

The new era of Broadband Wireless Access is Broadband Mesh Municipality. In this category, ZANO provides two models Dual Radio and Quad Radio.

Dual Radio (QR2)

1st radio for AP, 2nd radio WDS . The advantage of these functions are to enhance wireless network security supporting VLAN & up to 8 different ESSIDs, WDS interconnection for backhaul link, WiFi bridge, WiFi repeater .

Quad Radio (QR4)

1st radio for AP, 2nd radio WDS, 3rd radio WDS & 4th radio for either RF Scanning or Redundant Access Point Link . The advantage of these functions are to enhance wireless network security supporting VLAN & up to 16 different ESSIDs, WDS interconnection for backhaul link, WiFi bridge, WiFi repeater and RF scanning capability to monitor health status of managed APs.

Benefits

- Easy-to-deploy for Municipality, Enterprise and Telco Providers.
- Highly integrated Multi-radio/dual-frequency edge solution, significantly reducing cost.
- Dual radio enable simultaneous support of 802.11a backhaul link and 802.11b.g client.
- Dual radio enabling fail-over link of 802.11a backhaul redundant features.
- Dual function capabilities for either RF Scanning or Redundant Access Point Link.
- Rugged enclosure designed for outdoor use or in harsh indoor environments with exposure to extreme heat ,cold, and/or rain.
- Multi-layered security options allow multiple applications and user groups.
- Eliminates RF channel planning, centralized management helps lower operational expenses.
- Supports and works in all wireless mode when integrated with Lanready Wireless Backbone System.

Management (M)

M5000/M3000 SCALE solution, which coordinated QR4 at the edge and centralized M5000/M3000 controllers for management ,security , and coordination for over-the-air reliability and Quality of Service(QoS) . For customers planning new outdoor installations or adding capacity and coverage to existing WLANs in harsh environments, the Lanready Outdoor Bridge is the easy-to-deploy AP in its class. Centralized configuration with M5000/M3000 controllers and RF coordination that eliminates these costly installation steps.



Radio System



Management

Software Specifications	
Security	MAC Filtering <ul style="list-style-type: none"> - Local MAC database ;RADIUS MAC authentication Layer 2 Security <ul style="list-style-type: none"> - 802.11 Security:WEP-64,WEP-128 - 802.1x with EAP-TLS,EAP-TTLS,PEAP,WPA ,WPA2 - Dynamic VLAN assignment on a per-client basis
Encryption	WEP keys of 40bit,64bit, and 128 bit (in hardware) TKIP (in hardware) AES (in hardware)
RADIUS Interoperability	Microsoft IAS, Steel-Belted RADIUS, FreeRADIUS
Layer 3 Security	VPN Pass through Captive Portal for guest access
Management	Administrative Access <ul style="list-style-type: none"> - GUI (through controller) Configuration <ul style="list-style-type: none"> - Automatically downloaded from Controller - All configuration changes performed on the controller Troubleshooting and Local Access <ul style="list-style-type: none"> - Advanced trouble shooting through controller - Historical reports and alerts through ?? Remote/Central Management <ul style="list-style-type: none"> - RF Management for : Monitoring, Alerts ,Reports, RF Location
SNMP Support	SNMP v1 and v2c Agent with monitoring through controller MIBs
Remote Logging	Syslog v1 and v2 – failure alerts and change notifications through controller
Software Upgrade	Automatic software upgrades, originated by controller
Networking	Forwarding <ul style="list-style-type: none"> - IP Tunnel to Controller in Coordinated Mode 802.3/802.11 bridging in Bridge Mode Network Interfaces <ul style="list-style-type: none"> - 2 Auto-sensing 10/100 Base-TX Ethernet (RJ45) Addressing <ul style="list-style-type: none"> - DHCP or manual assignment VLAN <ul style="list-style-type: none"> - 802.1Q tagging support throughput controller

Hardware Specification	
Base Platform	
Processor	INTEL IXP 425
Wireless Radio	WDR5084 : 4 x 802.11abg 2.4/5GHz Dual Band WDR5082 : 2 x 802.11abg 2.4/5GHz Dual Band
Standards Conformance	IEEE 802.3 / IEEE 802.3u

Network Ports	<ul style="list-style-type: none"> - 3 * 10/100Mbps Ethernet ports with weatherproof connectors - IEEE 802.3, 802.3u compliant - CSMA/CD 10/100 auto sense - Port 1 Consol Port , Ports 2 ,3 PSE Power over Ethernet
Enclosure	
Weather Rating	Die Cast aluminum IP66,IP67 (NEMA-4X) Weathertight
Antenna Connector	QR2 : 2-NType QR4 : 4-Ntype
Ethernet Connector	3 * weatherproof Ethernet Connectors
Port 2	IEEE802.3af compatible PoE (PSE) , 48W max. (48V/1A)
Port 3	IEEE802.3af compatible PoE (PSE) , 48W max. (48V/1A)
Environmental Specification	
Operating Temperature	-40 °C ~ 75 °C
Storage Temperature	-40 °C ~ 85 °C
Operating Humidity	10% to 80% Non-Condensing
Storage Humidity	5% to 90% Non-Condensing
Unit Weight	3.5KG
Unit Dimension	30x25x17cm

Wireless Specifications	
RF Module	Atheros
Interface	Mini-PCI bus
Network Standards Conformance	IEEE802.11a/ b /g /h compliant
Data Transfer Rate	IEEE802.11b : 1 / 2 / 5.5 / 11Mbps (auto sensing) IEEE802.11g : 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54/108Mbps (auto sensing) IEEE802.11a : 6/9/12/18/24/36/48/54/108Mbps(auto sensing)
Frequency Range	IEEE802.11a: 4.94-4.99GHz (US Public Safety band) 5.15-5.25GHz,5.25-5.35GHz,5.725-5.825GHz IEEE802.11b/g : 2.412 ~ 2.462GHz (USA) 2.412 ~ 2.484GHz (Japan) 2.412 ~ 2.472 GHz (Europe ETSI) 2.457 ~ 2.462 GHz (Spain) 2.457 ~ 2.472 GHz (France)
Media Access Protocol	CSMA / CA with ACK
Modulation Method	IEEE802.11b : DSSS (DBPK,DQPSK,CCK) IEEE802.11a/g : OFDM(64-QAM,16-QAM,QPSK,BPSK)
Operating Channels	802.11a : 12 for FCC, 11 for Europe, 4 for Japan,5 for Singapore, 4 for Taiwan 802.11b/g : 11 for FCC,14 for Japan,13 for Europe, 2 for Spain, 4 for France
Transmit Power (TX)	100mW
Transmit Power Variation	802.11a : Up to 16dBm 802.11g : Up to 16 dBm 802.11b : up to 18 dBm

Frequency Response flatness	±1dB over operating range
Receiver Sensitivity	802.11a : -82dBm@6Mbps, -81dBm@9Mbps, -79dBm@12Mbps, -78dBm@18Mbps, -75dBm@24Mbps, -72dBm@36Mbps -70dBm@48Mbps, -68dBm@54Mbps, 802.11b/g : -91dBm@1Mbps, -90dBm@2Mbps,-89dBm@5.5Mbps,-87dBm@11Mbps,-84dBm@6Mbps,-82dBm@9Mbps,-79dBm@12Mbps,-77dBm@18Mbps,-75dBm@24Mbps,-73dBm@36Mbps,-70dBm@48Mbps,-68dBm@54Mbps