

# Information

## HiPath Wireless Access Points

The HiPath Wireless family of Access Points are enterprise-class dual radio 802.11 a/b/g capable, providing coverage anywhere that wireless LAN (WLAN) service is required. Unique Plug and Play technology dramatically simplifies network deployment.

Siemens Virtual Network Services Architecture optimizes traffic flow and user policies between the Access Point and Controller, balancing high performance, security and manageability.

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The HiPath Wireless solution optimizes the distribution of the processing load between the Access Point and Controller to deliver exceptional performance while remaining easy to manage. Complex, time-sensitive functions such as QoS, encryption, and RF management are handled by the AP, while global functions like configuration, roaming, and policy control are centralized at the Controller. Furthermore, Siemens innovative VNS Architecture can optimize the forwarding of traffic on a per-application basis for the best performance and reliability. The result is a WLAN infrastructure that can easily be expanded to support new high-performance technologies and solutions.

## Ease of Deployment & Management Control

### Deploy WLAN anywhere

HiPath Wireless Access Points are designed to provide optimal RF coverage in almost any environment. The AP2610 uses discrete internal antennae, while the AP2620 features external antennae to allow extended coverage and minimal interference in hard-to-reach areas. Wireless Distribution System (WDS) enables deployment of APs without the use of Ethernet cabling, instead using RF to bridge wireless traffic back to the network. This makes it possible to extend wireless coverage beyond the reach of conventional WLANs and wires.

### HiPath Wireless Outdoor Access Point

The Outdoor Access Point (Outdoor AP) allows installations to seamlessly span from office to factory floor to outdoors. Featuring the same capabilities of the 2610 and 2620 models, the Outdoor AP is designed to deliver enterprise WLAN coverage in the harshest industrial or outdoor environments. The Outdoor AP is available in internal (AP2650) or external (AP2660) antenna models, both featuring robust housing that withstands extreme temperature ranges, and is dust, dirt, salt water, fog and humidity resistant.

### Secure wired network integration

HiPath Wireless APs can seamlessly integrate with secure wired infrastructure by automatically authenticating using 802.1x. This ensures that all Ethernet connections are only used by authorized devices.

### Dual band, multi SSID flexibility

Each AP houses two independently manageable radios, one for 802.11b/g (2.4 GHz band) and one for 802.11a (5 GHz band). Each radio supports up to eight

separate SSIDs, each with its own configuration, security and policy settings. As a result, there are sixteen "virtual APs" for every physical unit. This can be used to create an additional level of security and quality by separating specific types of traffic or services on to different SSIDs.

### "Plug & Play" network installation

HiPath Wireless Access Points securely and automatically register with a Controller and download their configurations. APs can immediately provide service to users without any additional manual configuration.

### Central configuration and monitoring

All APs associated with a Controller are centrally monitored and managed for greater administrative control. When needed, each AP can be separately configured, enabled, or disabled. APs can be managed through the Controller, which provides alarms, traps and reporting statistics suitable for network managers. APs also provide data on performance, security, and usage to the Controller for consolidation into detailed reports.

### Authentication and encryption

HiPath Wireless Access Points use the most sophisticated standards to ensure the highest security and client compatibility. Based on the 802.11i (WPA2) industry standards for wireless security, implementations can utilize 802.1x or PSK authentication and AES, TKIP or WEP encryption.

### Proactive wireless intrusion detection and prevention

APs scan different RF channels at regular intervals - while also providing network access to users - to identify all wireless nodes within their airspace. This information is then passed on to the HiPath Wireless Controller, where it is consolidated for review by network administrators. Deployment of HiPath Wireless Manager HiGuard enhances this process by consolidating AP scan information into compliance reports.

### Dynamic RF management and load balancing for reliable performance

HiPath Wireless APs work together to deliver interference prevention and RF sharing. Each AP is able to intelligently and dynamically adjust its transmit power and

channel selection based on information from nearby APs. This process, known as Dynamic RF Management, ensures optimal performance for associated clients. If an AP fails, neighboring APs will increase power to maintain coverage in the affected area, maintaining a consistent high-level of performance despite the dynamic and inconsistent nature of RF traffic.

The APs support DRM channel plan selection with the option of supporting 3-channel, 4-channel, or fully custom channel configuration.

