Wireless Enterprise

Unlimited Connectivity

Samsung Wireless LAN

SAMSUNG


WELCOME

Wireless Enterprise

SAMSUNG

Explore Samsung's powerful WLAN technology.

Samsung WEA300 series access points can accommodate 50% more concurrent users and have 14% greater range than conventional models.

The Latest Technology

Samsung's new wireless access points use the latest LTE mobile communications technology to deliver unparalleled performance for no-compromise wireless working.

With the increasing popularity of mobile devices, such as smartphones and tablets, demands on the WLAN are growing more complex due to the number of separate devices competing for service on the move.

The Samsung WLAN solution uses the industry standard IEEE802.11a,b/g whilst incorporating technology adopted from the recent Samsung investment in LTE to address the specific needs of voice and video without impacting data throughput. Seamless automatic handover when moving between Access Points (APs) removes the burden on devices and risk of disruption while application of Crystal HD Voice ensures the best possible speech quality and wireless service regardless of the type or number of devices in use.

The Samsung Wireless Enterprise solution goes beyond just satisfying user expectations. The Samsung AP delivers on design as well as performance. Using multiantenna technology the typical range is increased by 14% whilst coverage, speech quality and data errors are improved by 30%. In addition, the superior power of the AP affects the devices connected to it, minimising their own power consumption for longer battery life, and increases the number of concurrent users per AP by up to 50%.

The WEC8500 is a high performance WLAN controller that is able to simultaneously manage up to 500 access points and operates at 20Gbps, offering a fast and reliable network.

Samsung's powerful WLAN technology

Compact and robust enterprise-class access point:

- WEA302: 2 x 2, 2 spatial streams, dual concurrent radio, diameter of 174 mm
  WEA303: 3 x 3, 3 spatial streams, dual concurrent radio, diameter of 174 mm.
- Provides optimized wireless environment for smartphones as well as notebook PCs by applying automatic handover and cell design through mobile technology integration.
- Independent RF sensing offers enhanced security via its embedded, dedicated security RF monitoring module, and reduced total investment cost.
- Guarantees coverage and fairness that exceed the limitation of legacy wireless LAN through mobile telecommunication and multi-antenna technology.
- Cost effective operation with an existing enterprise network environment by providing support for L3 routing, powerful firewall, 10G interface and power redundancy.
- Provides stability and operational convenience through wired/wireless integrated management.
- Quick troubleshooting anytime, anywhere through remote management using smart devices.

The Samsung WEA300 series are powerful access points that guarantee and ensure improvement of service coverage while providing a dedicated security monitoring module.

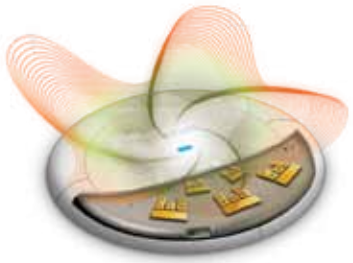
Key Benefits

AirEqualizer

Samsung's Traffic Schedule technology ensures the most optimized Wi-Fi service by allocating equal airtime to multiple devices. This technology guarantees airtime fairness when multiple devices connect to an AP at the same time. It also allows seamless service even in an environment where devices use different traffic types. In addition, it can maximize the AP's total cell throughput by more than 50% when compared with others, providing the best performance that adapts to the Wi-Fi connection specifications (11a/b/g/n) and signal intensity characteristics.

Intelligent Beam Selectable Antenna (IBSA)

A Samsung AP contains 14 antennas. Two antennas are used for monitoring and the remaining 12 provide an optimized RF pattern selecting a beam for each environment. As a result, dead areas are minimized, service coverage is expanded, and the receiving sensitivity is 2 dB higher than competitors. This means that the antenna can accurately receive a signal from a mobile device with weak Tx power even from a long distance.



AirMove*

Samsung AirMove technology applies the handover methodology used within LTE mobile communications to deliver seamless roaming. Timing and choice of access point is determined centrally by the Access Point Controller (APC) which has a full picture of device activity and adjacent AP loading.

