

## Indoor Access Point

# NetPassage WP543

WIRELESS 54/108/300Mbps<sup>①</sup> XR™ INDOOR ACCESS POINT

NetPassage WP543 is a high-performance Access Point with integrated PoE. Using Atheros AR7130 (300MHz) Processor, WP543 is able to support high-speed data transmission of up to 300 Mbps.

NetPassage WP543 provides a robust and powerful platform to utilize any of the Compex miniPCIs, making it one of the most versatile boards available in the market. Compex firmware on WP543 supports AP and client modes, so that the users can use them as APs or CPEs.

NetPassage WP543 also incorporates features that are useful to system integrators, such as Antenna Alignment for adjusting your antenna to optimize performance and Syslog for event logging.

## Features

- Atheros eXtended Range technology
- 300Mhz, 16MB SDRAM, 4MB Flash
- Compex WLM200 series MiniPCI supported
- Support Power-over-Ethernet (Passive PoE)
- Integrated 2.4GHz b/g band Radio(Optional)
- Embedded NAND flash
- Support up to 2 miniPCI slots<sup>①</sup>
- Supports 64/128-bit WEP, TKIP, AES, IEEE802.1x authentication
- Antenna Alignment
- Surge arrestor support



## TECHNICAL SPECIFICATIONS

SYSTEM INFORMATION	
Processing Specifications	300MHz, Atheros AR7130
Memory Size	32MB SDRAM
NOR Flash	4MB ( upto 16MB max)
NAND Flash	Optional ( From 32MB to 128 MB max)
WAN Interface	-
LAN Interface	1 x 10/100Mbps Ethernet Port
Antenna	2 x 2dBi detachable SMA antenna
Max power consumption	4 Watts
Power Supply	Input Range 10V-24V DC
Power method	Passive Power over Ethernet (PoE) or DC Jack
Certification	FCC, CE Mark
ROHS Compliant	Yes
Weight	260 grams (estimated)
Operating Temperature	-20°C to 70°C
Dimension	145 x 132 x 41mm (H x W x D)

WLM200N2 MIMO MINIPCI CARD RADIO OPERATING FREQUENCY 2.412-2.484GHz							
TX SPECIFICATIONS				TX SPECIFICATIONS			
	DataRate	TX Power	Tolerance		DataRate	TX Power	Tolerance
802.11b	11Mbps	20dBm	±2dB	802.11g	6-24Mbps	20dBm	±2dB
	5.5Mbps	20dBm	±2dB		36Mbps	19.5dBm	±2dB
	2Mbps	20dBm	±2dB		48Mbps	18.5dBm	±2dB
	1Mbps	20dBm	±2dB		54Mbps	17dBm	±2dB
802.11n	HT20 @800GI(400GI): +16 ~ +20dBm						
	HT40 @800GI(400GI): +14 ~ +18dBm						
RX SPECIFICATIONS				RX SPECIFICATIONS			
	DataRate	Sensitivity (Typical/Maximum 2Rx)	Tolerance		DataRate	Sensitivity (Typical/Maximum 2Rx)	Tolerance
802.11g	6 Mbps	-96/-92dBm	±2dB	802.11b	1 Mbps	-96/-92dBm	±2dB
	9 Mbps	-96/-92dBm	±2dB		5.5Mbps	94/-90dBm	±2dB
	12 Mbps	-96/-92dBm	±2dB		11 Mbps	-91/-87dBm	±2dB
	18 Mbps	-95/-91dBm	±2dB				
	24Mbps	-92/-88dBm	±2dB				
	38Mbps	-89/-85dBm	±2dB				
	48Mbps	-85/-81dBm	±2dB				
	54Mbps	-83/-79dBm	±2dB				
	DataRate	Sensitivity (Typical/Maximum 2Rx)	Tolerance		DataRate	Sensitivity (Typical/Maximum 2Rx)	Tolerance
802.11 b/g/n H20	MCS0	-96/-92dBm	±2dB	802.11 b/g/N H40	MCS0	-90/-86dBm	±2dB
	MCS1	-95/-91dBm	±2dB		MCS1	-90/-86dBm	±2dB
	MCS2	-93/-89dBm	±2dB		MCS2	-89/-85dBm	±2dB
	MCS3	-90/-86dBm	±2dB		MCS3	-87/-82dBm	±2dB
	MCS4	-87/-81dBm	±2dB		MCS4	-84/-79dBm	±2dB
	MCS5	-83/-76dBm	±2dB		MCS5	-79/-75dBm	±2dB
	MCS6	-81/-76dBm	±2dB		MCS6	-78/-74dBm	±2dB
	MCS7	-79/-73dBm	±2dB		MCS7	-75/-71dBm	±2dB
	MCS8	-95/-91dBm	±2dB		MCS8	-90/-86dBm	±2dB
	MCS9	-93/-89dBm	±2dB		MCS9	-89/-85dBm	±2dB
	MCS10	-90/-86dBm	±2dB		MCS10	-87/-83dBm	±2dB
	MCS11	-87/-83dBm	±2dB		MCS11	-84/-80dBm	±2dB
	MCS12	-84/-80dBm	±2dB		MCS12	-81/-77dBm	±2dB
	MCS13	-79/-75dBm	±2dB		MCS13	-76/-72dBm	±2dB
	MCS14	-77/-73dBm	±2dB		MCS14	-74/-68dBm	±2dB
MCS15	-75/-71dBm	±2dB	MCS15	-71/-67dBm	±2dB		

