



Alcatel OmniAccess Wireless Access Points OAW-AP60, OAW-AP61, OAW-AP70

The Alcatel OmniAccess family of next generation, multi-purpose access points (APs) is designed to meet the needs of any enterprise wireless LAN (WLAN) deployment. The Alcatel OmniAccess APs include single and dual-radio 802.11a/b/g models with a variety of fixed and detachable antenna options.

All Alcatel OmniAccess APs function as “thin” APs. Upper layer media access control (MAC) processing functions such as encryption and authentication are integrated into Alcatel OmniAccess WLAN switches, making Alcatel OmniAccess APs cost-effective and simple to deploy and manage. Alcatel OmniAccess APs can simultaneously service wireless users and act as wireless monitoring devices. This eliminates the need for a separate overlay of RF sensors to troubleshoot and optimize the wireless environment.

Alcatel OmniAccess APs work with the Alcatel OmniAccess 6000, OmniAccess 4324, OmniAccess 4308, and OmniAccess 4304 to provide a high performance, centrally managed wireless mobility solution for enterprises. Alcatel OmniAccess APs automatically configure themselves across any L2/L3 network using a discovery protocol, allowing easy upgrades when new features, capabilities, or standards emerge and increasing their life span.

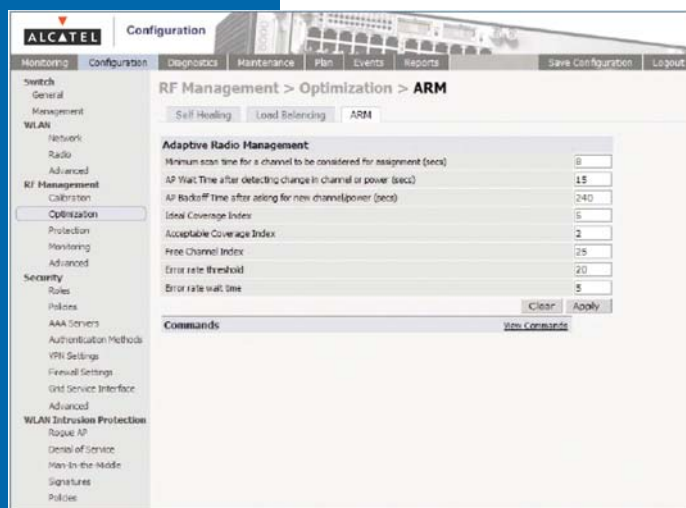
All plenum rated, Alcatel OmniAccess APs are small and lightweight and can be securely deployed in a variety of convenient locations such as on walls, cubicles, desktops, and in the ceiling. Antenna diversity allows for the best possible signal processing using dual, omni-directional antennas.

Thin AP Architecture

Alcatel OmniAccess Wireless access points (APs) are “thin” APs that provide 802.11a/b/g user access, but are not overburdened with processing-intensive functions such as wireless user authentication, link layer encryption, VPN termination, and upper layer MAC services better suited for a purpose-built processing system.

Moving these functions into a centrally-located Alcatel OmniAccess WLAN system gives administrators greater control over the entire system including better scalability, higher performance, and easier system-wide changes as standards and security schemes change. Additional benefits include better support for roaming and low-latency (sub 5 millisecond) handoffs between APs - making the Alcatel OmniAccess WLAN system ideal for handling delay-sensitive applications such as voice over wireless.

Adaptive RF Management (ARM), RF Planning, Dynamic Calibration, and Advanced Troubleshooting



With previous generations of WLAN technology, AP deployment was an expensive proposition. Corporations had to painstakingly undertake extensive RF planning, complete site surveys, climb into ceilings to run new cabling, and mount the APs. In turn, APs were deployed sparingly. Alcatel OmniAccess APs change this deployment model through Adaptive Radio Management (ARM) technology that negates the need for detailed RF planning.

To ease implementation, the Alcatel OmniAccess Wireless system combines online RF planning tools and ARM for fine-tuning, automated performance and capacity optimization. The Alcatel OmniAccess RF planning gives administrators the power to quickly provision APs based on coverage,

Adaptive Radio Management eases planning, calibration and optimization of WLANs

performance or resiliency requirements. IT staff can import floor plans and automatically determine the placement of APs and air monitors. Once the network is deployed, administrators can use ARM to automatically perform system-wide calibration, determine the actual propagation characteristics of RF signals, and set AP transmit power and channel assignments to desired levels.

