



Indoor/Outdoor Access Point

NetPassage WPP54

WIRELESS 54/108MbpsXR™ OUTDOOR ACCESS POINT
Built in 13dBi 5GHz DUAL POLARIZATION ANTENNA
or 8dBi 2.4GHz DUAL POLARIZATION ANTENNA

NetPassage WPP54 is a high-performance Indoor/Outdoor Access Point with integrated PoE. Using Atheros-based Wireless radios, WPP54 supports high-speed data transmission of up to 54Mbps or 108 Mbps.

NetPassage WPP54 is embedded with an integrated directional dual-polarization (vertical and horizontal) antenna, supporting 2.4 GHz or 5GHz (Either 8dBi for 2.4GHz or 13dBi for 5GHz), depending on order configurations. Dual-polarization antenna provides good diversity coverage and better noise immunity. It has integrated high power radio, coupled with firmware which support multiple SSID, long range support to allow for higher throughput, wider coverage. The device is a powerful and yet easy to use and implement for wireless ISP.



Features

- Atheros eXtended Range technology
- 175Mhz, 16MB SDRAM, 4MB Flash
- Support high power radios (23, 26dBm)
- Built in dual-polarization antenna, Either 8dBi 2.4GHz or 13dBi 5GHz
- Support Power-over-Ethernet(PoE passive)
- Supports 64/128-bit WEP, TKIP, AES, IEEE802.1x authentication
- Multiple SSID feature with VLAN segmentation
- Build in with Grounding Terminal
- Surge arrestor support
- Weatherproof casing



TECHNICAL SPECIFICATIONS

SYSTEM INFORMATION	
Processing Specifications	175MHz, ADMtek5120
Memory Size	16MB SDRAM, 4MB Flash
WAN Interface	-
LAN Interface	1 x 10/100Mbps Ethernet Port
Antenna	Integrated directional dual-polarization antenna, Either 8dBi 2.4GHz or 13dBi 5GHz
Max power consumption	5 Watts
Power method	Power over Ethernet
Certification	FCC, CE Mark
ROHS Compliant	Yes
Weight	420grams
Operating Temperature	-20°C to 70°C
Dimension	223 x 123 x 60 (mm)

ADJUSTABLE CHANNEL SIZE SUPPORT				
802.11A/G	5MHz	10MHz	20MHz	
SUPER A/G	5MHz	10MHz	20MHz	40MHz

WLM54G-26 MINI PCI CARD RADIO OPERATING FREQUENCY 2.412 - 2.484GHz							
TX SPECIFICATIONS				RX SPECIFICATIONS			
	DataRate	TX Power	Tolerance		DataRate	Sensitivity	Tolerance
802.11b	1Mbps	26dBm	+1.0/-1.5 dB	802.11b	1Mbps	-95dBm	±2dB
	2Mbps	26dBm	+1.0/-1.5 dB		11Mbps	-92dBm	±2dB
	5.5Mbps	26dBm	+1.0/-1.5 dB				
	11Mbps	26dBm	+1.0/-1.5 dB				
802.11g	6Mbps	26dBm	+1.0/-1.5 dB	802.11g	6Mbps	-95dBm	±2dB
	9Mbps	26dBm	+1.0/-1.5 dB				
	12Mbps	26dBm	+1.0/-1.5 dB				
	18Mbps	26dBm	+1.0/-1.5 dB				
	24Mbps	26dBm	+1.0/-1.5 dB		54Mbps	< -72dBm	±2dB
	36Mbps	25dBm	+1.0/-1.5 dB				
	48Mbps	24dBm	+1.0/-1.5 dB				
	54Mbps	23dBm	+1.0/-1.5 dB				

WLM54A-26 MINI PCI CARD RADIO OPERATING FREQUENCY 5.03 - 5.85GHz							
TX SPECIFICATIONS				RX SPECIFICATIONS			
	DataRate	TX Power	Tolerance		DataRate	Sensitivity	Tolerance
802.11a	6Mbps	26dBm	+1.0/-1.5 dB	802.11a	6Mbps	-95dBm	±2dB
	9Mbps	26dBm	+1.0/-1.5 dB				
	12Mbps	26dBm	+1.0/-1.5 dB				
	18Mbps	26dBm	+1.0/-1.5 dB				
	24Mbps	26dBm	+1.0/-1.5 dB		54Mbps	< -72dBm	±2dB
	36Mbps	24dBm	+1.0/-1.5 dB				
	48Mbps	22dBm	+1.0/-1.5 dB				
	54Mbps	20dBm	+1.0/-1.5 dB				

Firmware Information

Multiple SSID

- Supports up to 4 virtual access points (VAP) per radio, with unique BSSIDs. Traffic from each VAP can be tagged to a unique VLAN and /or bridged if required. Each VAP will be able to configure their own security (WEP, TKIP, and AES).

Long Range Support

- Suitable for long-range wireless deployment with Proprietary Long Distance Algorithm for ACK and CTS timeout adjustment support.
- Provides recommended values for the parameters and at the same time allow for manual fine-tuning for optimal performance.

