



## UAG4100/2100 Unified Access Gateway

High quality Internet service is no longer optional for hospitality businesses. It is a guest expectation and a key to customer satisfaction. Yet, providing satisfactory Internet access is not simply a matter of installing Ethernet cables and wireless access points where guests need them. Hospitality businesses need to address the issues of access management, regulation compliance, and providing sufficient bandwidth for an exploding amount of wireless mobile devices.

The ZyXel UAG4100/2100 Unified Access Gateway is a next-generation, all-in-one wireless hotspot/access gateway designed to fulfill the hospitality challenges of both today and tomorrow. In addition to account management, billing, and data retention capabilities, the UAG4100/2100 offers premium features—like 802.11 a/b/g/n dual-radio Wi-Fi and a built-in WLAN controller—to deliver better scalability, capacity, and performance to fulfill tomorrow's guest access demands.

### Benefits

#### Increasing customer loyalty

Virtually everyone today has at least one wireless mobile device, like smartphones, tablets, and laptops computers. Yet, yesterday's hotspot gateways can no longer handle the exploding amount of wireless mobile devices that need Wi-Fi access. To satisfy this fast-growing demand, hospitality businesses need a solution that can provide greater Wi-Fi bandwidth, capacity and performance.



EEE 802.11 a/b/g/n dual-radio (2.4 GHz and 5 GHz) design



Supports 200 concurrent logins by default and up to 300 via license upgrade (UAG4100)



Integrated account generator, Web-based authentication portal and billing system



Supports external RADIUS servers



Per account bandwidth management



SP350E Service Gateway Printer enables one-click account and billing generation



Built-in WLAN controller



Facilitates compliance with data retention regulations

The Zyxel UAG4100/2100 is a next-generation wireless hotspot/access gateway that provides better performance, capacity, and service quality than other similar solutions. Its 802.11 a/b/g/n dual-radio (2.4 GHz and 5 GHz) design provides 2x the spectrum and 2x the bandwidth to accommodate a much larger amount of wireless devices. Its high performance hardware architecture can support 200\* concurrent logins by default, and up to 300\* concurrent logins via license upgrade. It also offers granular bandwidth management capabilities to enforce equal bandwidth sharing, avoid bandwidth abuse, and provide the service quality necessary to increase customer loyalty and attract new customers.

\* Numbers of default and max concurrent logins are for UAG4100

## Reducing deployment costs

In addition to single-location Wi-Fi hotspot deployments, the Zyxel UAG4100 Unified Access Gateway is also suitable for extended, multi-room network deployments in smaller accommodation facilities like small hotels, B&Bs and hostels. It features a built-in WLAN controller that helps small accommodation businesses extend the WLAN to multiple locations in the facility (guest rooms, dining areas, or even outdoors). The built-in WLAN controller supports 8 APs by default, and up to 16 APs via license upgrade for UAG4100. With a built-in WLAN controller, the UAG4100 helps reduce deployment costs by eliminating the need to purchase an extra WLAN controller and lowers maintenance time and effort by providing centralized management of all the APs in the network.

## Meeting the challenges of future audit

To address information security concerns, hospitality businesses are sometimes required to retain Internet usage records for a certain amount time; and this can become a significant burden for the businesses without the right equipment.