In addition, the Alcatel OmniAccess Wireless system uniquely provides automatic tuning of the mobile environment through sophisticated system calibration and distributed, radio resource allocation technologies. ARM and Alcatel OmniAccess APs constantly scan the ambient radio environment to determine coverage holes, interference, and congestion. If discovered, Alcatel OmniAccess APs automatically change channel assignment or power transmit levels to ensure optimal operation and report these changes back to the WLAN switch. In the event of a failure, the OmniAccess WLAN system automatically alters adjacent AP settings to ensure no loss of WLAN service occurs.



For manual troubleshooting, Alcatel OmniAccess APs support packet capture and provide wireless RMON capabilities, letting administrators quickly diagnose and resolve wireless problems.

Zero Configuration, Plug-and-Play Deployment

Alcatel OmniAccess APs are completely plug-and-play, requiring no manual configuration. Alcatel OmniAccess APs can be attached to any existing Ethernet switch or IP router and across any subnet boundary. Once connected, the APs self-configure by automatically building a secure IP (GRE or IPSec) tunnel to the Alcatel OmniAccess WLAN switch. The WLAN switch automatically configures each OmniAccess AP based on the policies and configurations set by the administrator. This automation dramatically simplifies operation and eliminates the need for reconfiguring the existing network.

Unparalleled Security

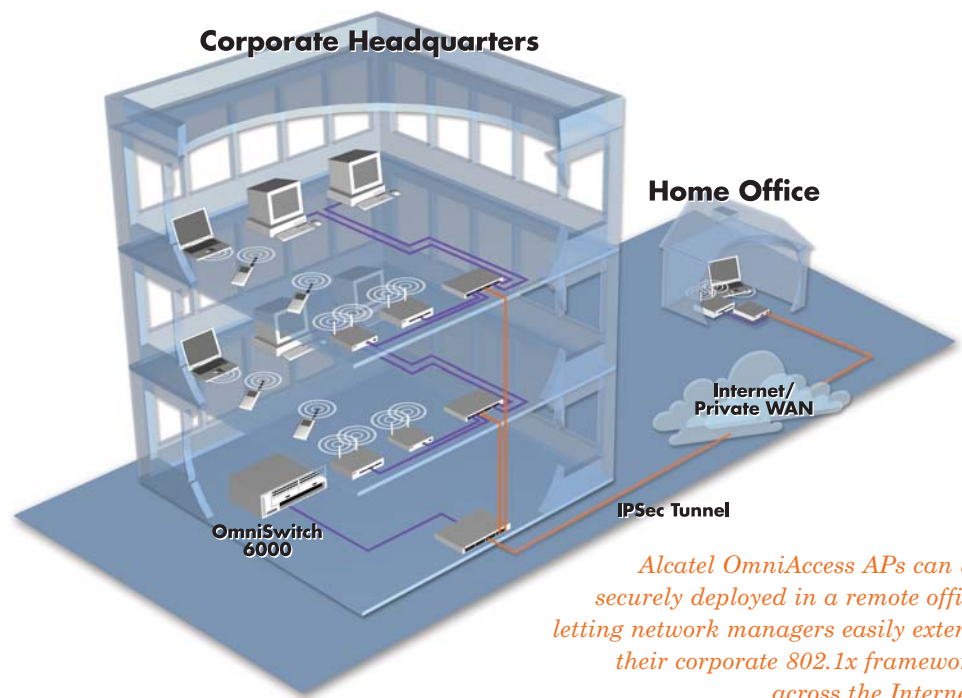
Acting as an air monitor, the Alcatel OmniAccess APs deliver 100 Mbps of intrusion analysis and relays alerts back to the OmniAccess WLAN switch. Alcatel OmniAccess APs detect and thwart rogue APs and wireless intrusions such as DoS and man-in-the-middle attacks.

Since the OmniAccess WLAN switch manages Alcatel's OmniAccess APs, no critical configuration information – such as passwords, encryption keys, or digital certificates – is stored on the APs. If APs are lost or stolen, no sensitive information can be obtained.

Conventional WLAN systems decrypt wireless traffic at the AP and store electronic keys derived from the requisite exchanges performed between the client and the authentication server of each AP. Local storage of this information poses serious security risks for large corporations if an access point is lost or stolen, or if a fake AP or man-in-the-middle attack is launched.

