-75dBm	±2dB
5GHz 802.11n HT20	MCS 0	-94dBm	±2dB
	MCS 1	-92dBm	±2dB
	MCS 2	-89dBm	±2dB
	MCS 3	-85dBm	±2dB
	MCS 4	-80dBm	±2dB
	MCS 5	-75dBm	±2dB
	MCS 6	-74dBm	±2dB
	MCS 7	-72dBm	±2dB
5GHz 802.11n HT40	MCS 0	-90dBm	±2dB
	MCS 1	-88dBm	±2dB
	MCS 2	-85dBm	±2dB
	MCS 3	-82dBm	±2dB
	MCS 4	-80dBm	±2dB
	MCS 5	-75dBm	±2dB
	MCS 6	-73dBm	±2dB
	MCS 7	-70dBm	±2dB

Wireless Module (2.4 GHz)

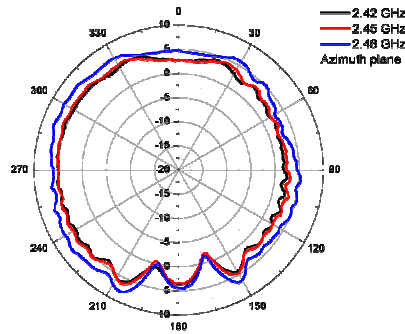
	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
2.4GHz 802.11b	1Mbps	23dBm	26dBm	±2dB
	2Mbps	23dBm	26dBm	±2dB
	5.5Mbps	23dBm	26dBm	±2dB
	11Mbps	23dBm	26dBm	±2dB
2.4GHz 802.11g	6-24Mbps	23dBm	26dBm	±2dB
	36Mbps	22dBm	25dBm	±2dB
	48Mbps	20dBm	23dBm	±2dB
	54Mbps	19dBm	22dBm	±2dB
2.4GHz 802.11n HT20	MCS 0	23dBm	26dBm	±2dB
	MCS 1	23dBm	26dBm	±2dB
	MCS 2	23dBm	26dBm	±2dB
	MCS 3	22dBm	25dBm	±2dB
	MCS 4	21dBm	24dBm	±2dB
	MCS 5	20dBm	23dBm	±2dB
	MCS 6	19dBm	22dBm	±2dB
	MCS 7	18dBm	21dBm	±2dB
2.4GHz 802.11n HT40	MCS 0	23dBm	26dBm	±2dB
	MCS 1	23dBm	26dBm	±2dB
	MCS 2	23dBm	26dBm	±2dB
	MCS 3	22dBm	25dBm	±2dB
	MCS 4	21dBm	24dBm	±2dB
	MCS 5	20dBm	23dBm	±2dB
	MCS 6	19dBm	22dBm	±2dB
	MCS 7	18dBm	21dBm	±2dB

	Data Rate	RX Specifications Sensitivity	Tolerance
2.4GHz 802.11g	6Mbps	-96dBm	±2dB
	9Mbps	-96dBm	±2dB
	12Mbps	-95dBm	±2dB
	18Mbps	-93dBm	±2dB
	24Mbps	-90dBm	±2dB
	36Mbps	-87dBm	±2dB
	48Mbps	-83dBm	±2dB
	54Mbps	-81dBm	±2dB
2.4GHz 802.11n HT20	MCS 0	-96dBm	±2dB
	MCS 1	-94dBm	±2dB
	MCS 2	-91dBm	±2dB
	MCS 3	-87dBm	±2dB
	MCS 4	-85dBm	±2dB
	MCS 5	-82dBm	±2dB
	MCS 6	-81dBm	±2dB
	MCS 7	-79dBm	±2dB
2.4GHz 802.11n HT40	MCS 0	-92dBm	±2dB
	MCS 1	-90dBm	±2dB
	MCS 2	-87dBm	±2dB
	MCS 3	-86dBm	±2dB
	MCS 4	-84dBm	±2dB
	MCS 5	-82dBm	±2dB
	MCS 6	-81dBm	±2dB
	MCS 7	-77dBm	±2dB

