

## WH-5420CPE

### Hi-Powered Wireless outdoor CPE

**A**s the leading global WISP solution provider, AirLive understands the application environments of WISP operators. As a result, we are constantly upgrading our AP's firmware to meet the changing demand of WISP operators. The firmware adds high end features not commonly found in the AP of this class. The AirLive multi-function Access Points not only work for long distance application, but also work much better than the competitions.

8-Operation Modes

802.3af PoE

Bandwidth Control

Watchdog

DHCP Relay

SSH2

4MB Flash

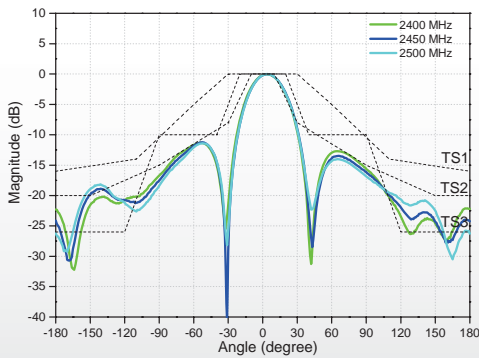
16MB DRAM

All-in-One Design

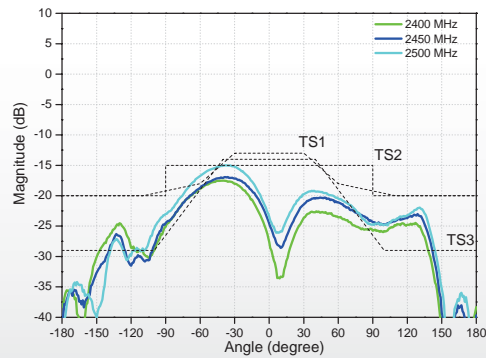
High Power



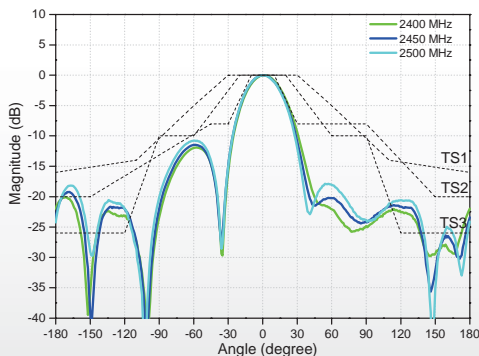
H-plane Co-polarization Pattern



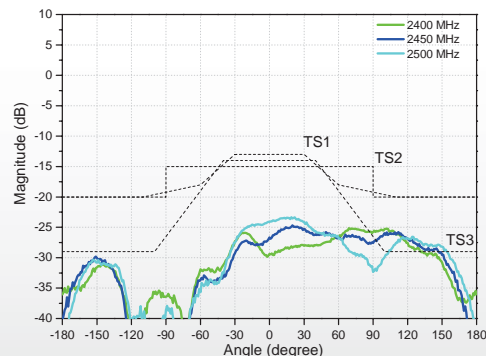
H-plane Cross-polarization Pattern



V-plane Co-polarization Pattern



V-plane Cross-polarization Pattern



Manufacturer

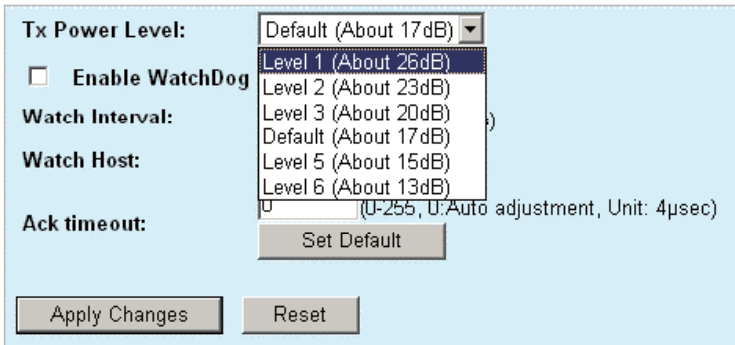
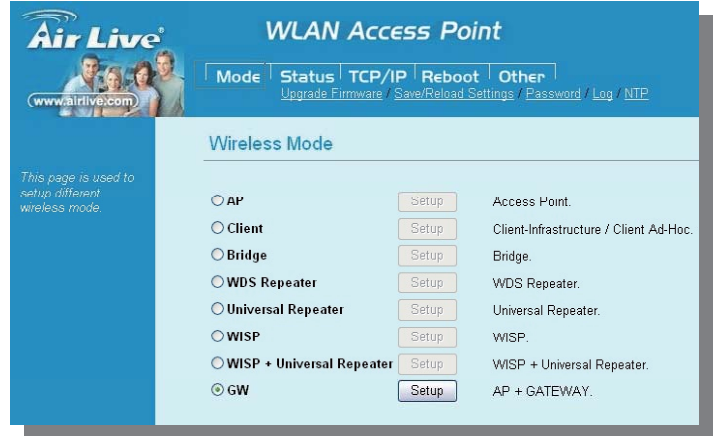
**OvisLink Corp.**

