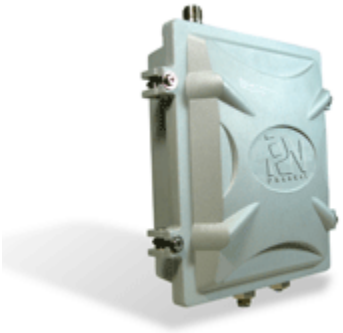


WCS-01R

IEEE802.11abg1 x Radio Wireless Outdoor Bridge for Wireless Coverage

Multiple SSID x 3 | Daisy Chain | Daisy Chain Mesh | Device Management Utility

Anti Co-Channel interference | Up to 12Mbps after 5 hops

PheeNet WCS-01R is an advanced solution for Citywide Wireless Coverage, Wireless Mesh, and Wireless Backhaul, which operates in IEEE802.11a 5GHz and IEEE802.11b/g 2.4GHz frequency band simultaneously.

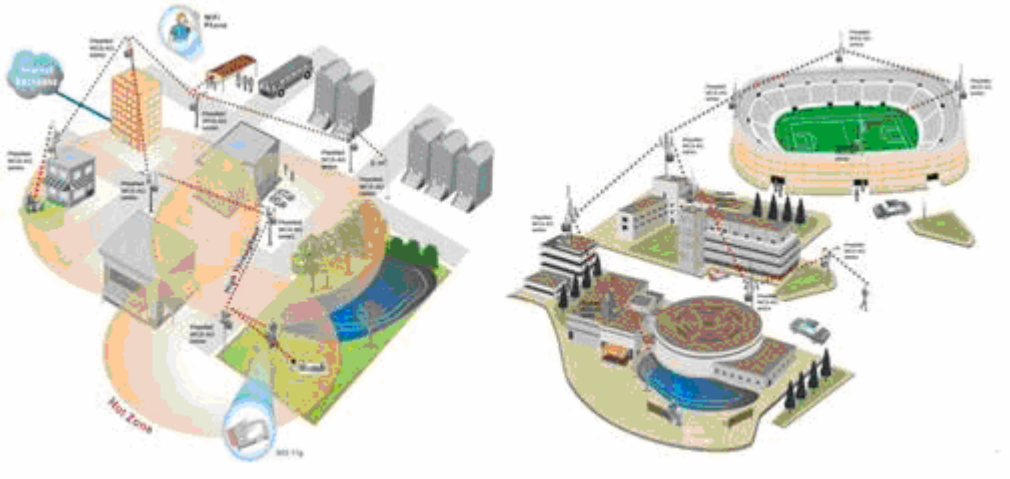
This series provides significant performance in terms of ranges, throughput, co-channel interference mitigation with its superior patent software techniques. This enables service provider to offer highly cost effective Citywide Wireless Coverage, Wireless Mesh, and Wireless Backhaul by "Daisy Chain" topology without compromising quality.

By taking advantage of "Daisy Chain" features, this series provides the "Daisy Chain Mesh" application. DC-Mesh is a more practical idea in Mesh application, and gets rid of the WiFi Mesh disadvantage, like long latency, up to 30% to 50% throughput drop.

To maximum the performance, WCS-02R / WCS-03R support two radios modes. Both radios are combined to operate as a single unit that provides a double bandwidth of a single radio equivalent. This is ideal for bandwidth-intensive application such as video surveillance, resulting in crystal clear video images. This mode also provides a "fat pipe" for point to point wireless backhaul. Both radios is capable of the applications, like Load Balance, Fail Over and one way transmit (TX, and RX separated in different radios) to enhance the performance of system in Citywide Wireless Coverage, Wireless Mesh, and Wireless Backhaul.

To conclude, WCS series is the best choice for the Wireless Coverage, Wireless Mesh, and Wireless Backhaul. It will offer you the biggest CP ratio and totally ease WISP / SI's cost on implementation and maintenance.

APPLICATION



Features

Offers an Multi-functional Modes
Access Point AP Client Bridge /
Router

Comprehensive Security Features
WPA with TKIP/AES support

802.1x EAP support (Client and Server modes)
64/128/152 bits Dynamic WEP keys
Radius client
Hide ESSID
MAC address filtering
NAT

Long Operating Range and Connect more Separate Networks Bridges in Point to Point (PtP) connect two networks in different locations through a single wireless link. Bridges in point-to-multipoint mode links more separate networks in scattered buildings through wireless links.

