

## **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 powert
- 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

CPU: Qualcomm Atheros AR9342 560MHz		
64MB DDR2		
16MB		
5GHz: Integrated 17dBi Dual-polarization antenna		
2x Fast Ethernet Port (Auto MDI-X) 1x JTAG 14 Pin Connector <sup>1</sup> 1x Serial Port 4 Pin Connector <sup>2</sup>		
Yes		
Indicators: Power LED, LAN Activity, 4x Signal Indicator		
Passive PoE 24V (LV version), IEEE 802.3af/at or Passive PoE 36-56V (HV version)		
No DC jack connector		
5W (Max)		
CompexWRT or OpenWRT <sup>2</sup> /LEDE		
FCC and CE Certified, RoHS Compliance		
Temperature: Operating: -20°C to 70°C, Storage: -40°C to 90°C Humidity (non-condensing): Operating: 5% to 95%, Storage: Max. 90%		
Weatherproof and IP53 Compliant		
278.5 x 122.2 x 94.5 mm		
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		Data Rate	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	23dBm	26dBm	±2dB	5GHz	6Mbps	-94dBm	±2dB
	9Mbps	23dBm	26dBm	±2dB		9Mbps	-94dBm	±2dB
	12Mbps	23dBm	26dBm	±2dB		12Mbps	-92dBm	±2dB
	18Mbps	23dBm	26dBm	±2dB		18Mbps	-91dBm	±2dB
	24Mbps	23dBm	26dBm	±2dB	802.11a	24Mbps	-90dBm	±2dB
	36Mbps	21dBm	24dBm	±2dB		36Mbps	-85dBm	±2dB
	48Mbps	19dBm	22dBm	±2dB		48Mbps	-80dBm	±2dB
	54Mbps	18dBm	21dBm	±2dB		54Mbps	-75dBm	±2dB
	MCS 0	22dBm	25dBm	±2dB	5GHz 802.11n HT20	MCS 0	-94dBm	±2dB
	MCS 1	21dBm	24dBm	±2dB		MCS 1	-92dBm	±2dB
	MCS 2	21dBm	24dBm	±2dB		MCS 2	-89dBm	±2dB
5GHz 802.11n	MCS 3	21dBm	24dBm	±2dB		MCS 3	-85dBm	±2dB
802.11n HT20	MCS 4	20dBm	23dBm	±2dB		MCS 4	-80dBm	±2dB
	MCS 5	19dBm	22dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	18dBm	21dBm	±2dB		MCS 6	-74dBm	±2dB
	MCS 7	16dBm	19dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 0	21dBm	24dBm	±2dB	5GHz 802.11n HT40	MCS 0	-90dBm	±2dB
	MCS 1	20dBm	23dBm	±2dB		MCS 1	-88dBm	±2dB
5GHz 802.11n HT40	MCS 2	20dBm	23dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	20dBm	23dBm	±2dB		MCS 3	-82dBm	±2dB
	MCS 4	19dBm	22dBm	±2dB		MCS 4	-80dBm	±2dB
	MCS 5	18dBm	21dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	17dBm	20dBm	±2dB		MCS 6	-73dBm	±2dB
	MCS 7	16dBm	19dBm	±2dB		MCS 7	-70dBm	±2dB

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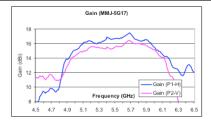




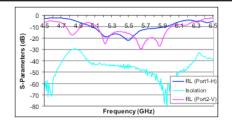
### **RF** Performance Information

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): 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		

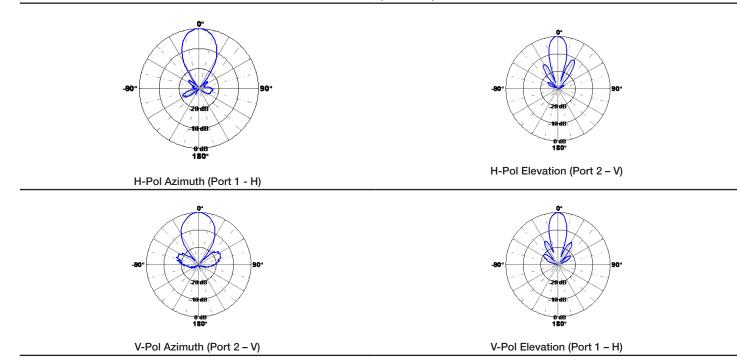
Gain Plot



Return Loss & Isolation Plot



Polar Plots (At 5.6GHz)



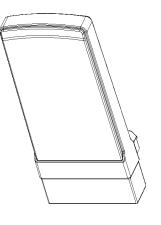


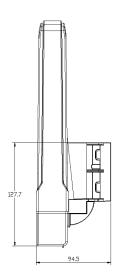
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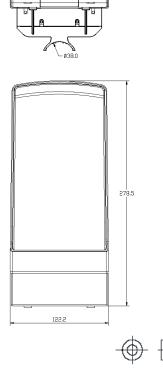




### Dimensional Drawing







### CompexWRT Features

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

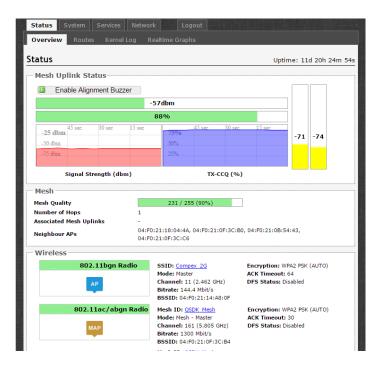
#### **Powerful Wireless Features**

- 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/



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### Firmware / Software

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

Supported Operating System

CompexWRT Operating System OpenWRT/LEDE Operating System<sup>1</sup>

Supported Mass Management Software

CNMS AP Controller Software<sup>2</sup>

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