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[www.airlive.com](http://www.airlive.com)

## 8 Wireless Operation Modes

The AirLive WH-5420CPE can operate in 8 different wireless modes. It can work as a Wireless Router, AP, Client, Repeater, Bridge, and much more. Whether it is for home, office, or WISP; the AirLive AP has a solution for you.



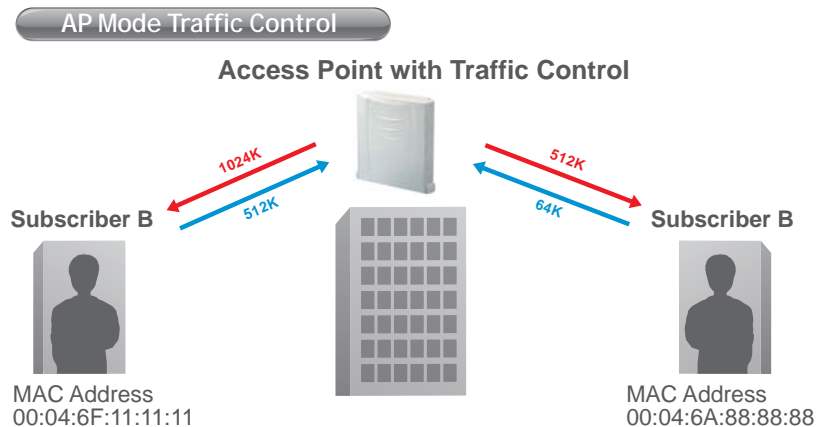
## Up to 400mW of Output Power\*

AirLive's high quality hardware let the AP expand its RF output power up to 26dBm using South American firmware. That's four times the output power of regular AP! It means much greater distance and coverage.

\* For South America only. Not available for other regions.

## Traffic Control QoS Function

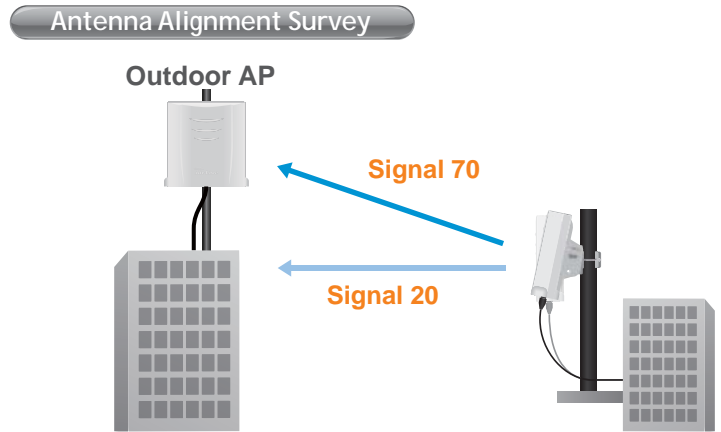
Traffic Control is a great tool to control the bandwidth of the WISP subscribers. Therefore, the WISP operators can offer different class of connection speeds for different subscription fees - just like the ADSL service! The AirLive advance Traffic Control firmware can control the bandwidth by Interface or IP/MAC.



## Dynamic Signal Survey Function for Antenna Alignment

Having trouble align your antenna correctly to the other outdoor AP? The AirLive Wireless Signal Survey function tells you the receiving signal strength dynamically as your antenna turns. It automatically refreshes itself in the process, therefore, making antenna alignment much simpler than before.

| SSID    | BSSID             | Channel | Type | Encrypt | Signal |
|---------|-------------------|---------|------|---------|--------|
| airlive | 00:50:18:21:d2:27 | 1 (B+G) | AP   | no      | 83     |