WLM200NX MIMO MINIPCI CARD RADIO							
TX SPECIFICATIONS				TX SPECIFICATIONS			
	DataRate	TX Power	Tolerance		DataRate	TX Power	Tolerance
802.11a	6-24Mbps	18dBm	±2dB	802.11b	1Mbps	20dBm	±2dB
	36Mbps	18dBm	±2dB		2Mbps	20dBm	±2dB
	48Mbps	17dBm	±2dB		5.5Mbps	20dBm	±2dB
	54Mbps	16dBm	±2dB		11Mbps	20dBm	±2dB
802.11g	6-24Mbps	20dBm	±2dB	802.11n	2.4GHz	HT20 @800G(400G): +16 ~ +20dBm	
	36Mbps	19.5dBm	±2dB			HT40 @800G(400G): +14 ~ +18dBm	
	48Mbps	18.5dBm	±2dB		5GHz	HT20 @800G(400G): +10 ~ +18dBm	
	54Mbps	17dBm	±2dB				
RX SPECIFICATIONS (802.11b)							
	Data Rate	Sensitivity (Typical/Maximum 2Rx)		Tolerance			
802.11b	1M	-96/-92Bm		±2dB			
	5.5M	-94/-90dBm		±2dB			
	11M	-91/-87dBm		±2dB			
RX SPECIFICATIONS(802.11a)				RX SPECIFICATIONS (802.11g)			
	Data Rate	Sensitivity (Typical/Maximum 2Rx)	Tolerance		Data Rate	Sensitivity (Typical/Maximum 2Rx)	Tolerance
802.11a	6M	-95/-91dBm	±2dB	802.11g	6M	-96/-92dBm	±2dB
	9M	-95/-91dBm	±2dB		9M	-96/-92dBm	±2dB
	12M	-95/-91dBm	±2dB		12M	-96/-92dBm	±2dB
	18M	-94/-90dBm	±2dB		18M	-95/-91dBm	±2dB
	24M	-90/-86dBm	±2dB		24M	-92/-88dBm	±2dB
	36M	-87/-83dBm	±2dB		36M	-89/-85dBm	±2dB
	48M	-83/-79dBm	±2dB		48M	-85/-81dBm	±2dB
	54M	-82/-78dBm	±2dB		54M	-83/-79dBm	±2dB
802.11 a/n HT20	MCS0	-95/-91dBm	±2dB	802.11 b/g/n HT20	MCS0	-96/-92dBm	±2dB
	MCS1	-94/-90dBm	±2dB		MCS1	-95/-91dBm	±2dB
	MCS2	-92/-88dBm	±2dB		MCS2	-93/-89dBm	±2dB
	MCS3	-88/-84dBm	±2dB		MCS3	-90/-86dBm	±2dB
	MCS4	-85/-81dBm	±2dB		MCS4	-87/-81dBm	±2dB
	MCS5	-81/-77dBm	±2dB		MCS5	-83/-76dBm	±2dB
	MCS6	-80/-76dBm	±2dB		MCS6	-81/-76dBm	±2dB
	MCS7	-77/-73dBm	±2dB		MCS7	-79/-73dBm	±2dB
	MCS8	-94/-90dBm	±2dB		MCS8	-95/-91dBm	±2dB
	MCS9	-92/-87dBm	±2dB		MCS9	-93/-89dBm	±2dB
	MCS10	-89/-85dBm	±2dB		MCS10	-90/-86dBm	±2dB
	MCS11	-86/-82dBm	±2dB		MCS11	-87/-83dBm	±2dB
	MCS12	-83/-79dBm	±2dB		MCS12	-84/-80dBm	±2dB
	MCS13	-78/-74dBm	±2dB		MCS13	-79/-75dBm	±2dB
	MCS14	-77/-73dBm	±2dB		MCS14	-77/-73dBm	±2dB
MCS15	-74/-69dBm	±2dB	MCS15	-75/-71dBm	±2dB		
802.11 a/n HT40	MCS0	-91/-87dBm	±2dB	802.11 b/g/n HT40	MCS0	-90/-86dBm	±2dB
	MCS1	-90/-86dBm	±2dB		MCS1	-90/-86dBm	±2dB
	MCS2	-88/-84dBm	±2dB		MCS2	-89/-85dBm	±2dB
	MCS3	-85/-81dBm	±2dB		MCS3	-87/-82dBm	±2dB
	MCS4	-82/-78dBm	±2dB		MCS4	-84/-79dBm	±2dB
	MCS5	-78/-74dBm	±2dB		MCS5	-79/-75dBm	±2dB
	MCS6	-77/-73dBm	±2dB		MCS6	-78/-74dBm	±2dB
	MCS7	-74/-70dBm	±2dB		MCS7	-75/-71dBm	±2dB
	MCS8	-91/-87dBm	±2dB		MCS8	-90/-86dBm	±2dB
	MCS9	-88/-84dBm	±2dB		MCS9	-89/-85dBm	±2dB
	MCS10	-86/-82dBm	±2dB		MCS10	-87/-83dBm	±2dB
	MCS11	-83/-79dBm	±2dB		MCS11	-84/-80dBm	±2dB
	MCS12	-80/-76dBm	±2dB		MCS12	-81/-77dBm	±2dB
	MCS13	-75/-71dBm	±2dB		MCS13	-76/-72dBm	±2dB
	MCS14	-73/-69dBm	±2dB		MCS14	-74/-68dBm	±2dB
MCS15	-70/-66dBm	±2dB	MCS15	-71/-67dBm	±2dB		