## Solutions Enablement Capabilities

### Unique VNS Architecture

With Siemens Virtual Network Services (VNS) Architecture, encryption, QoS, and RF management functions are performed at the Access Point. This minimizes the load on the central Controller, and enables the AP to intelligently forward different types of traffic locally or back through the Controller, depending on the network topology and application requirements. Siemens VNS Architecture delivers optimal performance and traffic flow on a per-application basis, and also ensures that new Controller hardware is not needed to support high-performance wireless applications.

### End-to-end VoWLAN

HiPath Wireless APs are optimized for the industry's leading VoWLAN devices to ensure peak call quality and reliability. Support for WMM-UAPSD optimizes transmission between phones and APs to maximize phone battery life.

### QoS for real-time voice & multi-media

Wireless Quality of Service (QoS) is delivered via the WMM standard for traffic prioritization, which is based on the 802.11e industry standard. QoS priorities can be set according to SSID, allowing critical real-time traffic to be assigned to a distinct high-priority queue. Interoperability with prioritization mechanisms on the wired network is also available to ensure end-to-end QoS. Call Access Control ensures that high-quality voice traffic is maintained in existing calls before admitting new traffic onto the access point.



AP2610

AP2620

Outdoor AP  
AP2650

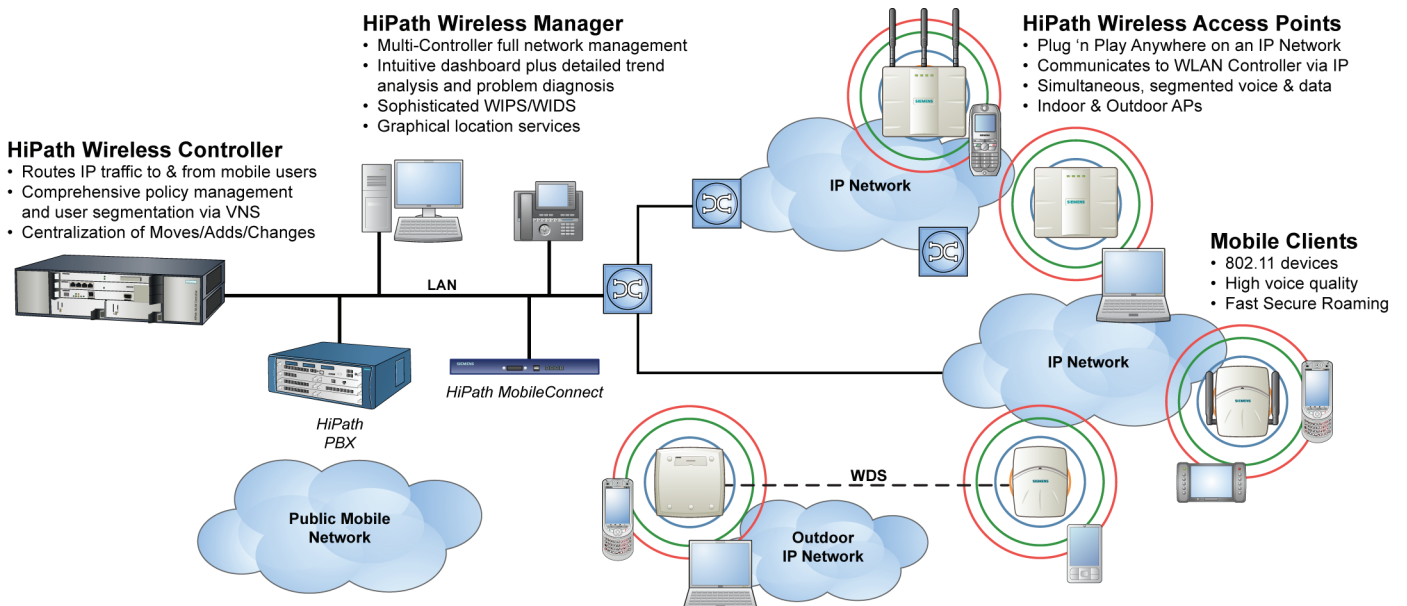
## HiPath Wireless Access Point Supported Features