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RF Performance Information

Gain patterns for 7dBi 2.4GHz Omni Dipole array antenna

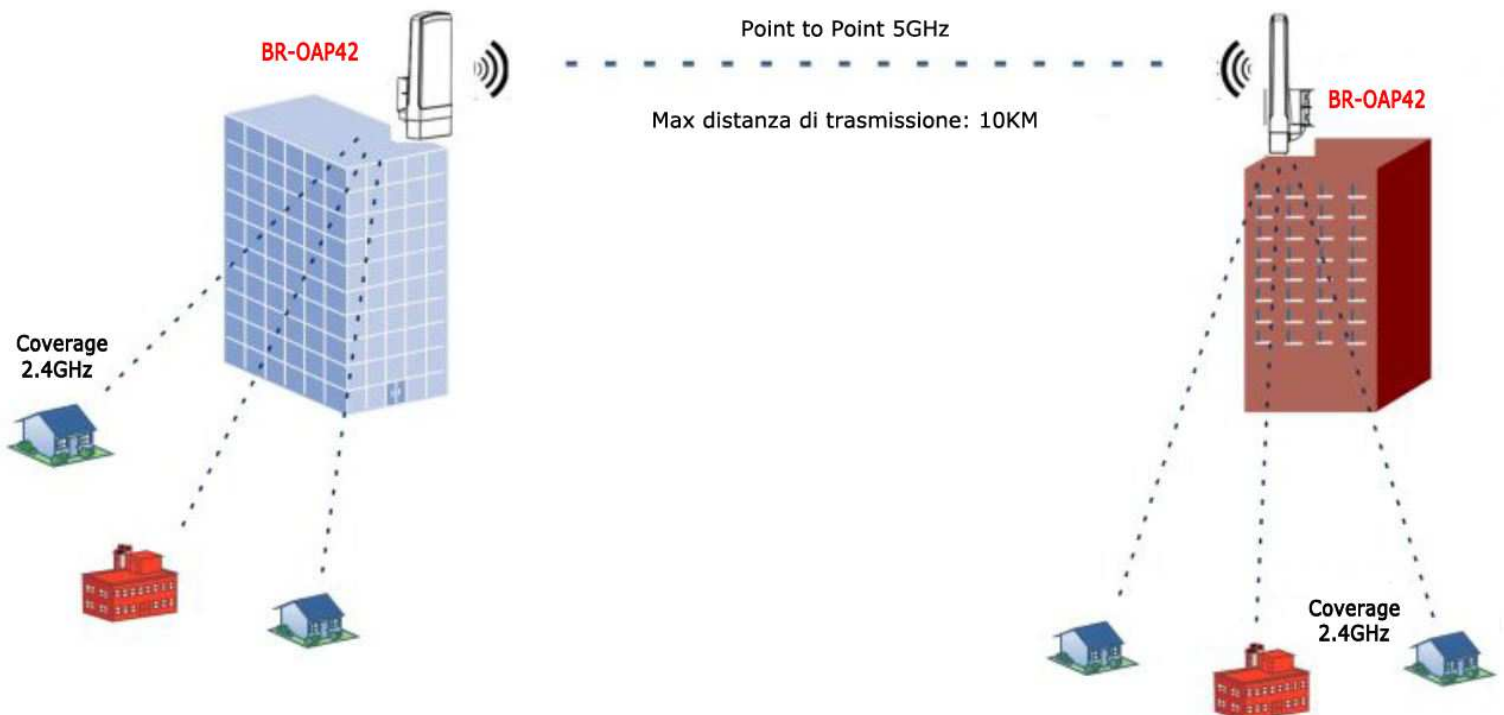


Frequency (GHz)	Peak Gain (dBi)*
2.42	6.124
2.45	6.284
2.48	7.958

*Peak gain refers to the maximum gain value in the azimuth plane.

Please note that the nulls occurring at around 165° and 195° is most probably due to the cable effects. Excluding these nulls, typical gain variation is around 3-4dB.

Applicazione PtP 5GHz con 2.4GHz Coverage AP Omnidirezionale

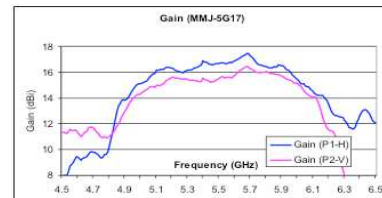


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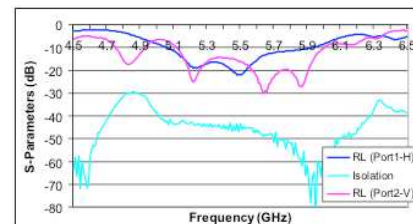
RF Performance Information

Gain	17dBi
Radiation	Directional
Frequency Range	5.1-5.9 GHz
Polarization	Dual – Polarization
Azimuth -3dB Beamwidth	Horizontal(Port 1): 30 degrees Vertical(Port 2): 33 degrees
Elevation -3dB Beamwidth	Horizontal(Port 1): 17 degrees Vertical(Port 2): 17degrees
Isolation	-40dB (Max)
Front-to-Back Ratio	-30dB (Max)
VSWR	Horizontal (Port 1) : < 1: 1.87; Vertical (Port 2): < 1: 1.55
Cross Polarisation Isolation	-28dB (Max)
SideLobe	<-12dB