## Firmware Information (11n Modules)

### 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.

### Antenna Alignment

- Antenna alignment feature allows the system integrator to align the antenna for best signal strength.

FIRMWARE INFORMATION					
<b>Operating Modes</b>	<ul style="list-style-type: none"> <li>• Access Points</li> <li>• Client</li> <li>• RootAP / Transparent Client (Work in Progress)</li> <li>• Repeater(Work in Progress)</li> <li>• Wireless Adapter(Work in Progress)</li> <li>• Wireless Routing Client(Work in Progress)</li> <li>• Gateway</li> </ul>				
<b>WAN Type</b>	• Static IP	• Dynamic IP	• PPPoE	• PPTP	• L2TP
<b>Device Management</b>	<ul style="list-style-type: none"> <li>• HTTP / HTTPs Web Server</li> <li>• SNMP V2c</li> <li>• Telnet / Secure Shell (SSH)</li> </ul>				
<b>Data Capture &amp; Notification</b>	<ul style="list-style-type: none"> <li>• Event Login (Syslog)</li> <li>• Detailed Statistics per Client</li> </ul>				
<b>Virtual Access Point (VAP)</b>	<ul style="list-style-type: none"> <li>• Up to 4 SSIDs with unique MAC Addresses (BSSID)</li> <li>• 802.1q VLAN tag per VAP with Bridging</li> <li>• Configurable Security (WEP, TKIP, AES, MAC Filtering) per VAP</li> </ul>				
<b>Advanced Features</b>	<ul style="list-style-type: none"> <li>• Built-in DHCP server</li> <li>• Transmission Power Control (One dB per step)(Work in Progress)</li> <li>• Closed System (Suppress SSID)</li> <li>• Transmission Rate Control</li> <li>• Spanning Tree Protocol</li> </ul>				

OTHER PROMINENT FEATURES	DESCRIPTION
<b>Long Range Parameter Settings</b>	Suitable for Long Range wireless deployment with high receiver sensitivity.
<b>CPE Point-to-Point (PtP)</b>	Ideal as CPE device connecting PtP with a central AP
<b>Power with Passive PoE</b>	Device power from PoE through ethernet cable provide flexible installation.
<b>IEEE 802.11h (DFS &amp; TPC)</b>	Enables worldwide operation through support for standards-based Dynamic Frequency Selection (DFS) and Transmission Power Control (TPC)
<b>SNMP Trap</b>	SNMP Traps enable an agent to notify the management station of significant events by way of an unsolicited event.
<b>Antenna Alignment</b>	Allows user to adjust their external antenna to receive the optimum throughput.
<b>DHCP Relay (Only in Gateway or Wireless Routing Client Mode)</b>	Allows DHCP Clients on different subnets to get IP address from central DHCP server.
<b>Remote Upgrade of Firmware</b>	Allows user to upgrade their firmware through Telnet/SSH
<b>Parallel Bandwidth I(Only in Routing Mode)</b>	Provide scalable Internet bandwidth with Load Balancing and Fail-Over Redundancy.
<b>RIP 1 / 2 (Only in Gateway or Wireless Routing Client Mode)</b>	Routing Information Protocol Version 1 / 2

### Customizable Features<sup>®</sup>

CUSTOMIZABLE FEATURES	DESCRIPTION
<b>Web Page Customization</b>	Customize webpage for OEM customers.