	Feature	Benefit
Management	Plug and Play Installation: – Automatic Controller Discovery – Centrally-deployed Configurations and Upgrades – Network-independent	No on-site configuration needed, dramatically reducing deployment time and costs.
	Secure Remote Management	APs can be easily configured and monitored from a central location with less personnel.
	Up to 16 SSIDs (8 per radio)	Segment networks based on distinct user access, performance, and security needs.
Security	Security via WEP, WPA, (TKIP), WPA2, (AES), 802.11i, 802.1x	Latest authentication and encryption standards ensure that user data is safe.
	VPN Support: IPSec, PPTP, L2TP	VPN interoperability provides added security.
	Rogue AP Detection	APs participate in the detection and prevention of unauthorized APs or ad hoc networks.
Performance	Intelligent Fit AP	Encryption, filtering, QoS, and RF management done by the AP, resulting in high performance and resilience if the rest of the network fails.
	Controller Fast Failover & Session Availability	APs continuously maintain a configuration profile for a secondary Controller, so that if a primary Controller failure occurs the APs can immediately communicate with the secondary Controller to ensure continuity of service. This allows VNS's configured for Session Availability to maintain communication sessions even in the event of a failover.
	Dynamic RF Management (DRM)	APs intelligently discover network gaps, and can increase transmit power to maintain coverage.
	802.11a/b/g WLAN Connectivity	Greater user interoperability and performance.
Voice	Quality of Service (WMM, 802.11e)	Optimal performance for media and voice applications.
	Fast, Secure Roaming and Handover (pre authentication, Opportunistic Key Caching)	Voice session integrity is preserved in a secure manner, even when users move across APs.
Capacity	Simultaneous Voice Calls: 12 (802.11b, G.711, R>80)	APs meet the quality and capacity demands of today's VoIP applications.
	Simultaneous Users: 127 per radio	Managers can stretch their investment further.

## The All Wireless Enterprise and Mobile UC

HiPath Wireless is the key enabler of Siemens All Wireless Enterprise Solution and part of Siemens OpenScope Mobility family of products. HiPath Wireless delivers unsurpassed speed, security and scalability enabling ubiquitous enterprise wireless access at the industry's lowest total cost of deployment. OpenScope Mobility – *delivering Mobile UC to the enterprise.*

