ZyXEL

The All-in-one Guest Access Solution of Tomorrow, Delivered Today

- IEEE 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
- 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
- SMS ticketing with ViaNett protocol support
- Built-in WLAN controller (supports 8 APs by default and up to 16 APs via license upgrade)
- Facilitates compliance with data retention regulations

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 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 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. The built-in WLAN controller can manage up to 16 APs, which makes the UAG4100 ideal for multi-room network deployments in smaller accommodation facilities like small hotels, hostels, or B&Bs (bread and breakfast). Used with the SP350E ticket printer, on the other hand, the UAG4100 is the perfect solution for single-location Wi-Fi hotspot deployments in hotel lobbies, restaurants, or cafés.

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.

The ZyXEL UAG4100 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.

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Unified Access Gateway

Generating revenue

The ZyXEL UAG4100 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 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 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. Billing plans can be customized with varying bandwidth speeds, service duration, and level of payment.

- **SP350E Service Gateway Printer:** The SP350E and UAG4100 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 supports SMS ticketing with ViaNett to provide improved convenience for both the business owner and the customer. With built-in support for SMS ticketing, the UAG4100 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 loosing or forgetting paper tickets.

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. 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.
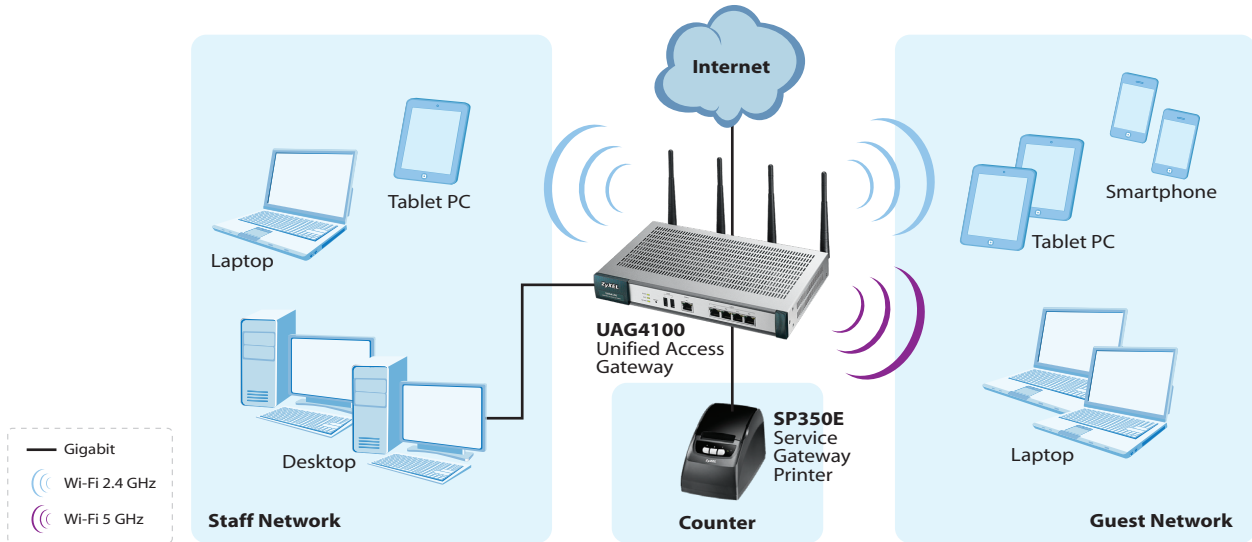
Meeting the challenges of regulatory compliance

