Alcatel-Lucent OmniAccess Instant for OmniAccess Instant Access Points 92, 93 and 105

INSTANT VIRTUALIZATION OF OMNIACCESS WLAN SWITCH/CONTROLLER

The Alcatel-Lucent OmniAccess™ Instant™ virtualizes Alcatel-Lucent OmniAccess Mobility Controller capabilities on 802.11n access points (APs), creating a feature-rich, enterprise-grade wireless LAN (WLAN) that delivers the affordability and simplicity of an entry-level Wi-Fi® network.

IAP92

IAP93

IAP105

Offering impressive scalability, the OmniAccess Instant can be installed at a single site or deployed across multiple geographically-dispersed locations. Up to 16 OmniAccess Instant Access Points (IAPs) can be controlled by a single IAP that automatically becomes a primary virtual controller. In the event of primary virtual controller failure, another OmniAccess IAP automatically takes on the role with no disruption.

The OmniAccess Instant product family consists of three IAPs: the OmniAccess IAP92, OmniAccess IAP93 and OmniAccess IAP105. The Omni-Access IAP92 features a single 2 x 2 MIMO dual-band 2.4-GHz or 5-GHz radio with external antennas while the OmniAccess IAP93 offers the same features with internal antennas. The OmniAccess IAP105 features two 2 x 2 MIMO dual-band 2.4-GHz and 5-GHz radios with two internal omnidirectional antennas.

Virtual-controller technology

The virtual-controller technology in the OmniAccess Instant delivers enterprise-grade capabilities such as AP auto discovery, 802.1X authenti-cation, role- and device-based policy enforcement, rogue detection and OmniAccess Adaptive Radio Manage-ment (ARM), which optimizes Wi-Fi client behavior by ensuring the APs remain free from RF interference.

Ease of deployment

OmniAccess Instant is up and running in minutes. From a laptop, simply connect wirelessly to a SSID to perform over-the-air provisioning in three easy steps. To expand, just install more OmniAccess IAPs; configurations are automatically uploaded from the designated virtual controller.

Management and visibility

Multiple OmniAccess Instant networks can be securely and centrally managed by the Alcatel-Lucent OmniVista™ 3600 Air Manager, allowing the OmniAccess Instant to operate hundreds of remote locations. With the OmniVista 3600 Air Manager, IT has real-time visibility into users, mobile devices and OmniAccess WLANs from a single management console.

Investment protection

As WLAN requirements expand, the OmniAccess Instant can be re-imaged as an 802.11n campus AP and migrated to a centralized OmniAccess Mobility Controller architecture that supports up to 2048 APs. In addition to providing WLAN access, APs in a centralized, controller architecture can provide wireless intrusion protection and powerful spectrum-analysis capabilities.

FEATURES	BENEFITS
Virtual Mobility Controller	Enables any IAP to be the controller, eliminating the need for a dedicated controller
Autoselection of virtual Mobility Controller	Autoselects controller with redundancy, enabling ease of use with always-on redundancy
One-touch, over-the-air provisioning, autodiscovery and autoconfiguration	Offers one-touch, over–the-air provisioning of first IAP, and auto-discovery and auto-configuration of new IAPs, easing existing network deployment and expansion; entire IAP network up five minutes after first IAP configured
Centralized management of multiple instant networks	Centrally and securely manage multiple OmniAccess Instant networks using OV3600 Air Manager to operate hundreds of remote locations with real-time visibility into users, mobile device and WLANs
IRe-image IAP to campus AP	Re-images IAP to campus APs, providing investment protection because same APs meet new network expansion and requirements

Technical specifications

Application
- Cost-effective indoor 802.11n single- or dual-radio, dual-band APs for medium to high-density deployments

Operating mode
- 802.11a/b/g/n AP

Radios
- Software-configurable single- or dual-radio capable of supporting 2.4 GHz and 5 GHz
- Dual-radio 802.11n-capable (IAP105 only), implementing 2 x 2 MIMO with two spatial streams, providing up to 300 Mb/s data rate per radio

RF management
- Automatic transmit-power and channel-management control with auto coverage-hole correction by Adaptive Radio Management (ARM)
- Supported radio technologies:
  ¬ 802.11b: Direct-sequence spread-spectrum (DSSS)
  ¬ 802.11a/g/n: Orthogonal frequency division multiplexing (OFDM)
  ¬ 802.11n: 2 x 2 MIMO with two spatial streams

- Supported modulation types:
  ¬ 802.11b: BPSK, QPSK, CCK
  ¬ 802.11a/g/n: BPSK, QPSK, 16- QAM, 64-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum transmit power:
  ¬ 2.4 GHz: 23 dBm, limited by local regulatory requirements
  ¬ 5 GHz: 23 dBm, limited by local regulatory requirements
- Maximum ratio combining (MRC) for improved receiver (RX) performance
- Association rates (Mb/s):
  ¬ 802.11b: 1, 2, 5.5, 11
  ¬ 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  ¬ 802.11n: MCS0 to MCS15, 6.5 Mb/s to 300 Mb/s
- 802.11n high-throughput (HT) support: HT 20 and HT 40
- 802.11n packet aggregation: A-MPDU and A-MSDU