Secure Remote Office Deployment

Alcatel OmniAccess APs can be securely deployed in a remote office letting network managers easily extend their corporate 802.1X framework across the Internet. Alcatel OmniAccess APs use the industry standard IPSec protocol to create secure tunnels that connect APs to a central OmniAccess WLAN switch. Tunneling traffic inside IPSec prevents an attacker from intercepting messages between the switch and AP, allows APs to be deployed across an un-trusted network, and enables AP to be deployed with a network address translation (NAT) device between the AP and switch. Remote office security policies are centrally defined and enforced. In



In addition, like all Alcatel OmniAccess APs, secure remote APs simply appear as another AP on the system and have the same features and functions, which are centrally managed by Alcatel OmniAccess WLAN switches.

Advanced Wireless Capabilities

The Alcatel OmniAccess WLAN system supports a host of advanced functionality to enable latency-sensitive applications. For example, Alcatel OmniAccess APs work in conjunction with the WLAN switches to support voice-aware scanning. When a voice session is detected, this feature ensures that the voice call is given priority service.

The Alcatel OmniAccess WLAN system offers many other unique capabilities for optimizing the wireless environment such as setting user thresholds per AP, defining and enforcing bandwidth contracts per user or user group, and the ability to broadcast up to eight discrete SSIDs per radio. Granular controls over the APs let administrators enable AP and client DoS protection, set channel scan times and frequencies and control beacon periods, RTS thresholds, SSID availability, DTIM periods, and maximum client levels.

Alcatel OmniAccess Wireless Access Points



Alcatel OmniAccess AP60 and AP61

The Alcatel OmniAccess AP60 and AP61 (OAW-AP60 and OAW-AP61) are single radio, 802.11a or b/g access points (APs) designed for dense wireless deployments. The Alcatel OAW-AP60 and OAW-AP61 deliver superior capacity, performance, and coverage.

Controlled by Alcatel OmniAccess WLAN switches, the software-programmable OAW-AP60 and OAW-AP61 are able to act as wireless access devices, RF monitors, or both simultaneously. The OAW-AP60 and OAW-AP61 eliminate the primary obstacle to dense deployments—the high cost of installing and managing APs in the ceiling. The

OAW-AP60 and OAW-AP61 can be connected to existing network ports and wall or desk mounted. With significantly lower cost-to-deploy APs, more companies can implement a performance-based enterprise WLAN.

- Supports 802.11a or b/g
- Two RP-SMA connectors for support of a wide variety of detachable antennas (OAW-AP60)
- Two integral tri-band omni-directional high-gain antennas with 90-degree movement (OAW-AP61)
- 802.3af-compliant power over Ethernet (PoE)
- Configurable as AP, air monitor, or both simultaneously
- Plenum rated
- Kensington lock interface
- Antenna diversity



Alcatel OmniAccess AP70

The Alcatel OmniAccess AP70 (OAW-AP70) is a dual-radio access point that provides concurrent operation of 802.11a and 802.11b/g services. The OAW-AP70 is a multi-purpose device that can function both as an access point and as an RF monitor – independently or concurrently – across the 2.4 GHz and 5 GHz spectrums. Ideally suited for workspace deployment, the OAW-AP70 can be securely wall or desk-mounted.

- **Concurrent support for 802.11a and 802.11b/g services**
- **Two integral omni-directional high-gain antennas with 180-degree rotation**
- **Four RP-SMA connectors (2 x 2.4 GHz, 2 x 5 GHz) for support of a wide variety of detachable antennas**
- **Additional USB port for future-proofed expandability and flexible service expansion**
- **802.3af compliant power over Ethernet (PoE)**
- **Configurable as AP, RF monitor or both simultaneously**
- **Plenum rated**
- **Kensington lock interface**





TECHNICAL SPECIFICATIONS

OAW-AP60 External Antenna Interfaces

Dual, diversity supporting reverse polarity SMA (RP-SMA) detachable antenna interfaces suitable for single or tri-band detachable antennas of various pattern types and gains.

OAW-AP61 Integral Antenna

An integral, diversity-supporting dual, tri-band omni-directional high-gain antenna with 90° degrees movement.