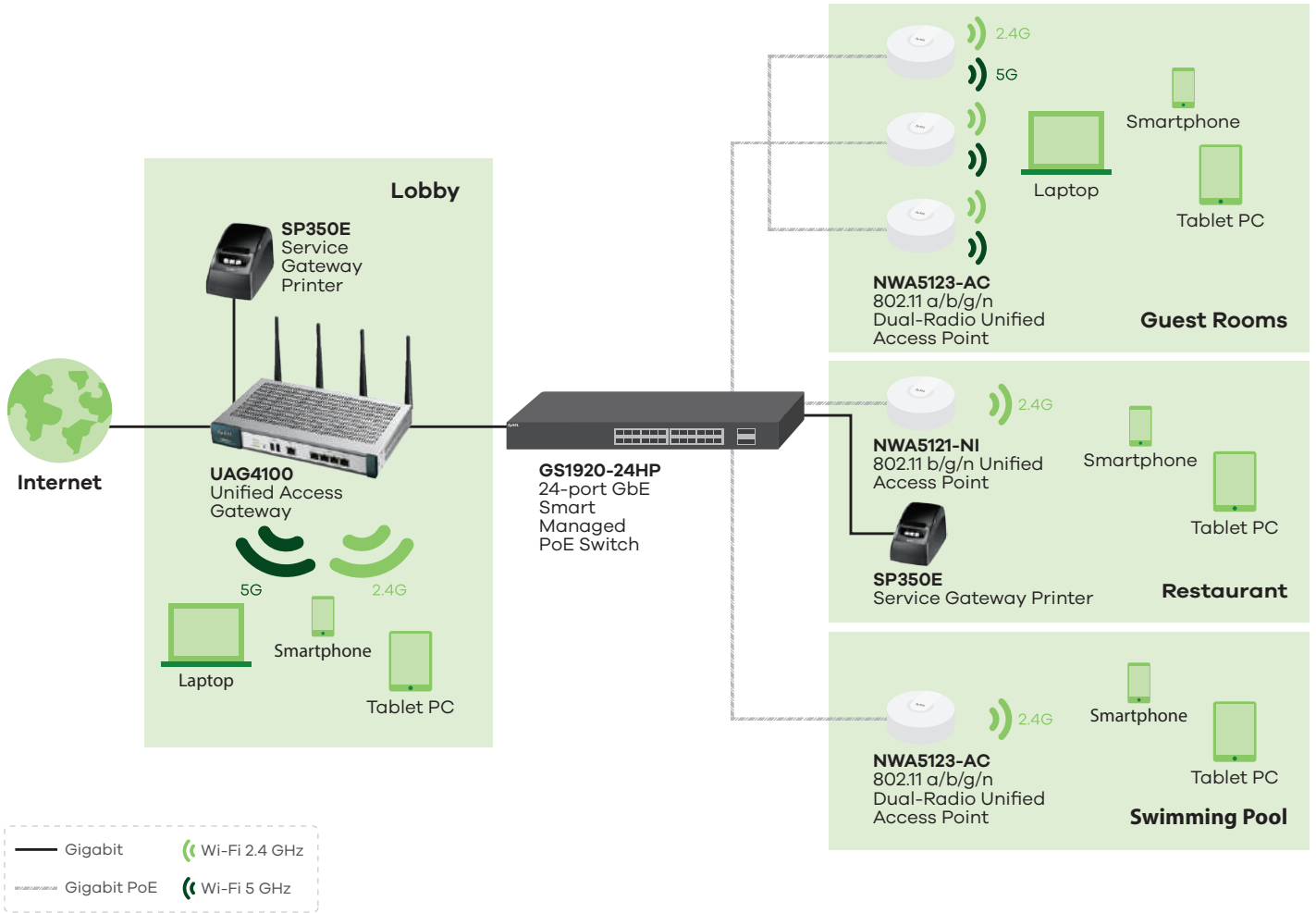
Designed with the hospitality industry in mind, the Zyxel UAG4100/2100 helps the businesses resolving the challenges. With a syslog server built-in, the UAG4100/2100 can automatically record user account information, MAC addresses, source and destination IPs, data volume and protocol types for future auditing requirements.

## Generating revenue



The Zyxel Unified Access Gateway is designed with advanced billing, user authentication, and access control features that help hospitality businesses manage guest accounts, block unauthorized access, and generate revenue with their Internet services. It gives hospitality businesses the flexibility to offer Wi-Fi access as a free service, a tiered service (premium when a purchase is made), or a paid service, depending on the preferred business model.

- **Guest account management:** Featuring a built-in account generator and a Web-based authentication portal, the UAG4100/2100 helps hospitality businesses provide controlled network access to hundreds of guests with ease. Simply by entering the provided account information in the captive portal, guests can get secure wired or wireless access to the Internet in a matter of seconds. Additionally, the UAG4100/2100 supports external RADIUS servers and external portal page redirection for added deployment flexibility.
- **Billing system:** Hospitality businesses can create up to 10 pre-paid billing plans with the UAG4100/2100. Billing plans can be customized with varying bandwidth speeds, service duration, and level of payment.
- **SP350E Service Gateway Printer:** The SP350E and UAG4100/2100 combination is the perfect solution for Wi-Fi hotspot applications. The SP350E enables one-click billing and account generation, which offers easy operation for staff members and smooth services flows in hotel lobbies, conference rooms, waiting areas and busy restaurants and cafés.
- **SMS ticketing:** The UAG4100/2100 supports SMS ticketing with ViaNett to provide improved convenience for both the business owner and the customer. With support for SMS ticketing, the UAG4100/2100 allows business owners to send Internet account and billing information directly to the customer's mobile phone, without needing to spend loads of money building an independent SMS ticketing system. This feature offers a cheaper and more environment-friendly ticketing solution compared to paper ticketing, and reduces the inconvenience related to customers losing or forgetting paper tickets.