## Wireless Site Survey Connection Wizard

During a new WISP service installation, the installer will need to find out which outdoor AP provides the best signal in the area for connection. The AirLive wireless site survey function provides one step setup for this process. First, the site survey page shows which AP has the strongest signal. Then the installer performs antenna alignment by using the signal survey function. At last, the installer simply clicks on "connect" button to establish connection. The site survey is available even in AP mode, so the installer can check the channels used by surrounding APs to avoid interferences.

| SSID         | BSSID  | Channel  | Type | Encrypt | Signal | Select                           |
|--------------|--------|----------|------|---------|--------|----------------------------------|
| testd        | 00:0f: | 11 (B+G) | AP   | WPA-PSK | 100    | <input type="radio"/>            |
| Gateway      | 00:4f: | 11 (B+G) | AP   | no      | 85     | <input type="radio"/>            |
| airlive      | 00:50  | 1 (B+G)  | AP   | no      | 83     | <input checked="" type="radio"/> |
| AirForce-2   | 0a:4   | 2 (B+G)  | AP   | no      | 82     | <input type="radio"/>            |
| AirLive      | 00:4   | 2 (B+G)  | AP   | no      | 82     | <input type="radio"/>            |
| Air-force-1  | 06:4f  | 2 (B+G)  | AP   | no      | 82     | <input type="radio"/>            |
| Freedom      | 00:05  | 6 (B)    | AP   | WEP     | 67     | <input type="radio"/>            |
| 802.11g-SSID | 00:e0  | 11 (B+G) | AP   | no      | 63     | <input type="radio"/>            |
| CL-WLAN      | 00:1e  | 1 (B+G)  | AP   | WPA     | 62     | <input type="radio"/>            |

Buttons: Refresh, Connect, Signal Survey

## Telnet Function

Some WISP operators prefer to use CLI command line for configurations. The firmware provides full command line feature via Telnet.

```

Telnet 192.168.0.123

Welcome !!!
WL-5470AP> ip help
valid subcommands are:
-----
address subnetmask gateway dhcp dns ping status urlfilter ipfilter macfi
lter nat
WL-5470AP>

```

## SSH login

WH-5420CPE provides SSH secure connection for remote management. The program SSH (Secure Shell) is a secure replacement for Telnet. It provides an encrypted channel for logging into WL-5420POE over a network, executing commands on WH-5420CPE from your workstation. SSH provides strong host-to-host and user authentication as well as secure encrypted communications over an insecure Internet.

## Wireless Client Isolation

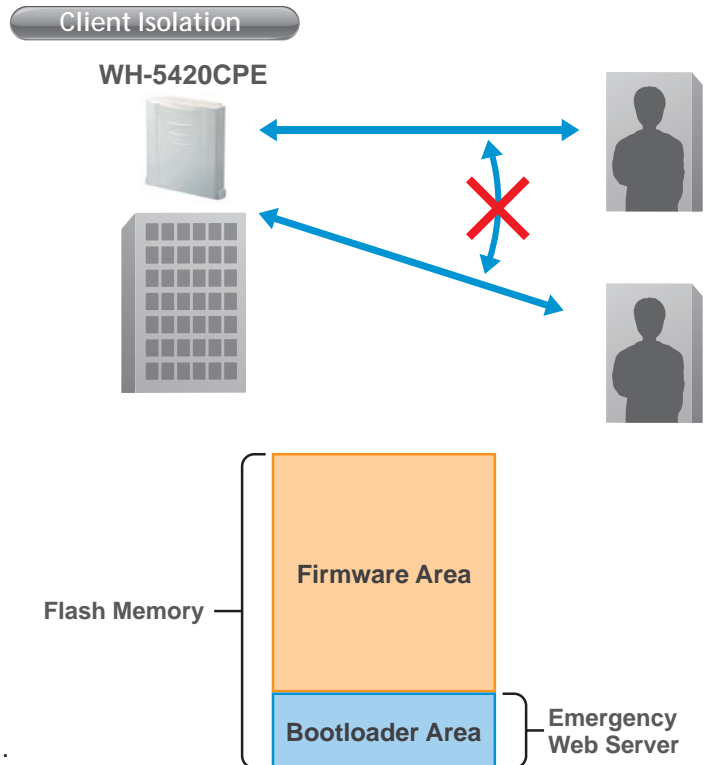
AirLive firmware's **Client Isolation** function protects the security and privacy of each individual subscriber. Therefore, subscriber does not need to worry about hacker attacks in the same wireless network.

## Emergency Recovery

How many times your machine crashed and lost access completely?