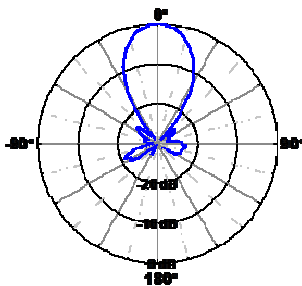
Gain Plot



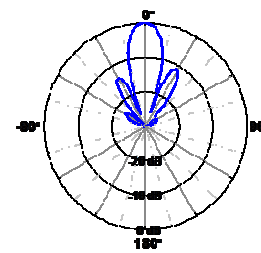
Return Loss & Isolation Plot



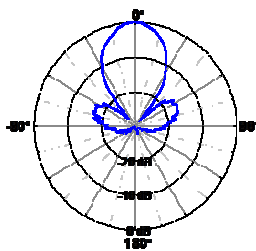
Polar Plots (At 5.6GHz)



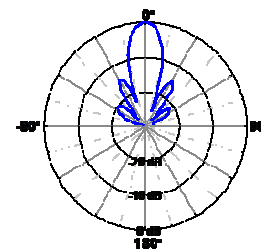
H-Pol Azimuth (Port 1 - H)



H-Pol Elevation (Port 2 - V)

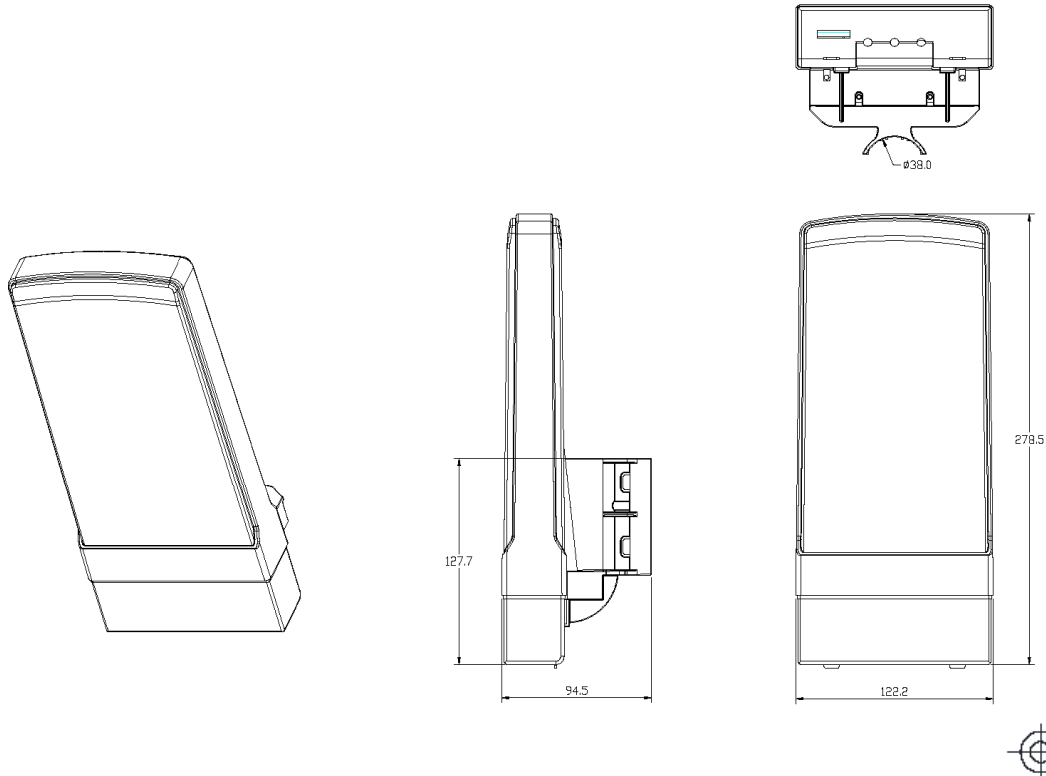


V-Pol Azimuth (Port 2 - V)



V-Pol Elevation (Port 1 - H)

Dimensional Drawing



Breldo O.S Features

It is developed based on the Linux platform and features the latest Qualcomm Atheros drivers with graphic web interface. It combines all of the best in one system. It offers many levels of customization.

