

MIMO Junior Series

Single Band 2x2 MIMO 802.11a/n Long Range Outdoor Access Point
560MHz CPU / 5GHz 300Mbps

Model: MMJ342



KEY FEATURES

- Qualcomm Atheros 560MHz Processor AR9342
- IEEE 802.11a/n compliant
- 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 17dBi 5GHz Dual-polarization antenna
- Weatherproof Casing
- 2 x RP-SMA Male Connector for External Antenna (optional)
- Support AP Mass Management Software via SNMP Protocol

APPLICATIONS

- 802.11a/n AP
- Point-to-Point / Point-to-Multipoint / Coverage
- Wireless Customer-Premises Equipment (CPE)

Specifications

Chipset	CPU: Qualcomm Atheros AR9342 560MHz
System Memory	64MB DDR2
NOR Flash	16MB
Antenna	5GHz: Integrated 17dBi Dual-polarization antenna
Interface	2x Fast Ethernet Port (Auto MDI-X) 1x JTAG 14 Pin Connector ¹ 1x Serial Port 4 Pin Connector ²
Reset Button	Yes
LED	Indicators: Power LED, LAN Activity, 4x Signal Indicator
Power Over Ethernet (on LAN0)	Passive PoE 24V (LV version), IEEE 802.3af/at or Passive PoE 36-56V (HV version)
DC Power	No DC jack connector
Power Consumption	5W (Max)
Supported Operating System	CompexWRT or OpenWRT ² /LEDE
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
Other Features	Surge Suppressor, Watchdog Timer

1. These features can only be accessed on the embedded board after removing the enclosure.

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

Configurations are subject to change without notifications.

RF Performance Table On-board Radio (WPJ342)

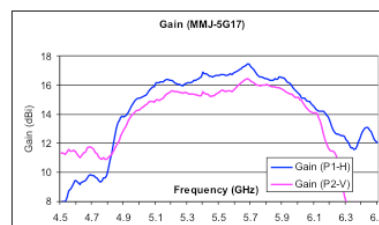
	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
5GHz 802.11a	6Mbps	23dBm	26dBm	±2dB
	9Mbps	23dBm	26dBm	±2dB
	12Mbps	23dBm	26dBm	±2dB
	18Mbps	23dBm	26dBm	±2dB
	24Mbps	23dBm	26dBm	±2dB
	36Mbps	21dBm	24dBm	±2dB
	48Mbps	19dBm	22dBm	±2dB
	54Mbps	18dBm	21dBm	±2dB
5GHz 802.11n HT20	MCS 0	22dBm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

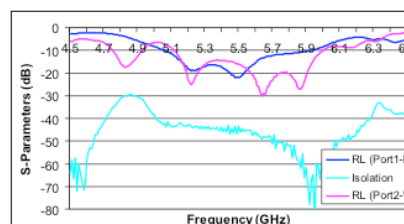
RF Performance Information

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): 33degrees
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

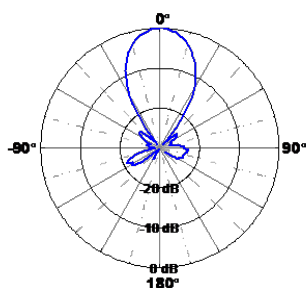
Gain Plot



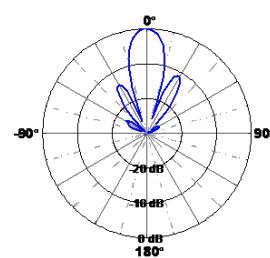
Return Loss & Isolation Plot



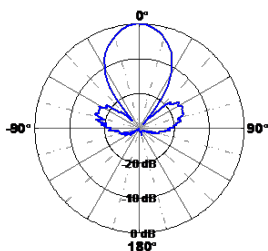
Polar Plots (At 5.6GHz)



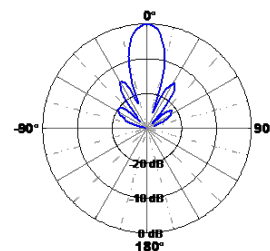
H-Pol Azimuth (Port 1 - H)



H-Pol Elevation (Port 2 - V)