Many countries have data retention laws, like the EU Data Retention Directive (2006/24/EC), which require businesses to retain Internet usage records for a certain amount of time. Hospitality businesses need to comply with these data retention regulations to avoid legal fines and regulatory penalties; but this can become a significant burden for hospitality owners if they do not have the right equipment.
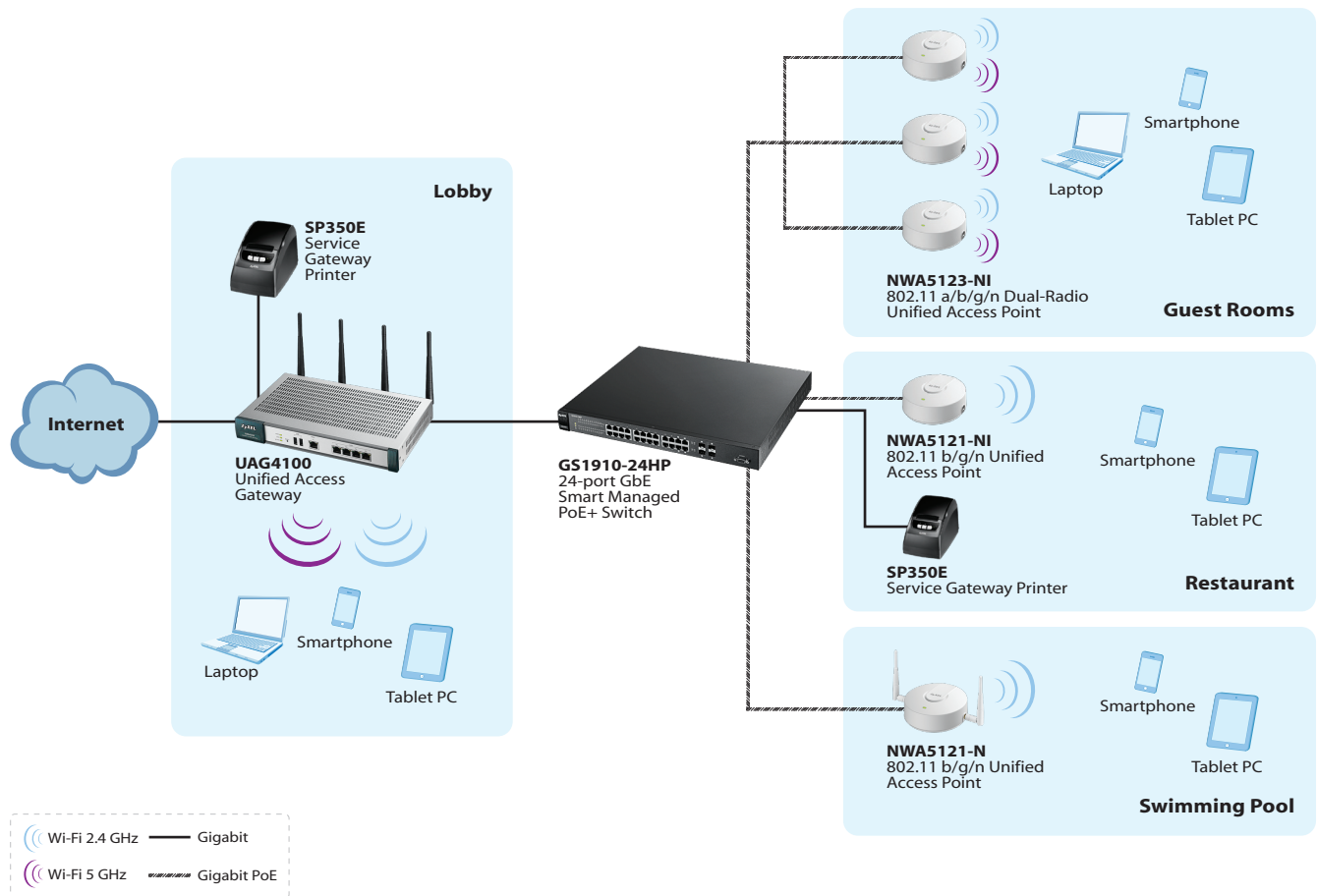
Designed with hospitality businesses in mind, the ZyXEL UAG4100 Unified Access Gateway helps hospitality businesses meet the challenges of regulatory compliance. Deployed with a syslog server, the UAG4100 can automatically record user account information, MAC addresses, source and destination IPs, data volume and protocol type for government auditing if required.