Wireless Intrusion Prevention (WIPS)**

The importance of security in the enterprise communication environment cannot be over-emphasized. Particularly for the WIPS that provides security through RF sensing, a sensor AP for RF sensing is also required in addition to the APs for service provision. There are two types of WIPS architectures: the Overlay that that installs an additional sensor AP, and Time Slice that splits the service and sensing by time and provides them at the same AP.

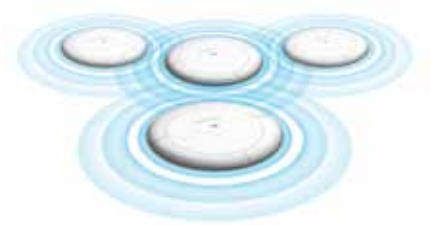
Samsung Wireless Enterprise AP combines the advantages of the two configurations and has the dedicated security RF monitoring chip embedded independently of the service RF chip to enable continuous real-time monitoring of data service. This maximizes the RF sensing performance and reduces design cost.

Voice Aware Traffic Scheduling (VaTS)

VaTS is a Samsung patented technology, which efficiently sends Voice Frames to multiple devices using mobile communication traffic scheduling technology. This means that there is no voice quality degradation due to an increase of devices in concurrent calls. This technology increases the concurrent call capacity even in areas with high call volume.

Self Organising Network (SON)

By adding LTE technology to the existing Tx power and channel optimization technology through wireless resource management, this technology automatically optimizes the cell configuration and coverage, considering the device features for voice environments. This allows a high level of quality management during operations and dramatically shortens design schedule and reduces design cost.



* Requires additional elements.

** Available in 2014.

WLAN Manager

Wire/Wireless Integrated Management

The Samsung WLAN Manager supports the access switch management function for AP as well as AP/APC. It provides an efficient wireless infrastructure management by supporting the Samsung L2 switch management function, including the AP connection port control for AP failure or remote AP reboot through its integrated UI. In addition, it supports the remote management function to help administrators respond to possible failures by using the smartphone fault monitoring and fault notification functions.

Remote Management Using Smartphones

You can use your smartphone to control remotely the wireless network status anytime, anywhere and quickly respond to any issues. You can easily identify the Critical/ Major/Minor alarm status. When a fault occurs, you can send its related information and a linkable URL to a specified device via SMS to check the status and troubleshoot in real time.

Access Point
WEA300 Series

		WEA302	WEA303
Radio Specifications		802.11a/b/g/n, Dual concurrent radio / Dynamic frequency selection (DFS) / 802.11n high throughput (HT20/40)	
		2 x 2 MIMO, 2 spatial streams / PHY data rates up to 300 Mbps	3 x 3 MIMO, 3 spatial streams / PHY data rates up to 450 Mbps
Operation Mode		Controller-based	
Supported Wireless LAN Controller		WEC8000 series	
RF Monitoring		Dedicated RF and security monitoring module in AP	
Data Rates		802.11a : 6, 9, 12, 18, 24, 36, 48, and 54 Mbps / 802.11g : 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps	
		802.11n : MCS 0 to MCS 15 (6.5 Mbps ~ 300 Mbps)	802.11n : MCS 0 to MCS 23 (6.5 Mbps ~ 450 Mbps)
Frequency Band		802.11b/g/n : 2.412 GHz ~ 2.472 GHz 13 CH / 802.11a/n : 5.180GHz ~ 5.825 GHz 24 CH * Available channel is compliant with local domain regulatory	
Maximum Transmit Power		20 dBm @ 2 streams (3 ~ 20 dBm)	23 dBm @ 3 streams (5 ~ 23 dBm)
		* The maximum transmit power will vary by channel and according to individual country regulation	
Integrated Antenna		Intelligent Beam Selectable Antenna (IBSA) 2.4 GHz : 4 dBi / 5 GHz : 5.5 dBi	Intelligent Beam Selectable Antenna (IBSA) 2.4 GHz : 3 dBi / 5 GHz : 5 dBi
External Antenna		–	External antenna provided per installation environment (sold separately)
Interfaces		10/100/1000BASE-T ethernet autosensing (RJ-45) / Management console port (RJ-45)	
Dimensions		Diameter x Height : 174 x 34.1 (mm)	
Weight		540 g	640 g
Environmental		Storage temperature : -20 ~ 70°C / Operating temperature : 0 ~ 45°C / Operating humidity : 5 ~ 95 % (noncondensing)	
Input Power Requirements		IEEE 802.3af PoE : 44 to 57 VDC	
Powering Options		Local power supply : 100 to 250 VAC, 50/60 Hz	
Power Draw		10.55 W	11.5 W
Compliance Standards	Safety	UL 60950-1 / UL 2043 / IEC 60950-1 / EN 60950-1	
	EMI and susceptibility (Class B)	FCC Part 15.107 and 15.109 / EN 301 489-1 and -17 (Europe) / KN 301 489-1 / KN 301 489-17 (Korea)	
	Radio approvals	FCC Part 15.247, 15.407 / EN 300 328, EN 301 893 (Europe) / Radio Equipment Specifications (Korea)	
	EAP type (s)	Extensible Authentication Protocol-Transport Layer Security (EAP-TLS) EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) Protected EAP (PEAP) v0 or EAP-MSCHAPv2 Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) PEAPv1 or EAP-Generic Token Card (GTC) EAP-Subscriber Identity Module (SIM) Multimedia : Wi-Fi Multimedia (WMM)	Extensible Authentication Protocol-Transport Layer Security (EAP-TLS) EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) Protected EAP (PEAP) v0 or EAP-MSCHAPv2 Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) PEAPv1 or EAP-Generic Token Card (GTC) EAP-Subscriber Identity Module (SIM) Multimedia : Wi-Fi Multimedia (WMM)
		EWMM-PS	–