## Firmware Information (11abg Modules)

### Multiple SSID

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<b>WAN Type</b>	• Static IP	• Dynamic IP	• PPPoE	• PPTP	• L2TP
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<b>Data Capture &amp; Notification</b>	<ul style="list-style-type: none"> <li>• Event Login (Syslog)</li> <li>• Detailed Statistics per Client</li> </ul>				
<b>Virtual Access Point (VAP)</b>	<ul style="list-style-type: none"> <li>• Up to 4 SSIDs with unique MAC Addresses (BSSID)</li> <li>• 802.1q VLAN tag per VAP with Bridging</li> <li>• Configurable Security (WEP, TKIP, AES, MAC Filtering) per VAP</li> </ul>				
<b>Advanced Features</b>	<ul style="list-style-type: none"> <li>• Built-in DHCP server</li> <li>• Transmission Power Control (One dB per step)</li> <li>• Closed System (Suppress SSID)</li> <li>• Transmission Rate Control</li> <li>• Spanning Tree Protocol</li> </ul>				

OTHER PROMINENT FEATURES	DESCRIPTION
<b>Long Range Parameter Settings</b>	Suitable for Long Range wireless deployment with high receiver sensitivity.
<b>CPE Point-to-Point (PtP)</b>	Ideal as CPE device connecting PtP with a central AP
<b>Power with Passive PoE</b>	Device power from PoE through ethernet cable provide flexible installation.
<b>IEEE 802.11h (DFS &amp; TPC) DFS (On/Off) Ability</b>	Enables worldwide operation through support for standards-based Dynamic Frequency Selection (DFS) and Transmission Power Control (TPC)
<b>SNMP Trap</b>	SNMP Traps enable an agent to notify the management station of significant events by way of an unsolicited event.
<b>Antenna Control(MAIN/AUX/DIVERSITY)</b>	Provides extra redundancy and able to auto-reconfigurable when there are changes in the network topology.
<b>Antenna Alignment</b>	Allows user to adjust their external antenna to receive the optimum throughput.
<b>DHCP Relay (Only in Gateway or Wireless Routing Client Mode)</b>	Allows DHCP Clients on different subnets to get IP address from central DHCP server.
<b>Remote Upgrade of Firmware</b>	Allows user to upgrade their firmware through Telnet/SSH
<b>Parallel Bandwidth I(Only in Routing Mode)</b>	Provide scalable Internet bandwidth with Load Balancing and Fail-Over Redundancy.
<b>RIP 1 / 2 (Only in Gateway or Wireless Routing Client Mode)</b>	Routing Information Protocol Version 1 / 2

### Customizable Features<sup>②</sup>

CUSTOMIZABLE FEATURES	DESCRIPTION
Web Page Customization	Customize webpage for OEM customers.

### Product Information<sup>③</sup>

MODE NAME	SUPPORTED PoE TYPE	POWER REQUIREMENT	RADIO CARD
WP543 N2	Passive PoE / Compex PoE+	24VDC (input range 10V to 24V DC)	WLM200N2
WP543 N5	Passive PoE / Compex PoE+	24VDC (input range 10V to 24V DC)	WLM200NX
WP543 XX	Passive PoE / Compex PoE+	24VDC (input range 10V to 24V DC)	Compex 802.11 abg WLM series MiniPCI card

### Ordering Configurations<sup>④</sup>

CODES	NORMAL FLASH	NAND FLASH	SDRAM	MINIPCI SLOT	FIRMWARE SUPPORTED	CARTON DIMENSIONS
WP543 6AXX-XX	2MB	32MB	32MB	1		For 10pcs (pcs/ctn), 0.78m * 0.38m * 0.25m / 0.006 = 12.35KG
WP543 6BXX-XX	2MB	32MB	32MB	2		
WP543 6CXX-XX	4MB	-	32MB	1	Compex, OpenWRT	
WP543 6DXX-XX	4MB	-	32MB	2	OpenWRT	
WP543 6EXX-XX	8MB	-	32MB	1	Compex, OpenWRT	
WP543 6FXX-XX	8MB	-	32MB	2	OpenWRT	
WP543 6GXX-XX	16MB	-	32MB	1	Compex, OpenWRT	
WP543 6HXX-XX	16MB	-	32MB	2	OpenWRT	

- 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 miniPCI & firmware.

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