Key Applications

Wi-Fi hotspot application

Internet

Tablet PC

Laptop

UAG4100
Unified Access
Gateway

Desktop

Staff Network

SP350E
Service
Gateway
Printer

Counter

Smartphone

Tablet PC

Laptop

Guest Network

— Gigabit
(((Wi-Fi 2.4 GHz
(((Wi-Fi 5 GHz

Small hotel Internet access application

Lobby

SP350E
Service
Gateway
Printer

Internet

UAG4100
Unified Access
Gateway

Smartphone

Laptop

Tablet PC

GS1910-24HP
24-port GbE
Smart Managed
PoE+ Switch

NWA5123-NI
802.11 a/b/g/n Dual-Radio
Unified Access Point

Smartphone

Laptop

Tablet PC

Guest Rooms

NWA5121-NI
802.11 b/g/n Unified
Access Point

SP350E
Service Gateway Printer

Smartphone

Tablet PC

Restaurant

NWA5121-N
802.11 b/g/n Unified
Access Point

Smartphone

Tablet PC

Swimming Pool

(((Wi-Fi 2.4 GHz   — Gigabit
(((Wi-Fi 5 GHz   ---- Gigabit PoE

Specifications

Model	UAG4100
Hardware Specifications	
10/100/1000 Mbps RJ-45 ports	4 x LAN, 1 x WAN
USB ports	2
Ticket printer support	Yes (up to 10 printers)
System Capacity & Performance[*1]	
Routing throughput (Mbps)[*2]	200
Concurrent logins (default/max.)	200/300
Max. concurrent sessions[*3]	40,000
DHCP pool size	4,096
WLAN Management	
Built-in WLAN controller	Yes
Managed AP number (default/max.)	8/16
SSID	8
WLAN Management	
Standard compliance	802.11 a/b/g/n
Radio	2
Antennas	4 (detachable)
Wireless throughput (Mbps)[*4]	187 (2.4 GHz); 190 (5 GHz)
Max. output power (2.4 GHz)	802.11b: 12.5 dBm @11 Mbps; 802.11g: 12 dBm @54 Mbps 802.11n: 12 dBm @20 MHz; 802.11n: 13 dBm @40 MHz
Max. output power (5 GHz)	802.11a: 22.5 dBm @54 Mbps; 802.11n: 23 dBm @20 MHz 802.11n: 23 dBm @40 MHz
Radio sensitivity (2.4 GHz)	802.11b: ≤-90 dBm @11 Mbps; 802.11g: ≤-79 dBm @54 Mbps 802.11n: ≤-72 dBm @20 MHz; 802.11n: ≤-70 dBm @40 MHz
Radio sensitivity (5 GHz)	802.11a: ≤-79 dBm @54 Mbps; 802.11n: ≤-72 dBm @20 MHz 802.11n: ≤-68 dBm @40 MHz
Power Requirements	
Power input	12 V DC, 3 A max.
Max. power consumption (watt)	28

Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	272 x 171 x 36/10.71 x 6.73 x 1.42
	Weight (kg/lb.)	1.46/3.22
Packing	Dimensions (WxDxH)(mm/in.)	416 x 247 x 71/16.38 x 9.72 x 2.80
	Weight (kg/lb.)	2.3/5.07
Environmental Specifications		
Operating environment	Temperature	0°C to 40°C/32°F to 104°F
	Humidity	10% to 90% (non-condensing)
Storage environment	Temperature	-30°C to 70°C/-22°F to 158°F
	Humidity	10% to 90% (non-condensing)
MTBF (hr)		497,644
Certifications		
EMC		FCC Part 15 (Class B), CE EMC (Class B), C-Tick (Class B), BSMI
Safety		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.
*4: Wireless throughput measured using the industry standard IXIA IxLoad testing tool (20/40 MHz, WPA2-PSK).

UAG4100
Unified Access Gateway

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
  ▪ 50 static accounts
  ▪ 2,000 dynamic accounts
• Multiple logins with pre-configured accounts
• Bandwidth management (per account)
• Credit card billing via PayPal
• Thermal Printer supper (up to 10)
• SMS ticketing support with ViaNett

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

Accessories

Model	Feature
SP350E Service Gateway Printer	• Buttons: 3 • Paper roll width: 58 (+0/-1) mm • Interface: 10/100 Mbps RJ-45 port • Power input: 12 V DC, 5 A max. • Item dimensions (WxDxH): 176 x 111 x 114 mm (6.93" x 4.37" x 4.49") • Item weight: 0.8 kg (1.76 lb.)

License

Item	Model	Description
Managed AP scalability license	LIC-EAP	Increases the amount of supported managed APs by 8
User scalability license	LIC-SX	Increases the amount of supported concurrent logins by 100

Access Point Compatibility List

Series	NWA3000-N Series Unified Pro Access Point	NWA5000 Series Managed Access Point	NWA5120 Series Unified Access Point
Models	NWA3160-N NWA3560-N NWA3550-N	NWA5160N NWA5560-N NWA5550-N	NWA5121-NI NWA5121-N NWA5123-NI
Functions			
Central management	Yes	Yes	Yes
Auto provisioning	Yes	Yes	Yes
Data forwarding	Local bridge	Local bridge	Local bridge