OAW-AP61 Integral antenna gain

- 2.4-2.5 GHz: 2.8dBi
- 5.150-5.350 GHz: 3.9dBi
- 5.6 GHz: 4 dBi

OAW-AP70 Integral Antenna

An integral, diversity-supporting dual, tri-band omni-directional high-gain antenna with 180° degrees movement

OAW-AP70 Integral antenna gain

- 2.4-2.5 GHz: 4.46 dBi
- 5.150 GHz: 7.21 dBi
- 5.350 GHz: 6.49 dBi
- 5.850 GHz: 5.23 dBi

OAW-AP70 External Antenna Interfaces

Quad (2 x 2.4GHz and 2 x 5GHz), diversity supporting reverse polarity SMA (RP-SMA) antenna interfaces suitable for a wide array of detachable antennas of various pattern types and gains.

Radio Specifications- 802.11a

- Frequency bands
 - 5.150 ~ 5.250 GHz (lower band): 4 channels (for OAW-AP61 and OAW-AP70 only)
 - 5.250 ~ 5.350 GHz (middle band): 4 channels
 - 5.500 ~ 5.700 GHz (ETSI band): 11 channels (for OAW-AP70 only)
 - 5.725 ~ 5.825 GHz (higher band): 4 channels
- Radio technology: orthogonal frequency division multiplexing (OFDM)
- Modulation type - BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power – configurable by system administrator/professional installer
- MAC – CSMA/CA with ACK
- Operating channels:
 - US and Canada: 8 external antenna / 12 internal antenna
 - ETSI: up to 19 for OAW-AP70, 13 for OAW-AP60 and AP61
 - Japan: 4 for OAW-AP70, 5 for OAW-AP61 (unavailable on OAW-AP60)
- Data rates: 6, 9, 12, 18, 24, 36, 48, 54 Mbps per channel

Radio Specifications- 802.11b

- Frequency band
 - 2.4 ~ 2.483 GHz (US, Canada and ETSI)
 - 2.4 ~ 2.497 GHz (Japan)
- Radio technology – direct sequence spread spectrum (DSSS)
- Modulation type - CCK, BPSK, QPSK
- Transmit power – configurable by system administrator
- MAC – CSMA/CA with ACK
- Operating channels:
 - US and Canada: 11
 - ETSI: 13
 - Japan: 14 (13 for OAW-AP60)
- Data rates: 1, 2, 5.5, 11 Mbps per channel

Radio Specifications- 802.11g

- Frequency bands
 - 2.412 ~ 2.462 GHz (USA, Canada)
 - 2.412 ~ 2.472 GHz (ETSI)
 - 2.412 ~ 2.484 GHz (Japan)
- Radio technology - OFDM
- Modulation type – CCK, BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power – configurable by system administrator
- MAC – CSMA/CA with ACK
- Operating channels:
 - US and Canada: 11
 - ETSI: 13
 - Japan: 14
- Data rates: 6, 9, 12, 18, 24, 36, 48, 54 Mbps per channel

OAW-AP60 Physical

Height: 6.26 in. (159 mm)
 Width: 3.90 in. (99 mm)
 Depth: 1.22 in. (31 mm)
 Weight: 12.2 oz. (198 g)

OAW-AP61 Physical

Height: 8.50 in. (216 mm)
 Width: 3.90 in. (99 mm)
 Depth: 1.22 in. (31 mm)
 Weight: 13.6 oz. (255 g)

OAW-AP70 Physical

Height (antenna retracted): 6.57 in. (167 mm)
 Height (antenna extended): 11.54 in. (293 mm)
 Width: 7.48 in. (190 mm)
 Depth: 1.18 in. (30 mm)
 Weight: 18 oz. (510 g)

OAW-AP60 and AP61 Electrical Interfaces

- 1 x 10/100BaseTX auto-sensing Ethernet RJ-45 interface
 - Auto-sensing MDI/MDX
 - Serial and power over Ethernet - 48V DC / 200mA power over Ethernet (802.3af compliant)
- 1 x 5V DC power interface

OAW-AP70 Electrical Interfaces

- 2 x 10/100BaseTX RJ-45 auto-sensing Ethernet interfaces:
 - (Port 0)
 - Auto-sensing MDI/MDX
 - PoE 48V DC / 250mA power over Ethernet (802.3af compliant)
 - Serial over Ethernet
 - (Port 1)
 - Auto-sensing MDX
 - PoE 48V DC / 250mA power over Ethernet (802.3af compliant)
- Redundant Ethernet data link and power over Ethernet
- USB ver2.0 interface
- 1 x 5V DC power interface

