

SkyAccess DualBand



Benefits

- **Reduces cost** to optimize Wi-Fi coverage area for superior client connectivity experience
- **Highly integrated** dual-radio/dual-frequency mesh edge solution
- **Seamless backhaul link** with SkyExtender mesh nodes at long range (up to 7.5 miles/12km)
- **Dedicated high-power Wi-Fi** radio with high power, high gain omnidirectional antenna for ubiquitous 802.11b/g coverage
- **Multi-service network** capable of providing end-to-end security and quality of service for VoIP
- **Auto-discovery and provisioning** over-the-air when link is established with the SkyPilot mesh
- **Centrally manageable** as part of the citywide mesh network with SkyControl EMS

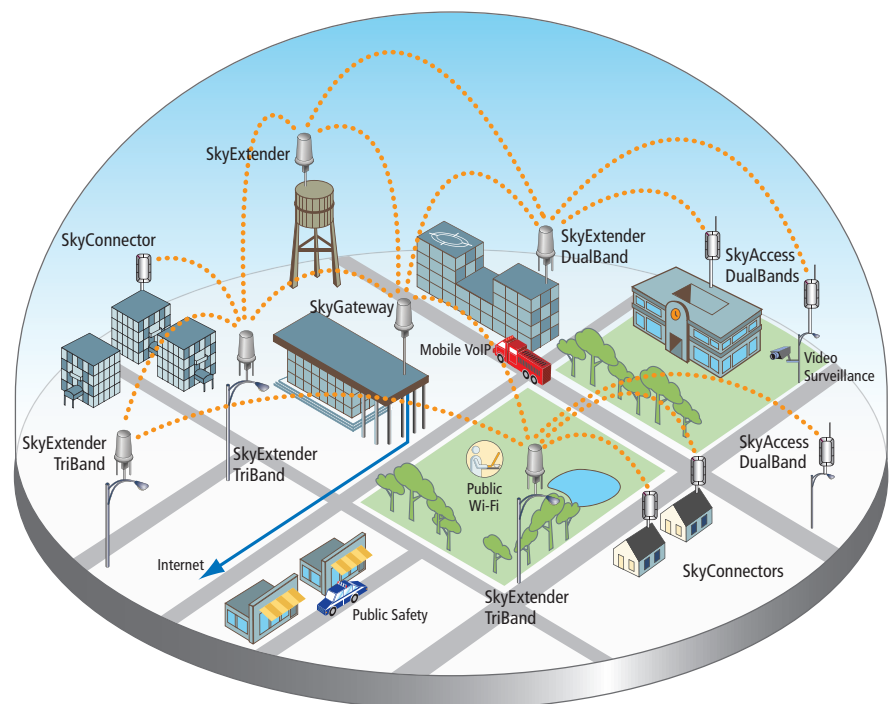
Dual-Radio Mesh Edge Reduces Citywide Wi-Fi Costs

The SkyAccess™ DualBand dramatically reduces the total cost of ownership of citywide Wi-Fi HotZones by offering service providers and carriers a low cost solution for the mesh edge. Tightly integrating high capacity wireless backhaul and Wi-Fi access into a single device, the SkyAccess DualBand quickly and cost effectively extends the Wi-Fi service area of the wireless mesh network, enhancing client reception and subscriber satisfaction. The highly versatile device is deployed with SkyExtender DualBand nodes to fill coverage holes and increase modulation rates where a full mesh node is unnecessary. Backhaul links seamlessly integrate with SkyPilot's advanced 5 GHz SyncMesh™ backhaul while simultaneously supporting dedicated 2.4 GHz public Wi-Fi access.

The SkyAccess DualBand is a dual-radio/dual-frequency device, with integrated directional antenna for 4.9-5.8 GHz backhaul and omnidirectional 2.4 GHz antenna to serve Wi-Fi clients. SkyPilot's backhaul uses a high gain directional antenna and a high output radio for an effective power of 42 dBm EIRP to support high modulation at distances up to 7.5 miles. Wi-Fi access is likewise optimized using a high gain antenna and high output radio for an effective power of up to 33.4 dBm EIRP. As with SkyPilot's mesh nodes, the SkyAccess DualBand automatically discovers the network and self-configures the backhaul link and modulation rate.