# Small Hotel Internet Access Application Diagram



## Specifications

Model		UAG4100	UAG2100
Product photo			
<b>Hardware Specifications</b>			
RJ-45 ports		4 x LAN, 1 x WAN (10/100/1000 Mbps)(10/100/1000 Mbps)	4 x LAN, 1 x WAN (10/100/1000 Mbps)
USB ports		2	2
Ticket printer support		Yes (SP350E)	Yes (SP350E)
<b>System Capacity &amp; Performance<sup>1</sup></b>			
Routing throughput (Mbps) <sup>2</sup>		200	150
Concurrent logins (default/max.)		200/300	100/200
Max. concurrent sessions <sup>3</sup>		40,000	20,000
DHCP pool size		4,096	4,096
Built-in account generator	Static accounts	150	50
	Dynamic accounts	2,000	1,000
<b>WLAN Management</b>			
Built-in WLAN controller		Yes	Yes
Managed AP number (default/max.)		8/16	0/8
SSID		8	8
<b>Wireless Specifications</b>			
Standard compliance		802.11 a/b/g/n	802.11 a/b/g/n
Wireless frequency		Concurrent 2.4 & 5 GHz	Concurrent 2.4 & 5 GHz
Radio		2	2
SSID number		16	16
Maximum transmit power (Max. total channel)	US (FCC) 2.4 GHz	24.3 dBm, 2 antennas	24.3 dBm, 2 antennas
	US (FCC) 5 GHz	25.8 dBm, 2 antennas	25.8 dBm, 2 antennas
	EU (ETSI) 2.4 GHz	18.6 dBm (EIRP), 2 antennas	18.6 dBm (EIRP), 2 antennas
	EU (ETSI) 5 GHz	28.4 dBm (EIRP), 2 antennas	28.4 dBm (EIRP), 2 antennas
No. of antenna		2.4 GHz: 2T2R MIMO 5 GHz: 2T2R MIMO (Detachable, SMA-R)	2.4 GHz: 2T2R MIMO 5 GHz: 2T2R MIMO (Detachable, SMA-R)
Antenna gain		3 dBi	3 dBi
Data rate		802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: up to 300 Mbps in MCS15 (40 MHz; GI = 400 ns)	802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: up to 300 Mbps in MCS15 (40 MHz; GI = 400 ns)
Receive sensitivity	2.4 GHz	11 Mbps ≤ -87 dBm; 54 Mbps ≤ -74 dBm HT20 ≤ -71 dBm; HT40 ≤ -68 dBm	11 Mbps ≤ -87 dBm; 54 Mbps ≤ -74 dBm HT20 ≤ -71 dBm; HT40 ≤ -68 dBm
	5 GHz	54 Mbps ≤ -75 dBm HT20, MCS15 ≤ -71 dBm; HT40, MCS15 ≤ -69 dBm	54 Mbps ≤ -75 dBm HT20, MCS15 ≤ -71 dBm; HT40, MCS15 ≤ -69 dBm

Model	UAG4100	UAG2100	
<b>AAA &amp; Billing</b>			
Web-based authentication	Yes	Yes	
RADIUS client	Yes	Yes	
Time-to-finish/Accumulation billing modes	Yes/Yes	Yes/Yes	
Customizable billing profiles	Yes	Yes	
Account operator	Yes	Yes	
User agreement	Yes	Yes	
SMS ticketing	Yes	License	
<b>Security</b>			
SPI firewall	Yes	Yes	
Layer 2 isolation	Yes	Yes	
VPN pass-through	Yes	Yes	
802.1x support	Yes	Yes	
<b>Management</b>			
Syslog	Yes	Yes	
SNMP	Yes	Yes	
Limited user sessions	Yes	Yes	
Pass-through address	Yes (IP)	Yes (IP)	
Walled garden	Yes	Yes	
Customizable login page	Yes	Yes	
Customizable user agreement page	Yes	Yes	
<b>Power Requirements</b>			
Power input	12 V DC, 3 A max.	12 V DC, 3 A max.	
Max. power consumption (watt)	28	28	
<b>Physical Specifications</b>			
Item	Dimensions (WxDxH) (mm/in.)	272 x 171 x 36/10.71 x 6.73 x 1.42	272 x 171 x 36/10.71 x 6.73 x 1.42
	Weight (kg/lb.)	1.46/3.22	1.46/3.22
Packing	Dimensions (WxDxH) (mm/in.)	416 x 247 x 71/16.38 x 9.72 x 2.80	416 x 247 x 71/16.38 x 9.72 x 2.80
	Weight (kg/lb.)	2.3/5.07	2.3/5.07
Included accessories	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Rack mounting kit</li> <li>• Antenna</li> </ul>	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Rack mounting kit</li> <li>• Antenna</li> </ul>	
<b>Environmental Specifications</b>			
Operating environment	Temperature	0°C to 40°C/32°F to 104°F	0°C to 40°C/32°F to 104°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
Storage environment	Temperature	-30°C to 70°C/-22°F to 158°F	-30°C to 70°C/-22°F to 158°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)	497,644	497,644	
<b>Certifications</b>			
EMC	FCC Part 15 (Class B), CE EMC (Class B), C-Tick (Class B), BSMI	FCC Part 15 (Class B), CE EMC (Class B), C-Tick (Class B), BSMI	
Safety	LVD (EN60950-1), BSMI	LVD (EN60950-1), BSMI	

Note:

\*1: Actual performance may vary depending on network conditions and activated applications.