Mechanical Interfaces

- Standard Kensington MicroSaver security cable interface (not supplied)
- Optional wall and ceiling mount kit interface

Visual Indicators (LEDs)

- (Ready) Power on/off
- (Ethernet) link status / activity
- (Radio mode) 802.11a and b/g AP /air monitor mode

OAW-AP60 and AP61 Power Requirements

- External AC power or POE
- 5V DC / 2A supplied externally via optional country specific AC adapter kits
- 48V DC / 200mA power over Ethernet (802.3af compliant)

Alcatel OmniAccess Wireless Access Points



OAW-AP70 Power Requirements

- External AC power or POE
- 5V DC / 3A supplied externally via optional country specific AC adapter kits
- 48V DC / 250mA power over Ethernet (802.3af compliant)

Environmental

- Temperature
 - Operating: 0 to 50° C (32 to 122° F)
 - Storage: 0 to 70° C (32 to 158° F)
- Humidity 5% to 95% (non-condensing)

Standards

- Ethernet IEEE 802.3 / IEEE 802.3u
- Power over Ethernet IEEE 802.3af
- Wireless IEEE 802.11a/b/g
- USB 2.0 (OAW-AP70 only)

Safety (OAW-AP60 and AP61)

- CSA/NTRL (CSA 22.2 No. 950 and UL1950)
- EN60950 (TÜV/GS), IEC60950 (CB)

Safety (OAW-AP70)

- UL Listed (UL60950)
- UL Listed (Canadian Electrical Code/CSA 22.2 No. 60950)
- EN60950 / IEC60950
- National Electrical Code Section 300-22(C)
- Canadian Electrical Code, Part 1, CSA C22.1 Sections 2-128, 12-010(3), and 12-100
- UL2043 plenum rating

Electromagnetic Compliance

- FCC Part 15 Class B – OAW-AP70 only
- FCC Part 15 Class A – OAW-AP60 and AP61
- FCC Part 15 Class C 15.207/15.247
- FCC Part 15 Class E 15.407
- ICES- 003 Class A
- RSS 210 (CAN)
- VCCI Class A
- EN 61000-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4
- EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11
- 73/23/EEC and 89/336/EEC
- EN 55022, EN55024 (89/336/EEC)
- ETS 300 328 (89/336/EEC), ETS 301 489 (89/336/EEC)
- AS/NZS 3548 Class A
- RFS 29 (NZ) (OAW-AP70 only)

Ordering Information

Part Number	Description
OAW-AP60	OmniAccess AP60 access point with dual RP-SMA external antenna connectors (supports diversity). Supports 802.11a or 802.11b/g (SW selectable). Supports one 10/100BaseT (RJ-45) Ethernet Interface (Power and Serial over Ethernet capable) and Installation Guide. Antenna shall be ordered separately. When no Power over Ethernet is available, an external Power Adapter Kit shall be ordered separately.
OAW-AP61	OmniAccess AP61 access point with Integral Tri-Band Antenna (supports diversity). Supports 802.11a or 802.11b/g (SW selectable). Supports one 10/100BaseT (RJ-45) Ethernet Interface (power and serial over Ethernet capable) and Installation Guide. When no power over Ethernet is available, an external Power Adapter Kit shall be ordered separately.
OAW-AP70	OmniAccess AP70 access point with Integral Antenna and Quad RP-SMA external antenna connectors (2.4 GHz and 5 GHz bands with Diversity). Supports 802.11a and 802.11b/g. Supports two 10/100BaseT (RJ-45) Ethernet Interface (one with power and serial over Ethernet and one with power over Ethernet capability) and one USB2.0 interface. Includes an Installation Guide. If required, an external antenna shall be ordered separately. When no power over Ethernet is available, an external Power Adapter Kit shall be ordered separately.
AP-60-MNT	OmniAccess AP60 and AP61 wall / ceiling mounting kit. Includes mounting cradle hardware, ceiling tile clips and security screws to mount the access point securely on wall or ceiling.
AP-70-MNT	OmniAccess AP70 wall / ceiling mounting kit. Includes mounting cradle hardware, ceiling tile clips and security screws to mount the access point securely on wall or ceiling.

Alcatel

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