4.9GHz Public Safety Spectrum Supported

- WPP54 with Compex WLM54AG miniPCI supported the 4.9GHz spectrum specifically for homeland security and public safety related operation
- Variable 5,10 and 20 MHz Transmit Bandwidth

Wireless Distribution System (WDS)

- Using the RootAP and Transparent Client combination, access points can be connected together, using MAC Address/ ESSID.
- Repeater Mode allows RootAP to be connected to another RootAP, which in turn can be connected to another RootAP.

FIRMWARE INFORMATION	
Operating Modes	<ul style="list-style-type: none"> • Access Points • Client • RootAP / Transparent Client • Repeater • Wireless Adapter • Wireless Routing Client • Gateway
WAN Type	<ul style="list-style-type: none"> • Static IP • Dynamic IP • PPPoE • PPTP
Device Management	<ul style="list-style-type: none"> • HTTP / HTTPs Web Server • SNMP V2c • Telnet / Secure Shell (SSH)
Data Capture & Notification	<ul style="list-style-type: none"> • Event Login (Syslog) • Detailed Statistics per Client
Virtual Access Point (VAP)	<ul style="list-style-type: none"> • Up to 4 SSIDs with unique MAC Addresses (BSSID) • 802.1q VLAN tag per VAP with Bridging • Configurable Security (WEP, TKIP, AES, MAC Filtering) per VAP
Advanced Features	<ul style="list-style-type: none"> • Built-in DHCP server • Transmission Power Control (One dB per step) • Closed System (Suppress SSID) • Transmission Rate Control

OTHER PROMINENT FEATURES	DESCRIPTION
Long Range Parameter Settings	Suitable for Long Range wireless deployment with high receiver sensitivity.
CPE Point-to-Point (PtP)	Ideal as CPE device connecting PtP with a central AP
Power with Passive PoE	Device power from PoE through ethernet cable provide flexible installation.
IEEE 802.11h (DFS & TPC) DFS (On/Off) Ability	Enables worldwide operation through support for standards-based Dynamic Frequency Selection (DFS) and Transmission Power Control (TPC)
SNMP Trap	SNMP Traps enable an agent to notify the management station of significant events by way of an unsolicited event.

Antenna Control	Allows user to select which antenna connector on the radio to use. Control Options are: Internal – Integrated directional Antenna External – External Antenna Auto – Automatically chooses the antenna which can receive more packets.
Antenna Alignment	Allows user to adjust their external antenna to receive the optimum throughput.
DHCP Relay (Only in Routing Mode)	Allows DHCP Clients on different subnets to get IP address from central DHCP server.
Remote Upgrade of Firmware	Allows user to upgrade their firmware through Telnet/SSH
Variable Transmit Bandwidths	Supports 5MHz, 10MHz, 20MHz and 40Mhz spectrum in 4.9GHz Public Safety Spectrum
Bandwidth Control(Only in Routing Mode)	Ability to limit the Upload/Download bandwidth at WAN/LAN ports
RIP 1 / 2 (Only in Routing Mode)	Routing Information Protocol Version 1 / 2

Customizable Features[®]

CUSTOMIZABLE FEATURES	DESCRIPTION
Custom Transmit Bandwidths	5MHz, 10MHz, 20MHz spectrum in other 'A' Bands
Web Page Customization	Customize webpage for OEM customers.



Specification for 8dBi G-band Antenna

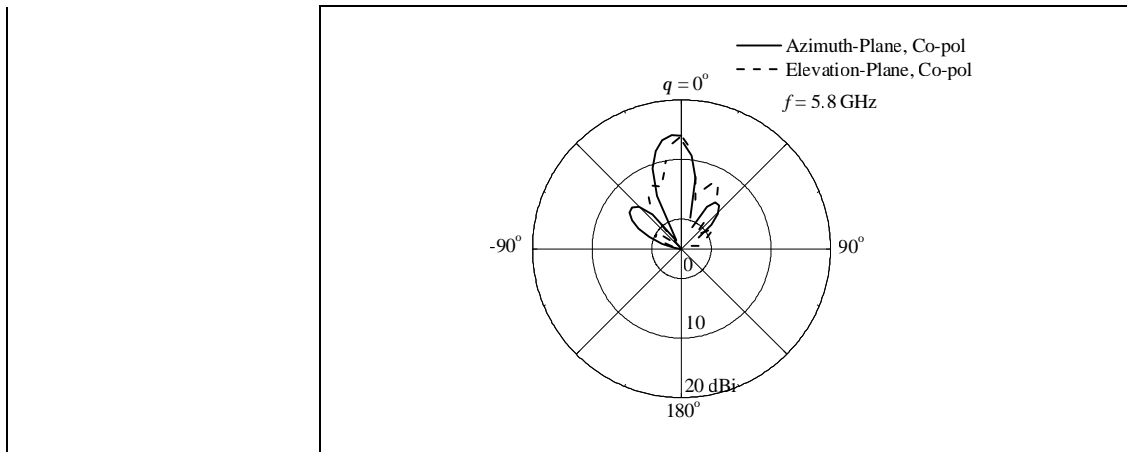
2.4GHz, 8dBi Antenna Specifications	
Gain	8dBi
Radiation	Directional
Frequency Range	2.4-2.5 GHz
Polarization	Dual – Polarization
Horizontal -3dB Beamwidth	60 degrees
Vertical -3dB Beamwidth	60 degrees
Front-to-Back Ratio	>25 dB
VSWR	$\geq 1.12:1$
Return Loss	$\geq 17\text{dB}$
Port to Port Isolation	$\geq 10\text{dB}$
Return Loss & Isolation Plot	<p style="text-align: center;"><u>2.2GHz to 2.8GHz Range Plot</u></p> <p style="text-align: center;">S Parameters, dB</p> <p style="text-align: center;">Frequency, GHz</p>
Radiation Patterns	<p style="text-align: center;">Azimuth-Plane, Co-pol Elevation-Plane, Co-pol $f = 2.45\text{ GHz}$</p> <p style="text-align: center;">$q = 0^\circ$</p> <p style="text-align: center;">-90° 90°</p> <p style="text-align: center;">0</p> <p style="text-align: center;">10 dBi</p> <p style="text-align: center;">180°</p>