Local wired connectivity is also supported via the integrated Ethernet port providing a convenient interface for a IP device such as a video surveillance camera, AMR transceiver, or other Ethernet-enabled device.

SkyAccess DualBand is an essential component of today's municipal Wi-Fi mesh networks where minimizing deployment cost and maximizing subscriber satisfaction are an essential component in driving business model success. SkyPilot offers a total network solution through the combination of SkyAccess DualBand, SkyGateway and SkyExtender series mesh nodes, SkyConnector CPE, and SkyControl EMS.



The SkyAccess DualBand cost effectively expands the boundaries of a Wi-Fi coverage area where a full mesh node is not justified

SkyAccess DualBand

Radios, Antennas, and Security

	5 GHz wireless backhaul	802.11b/g AP
Frequency band	Select from the following: 4.940-5.150 GHz, 5.150-5.450 GHz 5.450-5.725 GHz, 5.725-5.850 GHz	2.400-2.483 GHz
Antennas	16.5 dBi panel 28° horizontal x 9° vertical	7.4 dBi omnidirectional antenna (N connector)
Radio (peak Tx)	450 mW / 26.5 dBm	Two power options available: • 400 mW / 26 dBm (FCC) • 18 mW / 12.6 dBm (ETSI)
EIRP	42.5 dBm / 17 W peak EIRP	Per associated power level: • 2.2 W / 33.4 dBm EIRP (FCC) • 100 mW / 20 dBm EIRP (ETSI)
Media access	Time Division Duplex (TDD)	IEEE 802.11b/g CSMA/CA
Wireless Connectivity	Links to mesh backhaul; either SkyExtender or SkyGateway series	IEEE 802.11b/g Wi-Fi clients
Modulation technique	OFDM	OFDM (802.11g), DSSS (802.11b)
Modulation rates	6 to 54 Mbps	802.11b: 1 to 11 Mbps, 802.11g: 6 to 54 Mbps
Throughput	Up to 20 Mbps UDP / up to 12 Mbps TCP	
Latency	10-12 ms roundtrip per hop	
Channel width	20 MHz	20 MHz
Channel resolution	5 MHz frequency control	5 MHz frequency control
Receive sensitivity	-90 dBm at 6 Mbps modulation	-95 dBm at 1 Mbps modulation
Authentication	RSA-based certificates	RADIUS support for multiple servers, 802.1x
Encryption	128-bit AES encryption on all wireless link	WEP, Dynamic WEP, WPA & WPA2 (EAP-TTLS, EAP-PEAP/MSCHAPv2 with TKIP)

Product Specifications

Connectors	RJ-45: power & Ethernet (Power over Ethernet)	Enclosure/ humidity	NEMA-4X
Typical Mounting	Street light, utility pole, lampposts	Power	110-230 VAC, 50-60 Hz input; 8 Watts
LEDs	Power, Signal Strength, Wireless Link, Ethernet link	Certifications	FCC Part 15, FCC 47 CFR Part 15, Class B USA; compliance with UL safety standards, CE, C-Tick, IC RSS210 Issue 5, RoHS
Dimensions	12.6" (32 cm) H x 6.6" (16.8 cm) W x 4.2" (10.7 cm)	EMI and susceptibility	FCC Part 15.107 and 15.109
Weight	4 pounds (1.8 kg)	Warranty	One-year limited warranty on hardware; 90-day limited warranty on software
Operating temperature	-40° to 131° F (-40° to 55° C)		
Wind loading	Up to 150 mph (240 kph)		



Leading the Mesh Revolution

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Traffic Management

- VLAN support: IEEE 802.1q
- Traffic Prioritization: IEEE 802.1p, protocol type, IP port, IP ToS field, and IP address list
- Traffic Filtering: protocol type, IP port, and IP address list
- Traffic Shaping: upstream and downstream per-user rate control

Configuration, Management, & Monitoring

- NMS integration: SNMPv2c
- EMS: SkyControl
- IP address: DHCP or static
- Firmware: Multiple versions stored in nonvolatile memory; updated over-the-air via FTP
- Provisioning: Manual or automated
- Configuration file: XML over HTTP
- SNMP MIBs: MIB-II (RFC 1213); EtherLike (RFC 2665); Bridge (RFC 1493); 802.11; SkyPilot private MIB
- Remote logging
- Remote management: CLI via Telnet, SNMPv2c, web browser



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