WLAN Controller
WEC8500

		WEC8500
Capacity & Performance	Maximum # of APs	500
	Maximum # of stations	10 K
	MAC Address	12 K
	Number of IPv4 Unicast Routes	10 K
	System BSSIDs	16 K
	Firewall Throughput	20 Gbps
	Encrypted Throughput (AES)	10 Gbps
H/W, Interface	Network Interfaces and Indicators	• 8 1000Base_S/LX transceiver slots : Small Form-Factor Pluggable (SFP) options, LED indicators : link & Activity • 2 10GBase_S/LR transceiver slots : Small Form-Factor Pluggable (SFP)+ options, LED indicators : link & Activity • Management Ethernet port : 10/100/1000 Mbps ethernet (RJ-45 port), LED indicators : link and activity • Console port : RS232 (RJ-45 connector) • Other indicators : SYS, FAN , Power supply 1, Power supply 2
	USB Port	1
	Redundant Power Supply	Yes (Optional)
	Form Factor	1 RU
	Dimension	• Dimensions (W x D x H) : 435 x 500 x 44 mm • Weight : 8.48 Kg (1 power supply), 9.46 Kg with 2 power supplies • Temperature : Operating temperature : 32 to 113 °F (0 to 45 °C); • Storage temperature : -13 to 158 °F (-25 to 70 °C) • Humidity : Operating humidity : 10 ~ 90 % noncondensing • Input power : 100 to 240 VAC; 50/60 Hz
Network	Routing	Static routing, OSPF v1/v2, RIP v1/v2, IGMP v1/v2
	VLANs	1024
	DHCP	Server, Relay, Proxy
	QoS	Shaping, Policing, 802.1p, Voice Quality Monitoring (VQM)
	System Redundancy	Active-active, Active-standby
Security	Rogue AP Detection	Yes
	Firewall	Stateful firewall (License required)
	Authentication	802.1x
	MAC Filtering, ACL	Yes
	Encryption	• WEP and TKIP-MIC : RC4 40 and 104 bits • SSL and TLS : RC4 128 bit, RSA 1024 bit and 2048 bit • DTLS : AES-CBC
	AAA	Radius server
RF Management	SON	Power, Channel, Coverage hole
	RF Spectrum Analysis	Yes
Handover	L2 / L3	Inter/Intra controller
Management	Standard	• SNMP v1, v2c, v3 • RFC 854 Telnet • RFC 1155 Management Information for TCP/IP-based internets • RFC 1156 MIB • RFC 1213 SNMP MIB II • RFC 1350 TFTP • RFC 1643 Ethernet MIB • RFC 2616 HTTP • RFC 2863 interfaces group MIB • RFC 3164 syslog • RFC 3414 User-based Security Model (USM) for SNMPv3 • RFC 3636 definitions of managed objects for IEEE 802.3 MAUs • Samsung private MIBs • DHCP • SSH • Logging & reporting, Diagnostic
	Interfaces	• Web-based : HTTP/HTTPS • Command-line interface : Telnet, Secure Shell (SSH) protocol • Serial port • Wireless Enterprise WLAN Manager(WEM)
Regulatory Compliance		• KC type approval • UL 60950-1 • EN 60950-1 • FCC part 15 class A • EN 55022/ EN 55024