Powerful Wireless Features

- Wireless Distribution System (WDS) AP and Client Mode
- Set Transmit Power dBm
- Setting Wireless
- Security Wireless
- Mesh Networking (Coming Soon)
- AP Management Controller (Coming Soon)

Enhanced Control

- User-Friendly Graphical User Interface
- Network Diagnostic Utility
- Real-time Network Load Graphs
- QoS (Quality of Service)
- Scheduling Wireless

BREDO ITALIA
ENGINEERING WIRELESS

Changes: 0 AdminStrator

Breldo O.S v1.0
Histogram: QCA-Series Local: 0.1.0.0.21.0.1.2
Model: Corpor WDS33

Status Uptime: 0h 15m 37s

Overview

- Router
- Realtime Graphs
- System
- Network
- Interfaces
- Wireless
- Diagnostics
- Bandwidth Control
- Logout

Status

Link Status: -30dBm Signal Strength (dBm)

Wireless

Atheros 912.1Mbps Radio Wireless Controller

SSID: 2:14:00:20:20:38	Encryption: WPA2-PSK (TKIP)
Mode: Client	RX Rate: 1 Mbit/s
Channel: 1 (2.437 GHz)	TX Rate: 104 Mbit/s
Bitrate: 124 Mbit/s	
MAC Address: 04:7D:21:18:F7:6D	
BSSID: 04:7D:21:18:F7:6D	

Associated Stations (0)

MAC-Address	Network	Signal	Noise	TX Rate	RX Rate
No information available					

System

Router Name	QCA-Series
Router Model	91-QCA31
Firmware Version	Breldo O.S v1.0
Kernel Version	3.18.45
Local Time	Wed Jan 19 20:51:27 2017

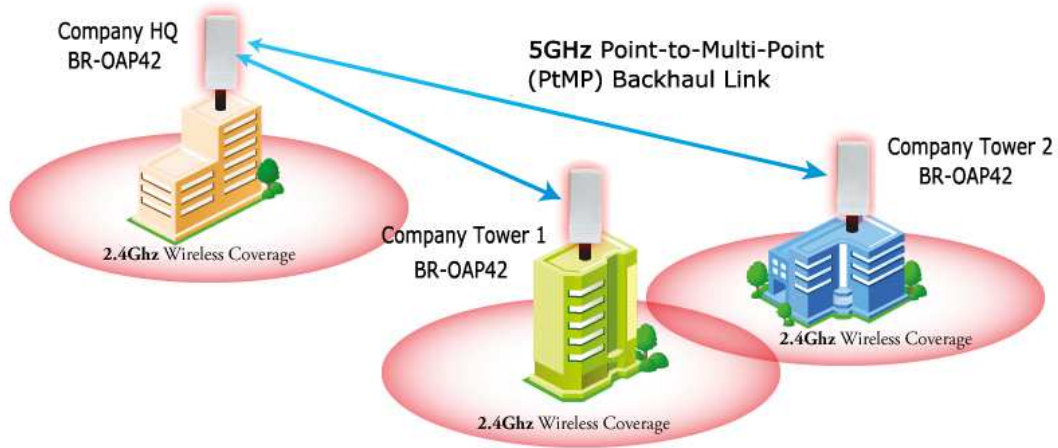
Memory

Total Available	45892 kB / 51124 kB (79%)
Free	32224 kB / 51124 kB (59%)

Network

Network	Status
LAN	Uptime: 0h 15m 14s MAC Address: 04:7D:21:18:F7:6D Protocol: 802.3 RX: 26.57 Mbit/s (4545 Pkts.) TX: 1.81 Mbit/s (4712 Pkts.) IPV4: 192.168.1.24 IPV6: FE07:8015:403D::184

Powered by BreldoItalia Engineering Wireless



Applicazione PtMP 5GHz con 2.4GHz Coverage AP Omnidirezionale

Firmware/Software

The BR-OAP42 is shipped with Breldo O.S firmware.

Supported Operating System	Breldo Operating System
Supported AP Management Controller	Coming Soon
Mesh Networking	Coming Soon

Ordering Options

Item	Antenna	Power Solutions	Radio Output	Power Supply
BR-OAP42	2x7 dBi 2.4 GHz / 17dBi 5GHz Dual-Band	Passive PoE: 24V	5GHz 26dBm	US
BR-OAP42	2x7 dBi 2.4 GHz / 17dBi 5GHz Dual-Band	Passive PoE: 24V	5GHz 26dBm	EU

Packaging Content

Item	Quantity
BR-OAP42 Outdoor Access Point	1
Read Me First Documentation	1
GE Passive 24V PoE Adapter	1
Mounting Bracket	1