

Dual-Concurrent 802.11n AP/Router

Powered by
Arada Wireless Solution



Arada Wireless Solution (AWS) combines with industry-leading hardware to give you a unique 802.11n dual-band, dual-concurrent wireless Access Point (AP). The product has been specifically designed for the high-end Enterprise and Small and Medium Business (SMB) segment. With advanced enterprise class features, this dual-concurrent AP offers best-in-class performance using state of art Atheros 2x2 radio chipsets. The single chip on board design runs on the Atheros AR7161 processor at 680 MHz CPU clock cycle and offers TCP/IP throughputs of up to 600 Mbps.

The dual concurrent 11n reference design-based solution is a powerful platform for high-performance, 802.11n ready, WLAN applications for various verticals including Enterprise and SMB. This design offers the ultimate 802.11n network performance with simultaneous 2.4 and 5.0 GHz band support, and 2x2 MIMO reliability along with advanced 802.11n features.

Platform Highlights

- High performance, draft 2.0 compliant wireless access point solution.
- 680MHz processing power with two simultaneous single chip dual radios for highest throughput
- Full support for Dynamic Frequency Selection (DFS).
- Industry's highest TCP/IP throughput at extended range.
- Support for 2x2 MIMO with spatial multiplexing.
- Enables bandwidth of up to 600 Mbps PHY/link rate
- Operating frequency from 2.3-2.5 GHz and 4.9-5.925GH
- Compliant with IEEE 802.11a, 802.11b, 802.11g, 802.11d, 802.11e, 802.11h, 802.11i, 802.11j, 11n.
- Lead-free RoHS compliant.

Hardware Support	
Processor Board (AR7161)	32-bit MIPS 24K processor
Ethernet	AR8316: Six Port Gigabit Ethernet Switch
Radio 1 (AR9223) Radio 2 (AR9220) Single chip 802.11n MAC/BB/Radios Performance enhancements include: <ul style="list-style-type: none"> • Weak signal detection • Improved Rate over Range performance • MIMO power save 	<ul style="list-style-type: none"> • AR9223 - supports 2.4GHz 2x2 configuration • AR9220 - supports 2.4/5GHz 2x2 configuration
	Supports 2.4/5.0 GHz 2x2 configuration
Frequency Band	2.300 to 2.500 GHz and 4.9 to 5.925 GHz
Modulation Technology	OFDM with BPSK, QPSK, 16 QAM, 64 QAM; DBPSK, DQPSK, CCK
FEC Coding Rate	1/2, 2/3, 3/4, 5/6
Hardware Encryption	AES, TKIP, WEP
Interfaces	PCI - Communication Interface GPIOs, LEDs - Peripheral Interface EEPROM - Memory Interface I ² S for Audio Streaming SLIC for VOIP Dual USB for NAS, networking printer connectivity, etc.
PCI	32-bit, 33/66 MHz PCI 2.3 host interface
Memory	DDR and serial FLASH memory interfaces
Debug	High speed UART and GPIOs
Supported Data Rates	IEEE 802.11a : 6 – 54 Mbps IEEE 802.11b : 1 – 11 Mbps IEEE 802.11g : 6 – 54 Mbps XSPAN : 6.5 – 300 Mbps (per band)
Variable Channel support	Support for 5, 10, 20 and 40 MHz channels. Rx filter supports blocking specifications for half and quarter rate channels.

Software Features	
AP Modes	Access Point mode Point-to-point support Point-to-multipoint WDS client Repeater WDS links with WPA-PSK WDS links with WPA2-PSK

Wireless Security	<ul style="list-style-type: none"> Upto 16 BSSIDs supported Hidden SSID RADIUS MAC authentication Local MAC authentication 802.1x client authentication WEP encryption (64, 128, 152 bit) Dynamic WEP keys with 802.1x WPA and WPA2 over 802.1x WPA and WPA2 Pre-shared Key WPA-WPA2 Mixed Mode WPA2 Pre-authentication TKIP and AES encryptions
Hotspot Support	
VLAN	<ul style="list-style-type: none"> 802.1Q tagging VLAN bridging 4095 VLAN IDs Management VLAN ID Default VLAN ID per radio Untagged VLAN 802.1x dynamic VLAN assignments
QoS	IEEE 802.1p/1Q
Radio Settings	<ul style="list-style-type: none"> Country Code setting External antenna Auto channel selection Selectable mode operation Selectable power setting Data rate setting Selectable beacon interval Selectable DTIM interval Adjustable RTS threshold Adjustable fragmentation threshold Maximum clients setting (64) Frame Aggregation
Bridging	802.11D and Spanning Tree Protocol
System Software Upgrade	<ul style="list-style-type: none"> TFTP upgrade FTP upgrade HTTP upgrade
IP Address Management	<ul style="list-style-type: none"> Static DHCP client DHCP server DNS resolution
SNMP	<ul style="list-style-type: none"> SNMP v1 and v2c SNMPv3 users SNMPv3 groups SNMPv3 trap targets

	SNMPv3 trap filters SNMP agent
MIB support	802.11a/b/g MIB 802.11n MIB Enterprise MIB
Management Access	Console CLI HTTP Packet capture HTTPS Telnet SSH v2.0
Logging	Event Logging Remote Syslog (4 servers) Console display and clear Web display and clear
System Clock	Manual date and time setting Time zone Daylight saving NTP support
System Information	System configuration Wireless configuration Wireless client status
Full Linux SDK support	

Certifications	
DFS2	FCC for North America ETSI for Europe TELEC for Japan
Regulatory certification	
WMM-PS certification	
11n interoperability certification	
WMM certification	