WLAN Manager
WEM

	WEM
Operating Systems (Customer-Supplied Server)	Linux (Red Hat Enterprise ES 5.5)
Minimum Server Requirements	• Low-end server : ~ 150 Devices (APs, APCs, Switches) - Intel® Xeon® E3-1220 3.10 GHz, 8 GB RAM, 200 GB HDD • Mid-range server : ~ 1500 Devices (APs, APCs, Switches) - Intel® Xeon® E5-2440 2.40 GHz, 16 GB RAM, 400 GB HDD • High-end server : ~ 3000 Devices (APs, APCs, Switches) - Intel® Xeon® E5-2640 2.50 GHz, 32 GB RAM, 600 GB HDD
Minimum Station Requirements	CPU : 3.0 GHz (Pentium Core2 duo processor) OS : Internet Explorer 7.0, FireFox 3.5, Chrome JRE : 1.6.0_20
Management and Security	SNMP v1, v2c, v3 / PNG, JPEG import file types supported
Managed Devices	Samsung WEC8500 series Wireless Enterprise Controllers Samsung WEA303, WEA302 Access Points Samsung iES4200 series Switches
Database	MySQL 5.5
Part Number	• WDS-LM50 / KOR : 50 devices support / • WDS-LM100 / KOR : 100 devices support • WDS-LM500 / KOR : 500 devices support / • WDS-LM1K / KOR : 1 000 devices support • WDS-LM3K / KOR : 3 000 devices support

Features and Benefits

Network Topology	Displays the connection hierarchy structure of the APC/AP to be managed. It displays the location and section in which a fault occurs
Monitor	• Displays the real-time fault information, traffic information, resource usage and history on a single screen • Displays overall status and detailed information on the APC/AP and devices • Supports viewing of the management target area on a map and identifies AP location, coverage, and device location • Checks the status of Rogue AP and devices in real time and promptly blocks the service fault and security breach • Allows you to select a preferred monitoring item and manage it continuously on a dashboard
Configuration	Supports detailed configuration of APC/AP required for service
Admin	• Grants various permissions per administrator through the WEM connection account management system • Allows you to configure alarm properties appropriate for the environment, such as an audible alarm
Tools	• Displays the signal strength and usage in the area around the AP using a spectrum analyzer • Allows you to identify and analyze a nearby interference source using the interference detector when a fault occurs, such as voice quality degradation • Supports the packet capture ɹnction in a wireless or wired section to allow you to monitor call faults and traffic overload status • Allows you to monitor the voice quality for each section using the VQM (Voice Quality Monitor) function to identify a faulty section when a call fault occurs
General	Supports WEM status monitoring and configuration to allow you to manage the WEM server
Troubleshooting	• Supports various troubleshooting features for diagnosing the causes of faults • Allows you to easily identify the cause of the fault by providing the status per stage
Reporting	Provides reports for various items such as interface, resource, station status, AP status, Rogue AP status, and traffic usage, etc.
Alarm Notification	Sends an alarm in real-time to a specified administrator when a fault occurs to enable prompt handling and troubleshooting of the fault
Tree viewer UI	• Offers admin convenience by enabling direct access to an APC or AP in the Tree Viewer • Provides high visibility on the current status screen by using a different color for each different fault type when a fault occurs
Mobile Management	Allows you to manage the status and handle faults anytime, anywhere with Mobile Web support ('13. 12)
Security	Provides Rogue AP detection and monitoring functions

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