The AirLive's Emergency web server function means you can recover your AP even if the machine failed during a firmware upgrade. This greatly reduces the service loading for WISP operators.

\* The TX output power is limited to 20dBm in EU region.



## FEATURES & SPECIFICATIONS

### Features

- AP, Bridge, Client, Repeater functions
- Router and Gateway mode
- WISP Client Router mode
- WISP + Universal Repeater Mode
- Up to 26dBm output power (South America)
- Built-in 14dBi Patch antenna
- R-SMA antenna connector, detachable Antenna
- IEEE802.3af standard compliant
- 802.1x, WPA, WPA2 and Web Mgt
- 4MB Flash, 16MB SDRAM
- 20dBm(EU) or 26dBm(South America) Output Power
- TX power regulation in 6 levels
- Bandwidth Control and Signal Survey
- Client Isolation, Watchdog, and TX Power regulation
- SSH2/HTTP/Telnet managements
- DHCP Relay Agent Supported
- Up to 40 Access Control List
- ACK Timeout Adjustment
- Watchdog, and TX Power Regulation
- Watchdog function use PING

- WDS Site Survey
- 802.11g Protection
- 40 MAC Access Control List

### Specifications

#### Hardware

- 1 x 10/100Mbps LAN Port compliant with IEEE802.3af standard
- 4MB Flash, 16MB SDRAM
- IP65 Weather proof Enclosure

#### Antenna

- Built-in 14dBi patch antenna
- WISP Mode
- DHCP, PPTP, L2TP, PPPoE ISP Authentication Support
  - Wireless Client function as WAN
  - To configure the WISP mode, you PC must be connected to the LAN port

### Gateway Mode

- LAN port becomes to WAN port
- NAT Routing between WAN and LAN port
- Wireless used for LAN side
- Virtual Server, MAC filtering, DMZ, Firewall, IP filtering functions

### Security

- 64/128-bit - 802.1x Radius Support
- WPA/WPA2-PSK support
- WPA Enterprise support in AP/WDS mode

### Configuration

- Web/Telnet/SSH2 Management
- WDS (Bridge, Client, Repeater) mode
- Hide ESSID
- 802.1x

### Receiver Sensitivity

| Rx Sensivity @ 25°C |              |         |       |     |
|---------------------|--------------|---------|-------|-----|
|                     |              |         | Spec. |     |
| IEEE<br>802.11b     | Min<br>(dBm) | 1Mbps   | -     | -95 |
|                     |              | 2Mbps   | -     | -91 |
|                     |              | 5.5Mbps | -     | -90 |
|                     |              | 11Mbps  | -76   | -86 |
| IEEE<br>802.11g     | Min<br>(dBm) | 6Mbps   | -82   | -86 |
|                     |              | 9Mbps   | -81   | -86 |
|                     |              | 12Mbps  | -79   | -85 |
|                     |              | 18Mbps  | -77   | -83 |
|                     |              | 24Mbps  | -74   | -81 |
|                     |              | 36Mbps  | -70   | -77 |
|                     |              | 48Mbps  | -66   | -73 |
| 54Mbps              | -65          | -71     |       |     |

### Frequency Range

- USA (FCC) 11 Channels: 2.412GHz~2.462GHz
- Europe (ETSI) 13 Channels :  
2.412GHz~2.472GHz
- Japan (TELEC) 14 Channels  
:2.412GHz~2.483GHz

### Modulation Technique

- 11g Orthogonal Frequency Division Multiplexing (64QAM, 16QAM, QPSK, BPSK)
- 11b Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK) - Data Rate: 54, 48, 36, 24, 18, 11, 5.5, 2, 1 Mbps

### Output Power

- 20dBm(EU), 23dBm(FCC), 26dBm(South America)
- Adjustable in 6 levels
- MAC Access Control
- MAC Access Table
- Wireless Client Isolation
- SSID, Channel, RTS Threshold, Fragment Threshold

### Environmental

- Operating temperature: 0~60 °C; Operating humidity (non-condensing): 20~80%
- Storage temperature: -20~65 °C
- Storage humidity: 95% Max

### Power Supply

- 82.3af PoE 48V, 0.35A

### EMI

- FCC, CE

### Product Weight (g)

- 1105 g

### Product Size

- ( L x W x H (mm) ) 225 x 122 x 225 mm

### Ordering Information:

- AirLive WH-5420CPE** Hi-Powered Wireless outdoor CPE  
**AirLive OD-25M** Optional 25 meter POE Cable