Specification for 13dBi A-band Antenna

5GHz, 13dBi Antenna Specifications	
Gain	13dBi
Radiation	Directional
Frequency Range	5.45-5.85 GHz
Polarization	Dual – Polarization
Horizontal -3dB Beamwidth	30 degrees
Vertical -3dB Beamwidth	20 degrees
Front-to-Back Ratio	> 25 dB
VWSR	≥1.15:1
Return Loss	≥14dB
Point to Point Isolation	≥12dB

Return Loss & Isolation Plot	<p>5Ghz to 6Ghz Range Plot</p>
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Radiation Patterns	<p>— Azimuth-Plane, Co-pol - - - Elevation-Plane, Co-pol <i>f</i> = 5.4 GHz</p>
	<p>— Azimuth-Plane, Co-pol - - - Elevation-Plane, Co-pol <i>f</i> = 5.6 GHz</p>



Product Information^③

MODE NAME	SUPPORTED PoE TYPE	POWER REQUIREMENT	NETWORK INTERFACE	ANTENNA(DIRECTIONAL)
WPP54 6D	Compatible with IEEE 802.3af PoE Compatible with Compex PoE Plus	24VDC (Can Range from 24V to 48V DC)	2 X 10/100 BASE-TX (Cat. 5, RJ-45) Ethernet Interface	8dBi for either 11g or 11a band
WPP54 7A	Compatible with Compex PoE Plus	24VDC (Can Range from 12V to 24V DC)	1 X 10/100 BASE-TX (Cat. 5, RJ-45) Ethernet Interface	8dBi for either 11g or 11a band
WPP54 7C	Compatible with Compex PoE Plus	24VDC (Can Range from 12V to 24V DC)	1 X 10/100 BASE-TX (Cat. 5, RJ-45) Ethernet Interface	Either 8dBi for 2.4GHz or 13dBi for 5GHz

Ordering Configurations^④

CODES	SPEED	INTEGRATED ANTENNA	RADIO CARD	RADIO OUTPUT POWER	CARTON DIMENSIONS
WPP54G xx-26	Up to 54 / 108 Mbps	2.4GHz	WLM54G-26	26dBm	For 10pcs (pcs/ctn), 0.54m * 0.54m * 0.35m / 0.006 = 17.1KG
WPP54A xx-26	Up to 108Mbps	5GHz	WLM54A-26	26dBm	
WPP54x xx-xx	Up to 54 / 108 Mbps	2.4 / 5 GHz	Available with WLM54 series of miniPCI	20~26dBm	

① Depends on Order Configuration

② Features Not Available on the Firmware. Please contact salesperson for customization. Subjected to approval

③ Configurations are subjected to change without notice

④ Contact sales person for ordering configurations for different series of miniPCI

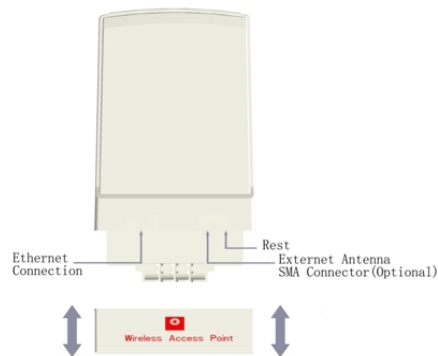
Mounting Options

Mounting Options

1. Pole Mount (Standard)



2. Wall Mount (Optional)



Complex Systems Pte Ltd

135 Joo Seng Road, PM Industrial
Building #08-01, Singapore 368363
Tel: (65) 6288 8220
Fax: (65) 6280-9947

Complex (CHANGSHU) CO. Ltd

Block 8, Haicheng Industrial Square
Changshu Economic Development Zone,
Jiangsu Province, China 215513
Tel: (86)-512-52297891
Fax: (86)-512-52698858

Complex (Suzhou) CO. Ltd

No. 12, ChuangTou Industrial Square,
LouFeng North, Suzhou Industrial Park,
Suzhou City, Jiangsu Province, China
Tel: (86)-512-62950031
Fax: (86)-512-62950032



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