## HiPath Wireless Portfolio



# HiPath Wireless Access Point Specifications

	AP2610/AP2620	Outdoor AP AP2650/AP2660
<b>Data rates</b>	<ul style="list-style-type: none"> <li>● 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>● 802.11b: 1, 2, 5.5, 11 Mbps</li> <li>● 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps</li> </ul>	
<b>Frequency bands*</b>	802.11a: <ul style="list-style-type: none"> <li>● 5.15 to 5.25 GHz (FCC / IC / ETSI)</li> <li>● 5.25 to 5.35 GHz (FCC / IC / ETSI)</li> <li>● 5.47 to 5.725 GHz (ETSI)</li> <li>● 5.725 to 5.825 GHz (FCC / IC)</li> </ul> 802.11b/g: <ul style="list-style-type: none"> <li>● 2.400 to 2.4835 GHz (FCC / IC / ETSI)</li> </ul>	802.11a: <ul style="list-style-type: none"> <li>● 5.15 to 5.25 (FCC / IC / ETSI)</li> <li>● 5.25 to 5.35 GHz (ETSI)</li> <li>● 5.47 to 5.725 GHz (ETSI)</li> <li>● 5.725 to 5.825 GHz (FCC / IC)</li> </ul> 802.11b/g <ul style="list-style-type: none"> <li>● 2.400 to 2.4835 GHz (FCC / IC / ETSI)</li> </ul>
<b>Dynamic channel control</b>	DFS & TPC support (ETSI)	
<b>Wireless modulation</b>	<ul style="list-style-type: none"> <li>● 802.11a: OFDM</li> <li>● 802.11b: DSSS</li> <li>● 802.11g: DSSS and OFDM</li> </ul>	
<b>Antennae</b>	<b>Integrated Antenna (AP2610 only)</b> 2.4 / 5.0 GHz - 4 dBi Gain <b>External Antenna (AP2620 only)</b> 2.4 GHz / 5.0 GHz - 4 / 5 dBi Gain Customers can purchase approved directional and omni-directional antennae with a selection of antenna gain.	<b>Integrated Antenna</b> 3dBi@2.4 GHz, 4dBi@5 GHz <b>External Antenna</b> Various high-gain directional and omni-directional antennae are approved.
<b>Interface &amp; indicators</b>	Auto-sensing 10/100bT Ethernet interface. LED indicating AP status and connectivity	
<b>Receive sensitivity (typical)</b>	<ul style="list-style-type: none"> <li>● 802.11a: 6 Mbps/-89 dBm, 36 Mbps/-78 dBm, 48 Mbps/-73 dBm, 54 Mbps/-70 dBm</li> <li>● 802.11b: 1 Mbps/-91 dBm, 2 Mbps/-90 dBm, 5.5 Mbps/-89 dBm, 11 Mbps/-87 dBm</li> <li>● 802.11g: 6 Mbps/-89 dBm, 36 Mbps/-79 dBm, 48 Mbps/-74 dBm, 54 Mbps/-72 dBm</li> </ul>	
<b>Power</b>	<ul style="list-style-type: none"> <li>● 802.3af Power over Ethernet, Class 0 (12.95 Watts Max)</li> <li>● Typical Power: 9.75 Watts DC Power</li> <li>● Voltage: +6 V DC</li> <li>● Current: 1700 mA max. at +6 V DC</li> </ul>	<ul style="list-style-type: none"> <li>● 802.3af Power over Ethernet – 12.9W</li> <li>● 48V DC – 15W</li> <li>● 110-230V AC -15W</li> </ul>
<b>Available transmit power*</b>	<ul style="list-style-type: none"> <li>● 802.11a: – 5.15 to 5.25 GHz: 17 dBm (FCC/IC), 18 dBm (ETSI); 5.25 to 5.35 GHz: 18 dBm (FCC/IC/ETSI) – 5.470 to 5.725 GHz: 18 dBm (ETSI); – 5.725 to 5.850 GHz: 15 dBm (FCC / IC)</li> <li>● 802.11b/g: 18 dBm (FCC / IC), 15 dBm (ETSI); Transmit (selectable per radio): – 100%, 50%, 25%, 12.5%, 6.25%</li> </ul>	
<b>Compliance/standards</b>	Ethernet IEEE 802.3 / 802.3u / 802.3af; Wireless IEEE 802.11a/b/g; WPA, WPAv2, WMM	
<b>Safety</b>	UL / IEC / EN 60950 - 1; CAN/CSA 22.2 # 60950-1-03 UL 2043 Plenum Rating	IEC / EN 60950 - 1; UL / CSA 60950 - 1 UL HAZLOC, FM, ATEX
<b>EMC &amp; Radio</b>	FCC CFR 47 Part 15, Class B ICES-003 Class B; FCC Subpart C 15.247; FCC Subpart E 15.407; RSS-210; EN 301 893 V1.2.3; EN 300 328 V1.6.1; EN 301 489 1 & 17; EN / UL 60601-1-2; EN 50385 EN 55011 (CISPR 11) Class B Group 1ISM	EN 301 489-1 V1.6.1; EN 301 489-17 V1.2.1; EN 300 328 V1.6.1; EN 301 893 V1.3.1; EN 50385; 1999/519/EC; FCC CFR 47 Part 15, Class B
<b>Dimensions &amp; weight</b>	40 mm x 115 mm x 175 mm (1.5" x 4.5" x 7") AP2610 weight: 272 g (9.6 oz) AP2620 weight: 363 g (12.8 oz)	(W x H x D) 251 mm x 251 mm x 72 mm Without PS adaptor: 2241g With AC PS adaptor: 2433g
<b>Environmental</b>	<ul style="list-style-type: none"> <li>● Operating Temp: 5°C to 40°C (41°F - 104°F)</li> <li>● Storage Temp: -40°C to 85°C (-40°F - 185°F)</li> <li>● Humidity (Non-Condensing): 10 to 95%</li> </ul>	<ul style="list-style-type: none"> <li>● Operating Temp: -40°C to 70°C (+60°C with optional Power Supply)</li> <li>● Storage Temp: -40°C to 85°C</li> <li>● Protection – IP65, NEMA 4x</li> <li>● Humidity 95%, MTBF – 61 years</li> </ul>



Note: Specifications are subject to change

\* Bands, frequency settings, and maximum power settings will vary according to channel and individual country regulations.

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Hofmannstr. 51, D-81359 München

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