Harsh Outdoor Environments to Keep Operation
Certified IP68 sturdy water-tight housing
Built-in automatic thermal sensor and regulator module to facilitate deployment in cold regions
PoE module

System Management
Firmware upgrade through TFTP, FTP Interface status
display
SSH Telnet Syslog SNMP v1/v2
Easy Configuration backup

Simple Installation and Deployment
Software Alignment / Deployment Tool

Specification

Industrial Standard	
Standard	IEEE 802.11a, 802.11b, 802.11g, 802.3, 802.3u, 802.3af
RF	
Radio	1 x 802.11abg
Frequency Band	USA: 2.400~2.483GHz, 5.15~5.35GHz, 5.725~5.825GHz Europe: 2.400~2.483GHz, 5.15~5.35GHz, 5.47~5.725GHz Japan: 2.400~2.483GHz, 4.90~5.091GHz, 5.15~5.25GHz China: 2.400~2.483GHz, 5.725~5.85GHz
Signal Type	TDM
Modulation	DBPSK, DQPSK, CCK OFDM (BPSK,QPSK,16QAM,64QAM)
Sensitivity	>Receiver Sensitivity: PER<8% for 11b; PER<10% for 11g & 11a >802.11b Sensitivity: DBPSK (1Mbps) -93dBm DQPSK (2.2Mbps) -92dBm CCK (5.5Mbps) -90dBm CCK (11Mbps) -88dBm >802.11g Sensitivity BPSK (6Mbps) -89dBm BPSK (9Mbps) -88dBm QPSK (12Mbps) -86dBm QPSK (18Mbps) -85dBm 16QAM (24Mbps) -83dBm 16QAM (36Mbps) -80dBm 64QAM (48Mbps) -77dBm 64QAM (54Mbps) -72dBm >802.11a Sensitivity BPSK (6Mbps) -88dBm BPSK (9Mbps) -87dBm QPSK (12Mbps) -85dBm QPSK (18Mbps) -84dBm 16QAM (24Mbps) -82dBm 16QAM (36Mbps) -80dBm 64QAM (48Mbps) -76dBm 64QAM (54Mbps) -71Bm
Output Power	802.11b: 18dBm 802.11g: 18dBm @6Mbps, 15dBm@54Mbps 802.11a: 17dBm @6Mbps, 13dBm@54Mbps
Transmit Power Control	Any

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Output Power	802.11b: 18dBm 802.11g: 18dBm @6Mbps, 15dBm@54Mbps 802.11a: 17dBm @6Mbps, 13dBm@54Mbps
Transmit Power Control	Any

Channel	>802.11b/g: * US/Canada: 11(1~11) * Major European Country: 13 (1~13) * France: 4 (10~13) * Japan: 11b: 14 (1~13 or 14th), 11g: 13 (1~13) * China: 13 (1~13) >802.11a: * US/Canada: 12 non-overlapping channels (5.15~5.35GHz, 5.725~5.825GHz) * Europe: 19 non-overlapping channel (5.15~5.35GHz, 5.47~5.725GHz) * Japan: 4 non-overlapping channel (5.15~5.25GHz) * China: 5 non-overlapping channel (5.725~5.85GHz)
Operating Mode	AP AP Client Bridge Router
Security	64/128/152-bit WEP WPA (EAP, TKIP) WPA2 (AES, 802.11i) IEEE802.1x client and server SSID Broadcast Disable Wireless Isolation MAC Address Filtering Radius Client Deny Station without cable
IP Assignment	DHCP Server / Client, Fixed IP
Management	SSH Telnet (system configuration & management, firmware upgrade, reset to default and configuration backup, etc.) SNMP V1 & V2
Special Features	Daisy Chain (Bridge / Route) Daisy Chain Mesh High Speed Roaming Auto DFS (802.11h – Dynamic Frequency Selection) 802.1q VLAN - Multiple SSID supported (3 max.) Bandwidth Control of Wireless Client (MAC) 802.11e WiFi QoS (by port & service) MS NetBIOS IP Filter Enable / Disable Wireless Station Fix AP MAC Address Optional Web RSSI Software Alignment / Deployment Tools

	Statistic Report Spanning Tree Link Test
Network	
Firewall	NAT (in Router Operation Mode)
Protocol	TCP, UDP, NetBIOS, NAT
Hardware	
CPU	IXP420 /266MHz
RF	Atheros AR-5213
SDRAM	64MB
Flash	8MB
Interface	1 x 10/100Base-TX (RJ-45) W/ 802.3af POE function 1 x N-type connector (Reverse Female) 1 x RS-232 port
Environment	Operating Temperature: -30 ~ 65℃ Storage Temperature: -40 ~ 80℃ Humidity: 0%~95%(non condensing)
Enclosure	Metal Case, IP68 certified
Power Supply	DC 48Volt / 0.8A; AC adapter 100-240V Support Power over Ethernet
LED Indicators	Wireless / Status
Dimensions	226 (L) x 197 (W) x 79 (H) mm
Weight	1600g
Certificate	FCC , CE