

SKG10000-205E

Multi-service gateway

Datasheet

Highly scalable carrier-class Wi-Fi solution



The SKG10000-205E is a carrier-class multi-service gateway that functions as a high performance router, switch, WLAN gateway, and access point controller. Designed for next-generation mobile networks that require high bandwidth, excellent scalability, and industry-leading carrier Wi-Fi performance, the SKG10000-205E can deliver multiple service requirements for over 440,000 users across 20,000 Wi-Fi access points.

The SKG10000-205E integrates seamlessly into the core mobile network, allowing network operators to leverage Wi-Fi to cost-effectively expand the coverage and capacity of 3G/4G networks in dense urban areas, such as transit centers, campuses, and retail malls. With transparent extension of the cellular network via Wi-Fi and support for industry standards, like HotSpot™ 2.0, the SKG10000-205E ensures a superior quality of experience for users.

The SKG10000-205E can also generate advanced statistics and data analysis of user behavior through its intelligent services management (ISM) package. The ISM provides tools to help network operators monetize the use of Wi-Fi by delivering value-added services and applications to businesses operating in the service area.

Features

Integrates seamlessly into the core mobile network

- High volume offloading of 3G/4G data to Wi-Fi frees up licensed capacity
- Scalable to 20,000 Wi-Fi access points
- Supports up to 440,000 device users
- L2/L3 roaming, load balancing, and RF control
- Complies to Advanced Telecom Computing Architecture (ATCA) standards
- Supports industry standards, such as Hotspot 2.0

Superior quality of experience for users

- Excellent coverage in dense urban areas
- Multi-core, multi-thread processing power delivers industry-leading capacity
- Up to 2,800 user-per-second DHCP request processing
- Up to 2,400 users-per-second authentication request processing
- Up to 512,000 MAC address entries supported
- Seamless switching between 3G/4G and Wi-Fi service zones
- Seamless authentication and roaming

Flexible network architecture and data forwarding options

- Configurable for centralized or local data forwarding
- Centralized data forwarding routes all control and data traffic through the gateway for maximum control
- Local data forwarding provides lower latency and higher bandwidth, while maintaining centralized user management and security—optimal for large-scale deployments
- Multi-vendor access point support

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Specifications

Physical Specifications

Data ports (single line card)	8 x 10 GE ports 2 x 40 GE ports
Line card slots	2
RTM slots	2
Power consumption (fully loaded)	660W
Power supply	100–240 Vac
Maximum throughput	80 Gbps
Dimensions (H x W x D)	5.20" x 19.02" x 18.58" (132 mm x 483 mm x 472 mm) Including the mounting ear
Weight (fully loaded)	47.95 lb (21.75 kg)
Operating temperature	41°F to 104°F (5°C to 40°C)
Storage temperature	–40°F to +185°F (–40°C to +85°C)
Relative humidity	5–80% noncondensing
DHCP processing	2,800 users per second, maximum
Web authentication	2,400 users per second, maximum
VLANs	4096
MAC addresses	512,000
Access points	2,000 maximum (centralized forwarding) 20,000 maximum (local forwarding)
Users	64,000 maximum (centralized forwarding) 440,000 maximum (local forwarding)

Software Specifications

WLAN	Central forwarding and local forwarding modes AC discovery based on DNS/DHCP Option 43/broadcast/static IP address NAT through CAPWAP CAPWAP tunnel encryption Intelligent service holding Support for 802.11 protocol suite Hidden SSID Configurable country code Static/dynamic channel, power setting and adjustment Band steering L2/L3 roaming Hotspot 2.0
L2 and L3 functions	VLAN and super VLAN Static MAC IPv4 and IPv6 dual stack ARP, proxy ARP, local proxy ARP, ARP with DHCP snooping Static routing, policy-based routing OSPF VRRP DHCP server/relay/snooping

Wi-Fi security	Open system, shared key WEP 64/128 WPA/WPA2-PSK-TKIP WPA/WPA2-PSK-CCMP WPA/WPA2-802.1X-TKIP WPA/WPA2-802.1X-CCMP WAPI-PSK/CA (optional) MAC, Dot1x, Portal, Transparent (portal plus MAC) authentication AAA server backup Dynamic RADIUS attributes delivery AAA billing L2 isolation of wireless users WIDS/WIPS
Redundancy	1:1 active-standby redundancy
System management	CLI, Web, or SNMP configuration Console, SSH, or Telnet login Syslog System monitor SNMP v2c Lawful interception License-based capacity (AP and user quantity) control ATCA PICMG 3.1

Note: Specifications are subject to change.

Ordering

Product	Description
SKG10000-205E ①	1 x SK-PP-4, 1 x SK-CHAS-3&-2SL
SK-PP-4 ②③	Line card plus RTM
SK-CHAS-13U-2SL ③	Chassis (power modules included)

License	Description
LIC-AP-1000-UPG ④⑤	Licenses a line card to manage 1,000 additional access points
LIC-AP-5000-UPG ④⑤	Licenses a line card to manage 5,000 additional access points

① Standard configuration

② The number of access points a line card can manage is license-controlled. By default, a card has no license.

③ Expansion or backup

④ For upgrade

⑤ Once the upgrade license is imported, the total number of access points that the card can manage is increased by the number authorized by the license.



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