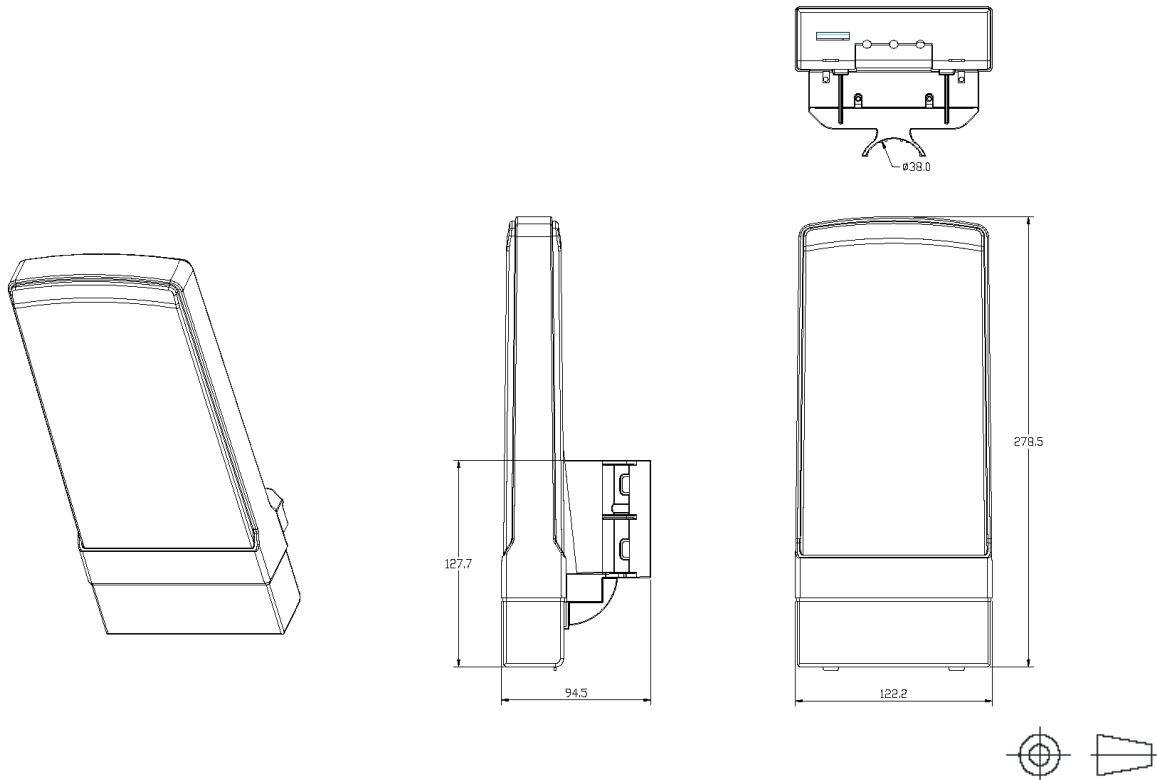


V-Pol Azimuth (Port 2 - V)



V-Pol Elevation (Port 1 - H)

Dimensional Drawing



CompexWRT Features

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

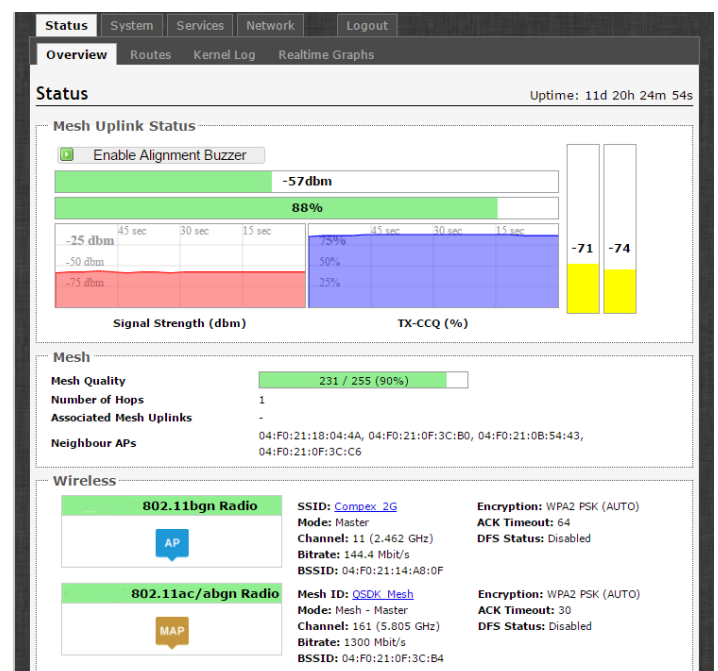
Powerful Wireless Features

- Qualcomm Atheros Drivers
- Wireless Distribution System (WDS) AP and Client Mode
- Seamless Mesh Networking

Enhanced Control

- User-friendly LuCI Graphical User Interface
- Works with Compex Network Management System (CNMS)
- Powerful Network Diagnostic Utilities
- Real-time Network Load Graphs

Find out more at <http://wiki.compex.com.sg/>



Firmware / Software

The MMJ342 is shipped with CompexWRT firmware. SDKs with QCA binary drivers are available for software developers.

Supported Operating System	<ul style="list-style-type: none"> CompexWRT Operating System OpenWRT/LEDE Operating System¹
Supported Mass Management Software	<ul style="list-style-type: none"> CNMS AP Controller Software²

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

2. CNMS AP Controller only compatible with MMJ342 running CompexWRT.

*Configurations are subject to change without notifications.

Ordering Options

Item	Antenna	Power Solutions	Radio Output	Power Supply
MMJ342LV	17dBi 5GHz Dual-polarization antenna	Passive PoE: 24V	5GHz 26dBm	US
MMJ342LV	17dBi 5GHz Dual-polarization antenna	Passive PoE: 24V	5GHz 26dBm	EU

Packaging Content

Item	Quantity
MMJ342 Outdoor Access Point	1
Read Me First Documentation	1
FE Passive 24V PoE Adapter	1
Mounting Bracket	1

Customization Options

The MMJ342 can be customized for volume applications. Contact our sales representatives for more information.

Increase System Memory up to 128 MB	Reduce NOR Flash to 8 MB	Removing of Peripherals
Antenna Customization	For more customization, contact us at sales@compex.com.sg	

Packaging Information

Packaging Type	Dimensions	Nett Weight	Gross Weight
Carton Box (10 units)	675 x 310 x 220 mm	7.09kg	7.82kg