\*2: Routing throughput measured using the industry standard IXIA IxLoad testing tool (1,460-byte TCP packets).

\*3: Maximum sessions measured using the industry standard IXIA IxLoad testing tool.

## Features

### Networking

- Universal Plug and Play (UPnP)
- IP Plug and Play (iPnP)
- NAT/PAT
- Static routing and policy routing
- DHCP client/server/relay
- HTTP proxy support
- SMTP redirection
- VPN 1-to-1 mapping
- VPN pass-through
- WAN client: static, DHCP, PPPoE, PPTP
- Tagged VLAN (802.1Q)
- DDNS

### Security

- 64/128-bit WEP data encryption
- WPA-PSK TKIP data encryption (Wi-Fi Certified)
- WPA2-PSK AES data encryption (Wi-Fi Certified)
- WPA/WPA2-Enterprise
- Stateful packet inspection firewall
- L2 isolation
- User-aware security policy
- SSL login page
- Session limit
- IP pass-through (white list)

### AAA & Billing

- Web-based authentication
- User agreement login

- External RADIUS support
- Secondary RADIUS server support
- Built-in billing system
  - Time-to-finish accounting mode
  - Accumulation accounting mode
- 10 customizable billing profiles
- Built-in account generator
- Multiple logins with pre-configured accounts
- Bandwidth management (per account)
- Credit card billing via PayPal
- Thermal Printer support (SP350E)
- SMS ticketing support with ViaNett\*

\* UAG2100 SMS ticketing supports by license

### Marketing

- Advertisement link
- Walled garden
- Login page redirection
- Portal page
- Customizable login page
- Customizable information window
- Customizable user agreement page

### System Management

- Administrator access: WAN and LAN
- Web Management (HTTP/HTTPS)
- Secure administrator IP address
- SNMP v2c (MIB-II)
- Configuration backup and restoration

- Role-based administration (Admin, guest operator)
- Command line interface (console/web console/SSH)

### Monitoring and Reporting


- Email log
- Syslog: account, IP, MAC, traffic & protocol (data retention)
- Session list
- Account list
- Billing report
- DHCP client list

### WLAN Management

- Zyxel AP Controller (APC) 1.97 compliant
- Client RSSI threshold to prevent sticky clients
- IEEE 802.1x authentication
- Captive portal Web authentication
- Customizable captive portal page
- RADIUS authentication
- Wi-Fi Multimedia (WMM) wireless QoS
- CAPWAP discovery protocol

## Accessories

Model	Feature
<b>SP350E</b> <b>Service Gateway</b> <b>Printer</b>	<ul style="list-style-type: none"><li>• Buttons: 3</li><li>• Paper roll width: 58 (+0/-1) mm</li><li>• Interface: 10/100 Mbps RJ-45 port</li><li>• Power input: 12 V DC, 5 A max.</li><li>• Item dimensions (WxDxH): 176 x 111 x 114 mm (6.93" x 4.37" x 4.49")</li><li>• Item weight: 0.8 kg (1.76 lb.)</li></ul>



## License

Item	Model	Description
<b>Managed AP scalability license</b>	LIC-EAP	Increases the amount of supported managed APs by 8
<b>Concurrent device upgrade license</b>	LIC-SX	Increases the amount of supported Concurrent device upgrade by 100
<b>SMS ticketing license</b>	LIC-eSMS	One time SMS ticketing license for UAG2100

## Access Point Compatibility List

Series	NWA3000-N Series Unified Pro Access Point	NWA5000 Series Managed Access Point	NWA5120 Series Unified Access Point	WAC6500 Series Unified Pro Access
<b>Models</b>	NWA5121-NI NWA5121-N NWA5123-NI NWA5301-NJ NWA5123-AC*	NWA5160N NWA5560-N NWA5550-N	NWA5121-NI NWA5121-N NWA5123-NI	WAC6503D-S WAC6502D-S WAC6502D-E WAC6553D-E WAC6103D-I*
<b>Functions</b>				
<b>Central management</b>	Yes	Yes	Yes	Yes
<b>Auto provisioning</b>	Yes	Yes	Yes	Yes
<b>Data forwarding</b>	Local bridge	Local bridge	Local bridge	Local bridge

\*With firmware UAG ZLD 4.15 or later

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