Power
- 48-V DC 802.3af power over Ethernet (PoE)
- 12-V DC for external AC supplied power, adapter sold separately
- Maximum power consumption:
  ¬ OmniAccess IAP92 and OmniAccess IAP93: 10 W
  ¬ OmniAccess IAP105: 12.5 W

Antenna
- OmniAccess IAP92: Dual, RP-SMA interfaces for external antenna support
- OmniAccess IAP93: Integrated, omnidirectional antenna elements, supporting up to 2 x 2 MIMO with spatial diversity:
  ¬ 2.4 GHz or 2.5 dBi
  ¬ 5 GHz or 5.8 dBi
- OmniAccess IAP105: 4 x integrated, omnidirectional antenna elements, supporting up to 2 x 2 MIMO with spatial diversity:
- Maximum antenna gain:
  ¬ 2.4 GHz/2.5 dBi
  ¬ 5.150 GHz to 5.875 GHz / 4.0 dBi

Interfaces
- Network: 1 x 10/100/1000Base-T Ethernet (RJ45), auto-sensing link speed and MDI/MDX
- Power: 1 x DC power connector
- Other: 1 x RJ-45 console interface

Mounting
Standard
- Wall
- Tool-less ceiling-tile rail (15/16 in.)

Mounting kit
- Solid wall-mount bracket
- Wall box-mount bracket: Fits standard US single gang wall boxes
- Ceiling-tile rail adapters: 15/16 in. and 9/16 in., recessed or nonrecessed

Advanced features
- Wireless intrusion detection
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys

Wireless radio specifications
- AP type: Single-radio or dual-radio, dual-band 802.11n indoor
- Supported frequency bands (country-specific restrictions apply):
  ¬ 2.400 GHz to 2.4835 GHz
  ¬ 5.150 GHz to 5.250 GHz
  ¬ 5.250 GHz to 5.350 GHz
  ¬ 5.470 GHz to 5.725 GHz
  ¬ 5.725 GHz to 5.850 GHz
- Available channels: Dependent upon configured regulatory domain

Mechanical

Dimensions (unit):

OmniAccess IAP92 and
OmniAccess IAP93

- Length: 120 mm (4.7 in.)
- Width: 130 mm (5.1 in.)
- Height: 35 mm (1.4 in.)
- Weight: 0.26 kg (9 oz)

OmniAccess IAP105

- Length: 132 mm (5.2 in.)
- Width: 135 mm (5.3 in.)
- Height: 45 mm (1.8 in.)
- Weight: 0.30 kg (10.6 oz)

Dimensions/weight (shipping)

OmniAccess IAP92 and
OmniAccess IAP93

- Length: 180 mm (7.1 in.)
- Width: 155 mm (6.1 in.)
- Height: 45 mm (1.8 in.)
- Weight: 0.37 kg (13.2 oz)

OmniAccess IAP105:

- Length: 195 mm (7.7 in.)
- Width: 170 mm (6.7 in.)
- Height: 55 mm (2.2 in.)
- Weight: 0.44 kg (15.5 oz)

Environmental

Operating

- Temperature: 0°C to 50°C (32°F to 122°F)
- Humidity: 5 to 95% non-condensing
- Storage and transportation temperature: -40°C to +70°C (-40°F to +158°F)

Regulatory

- FCC/Industry of Canada
- CE marking
- R&TTE Directive 1995/5/ EC 72/23/EEC
- Low Voltage Directive
- EN 300 328

- EN 301 489
- EN 301 893
- UL/IEC/EN 60950
- CB Scheme Safety, cTUVus
- Japan MIC/VCCI
- Korea KCC
- Brazil ANATEL
- Mexico NOM/COFETEL
- China SRRC/CCC
- UL2043 Compliant

Warranty

- Limited lifetime warranty

Certifications

- Wi-Fi certified 802.11a/b/g/n

Ordering information

PART NUMBER	DESCRIPTION
OMNIACCESS INSTANT ACCESS POINTS	
OAW-IAP92	OmniAccess IAP92 wireless AP, 802.11abgn, dual-band, single radio, with external antenna connectors (RP-SMA)
OAW-IAP93	OmniAccess IAP93 wireless AP, 802.11abgn, dual-band, single radio, integrated antennas
OAW-IAP105	OmniAccess IAP105 wireless AP, dual-radio IEEE 802.11a/b/g/n wireless AP with support for 802.11B/G/N and 802.11A/N operation, dual-band integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet interface (supports 802.3af PoE), 1 x 12-V DC power interface; AC power adapter kit (OAW-AP-AC-UN) sold separately
OMNIACCESS IAP ACCESSORIES	
OAW-AP-AC-UN	OmniAccess AP92, AP93, AP105 universal AC power adapter kit - North America, Japan, United Kingdom, Italy, EC (Shuko), Australia, China, India, Korea
OAW-AP90-MNT	OmniAccess IAP90 series AP wall or ceiling mounting it
OAW-AP105-MNT	OmniAccess IAP105 wall or ceiling mounting kit
OAW-AP105-MNTC	OmniAccess IAP105 ceiling mounting kit, rail adapters only
OAW-MS-3501G	1 Port 802.3af PoE MS 10/100/1000 15.4 W
OMNIACCESS IAP-92 DETACHABLE ANTENNA OPTIONS	
AP-ANT-1B	2.4 GHz to 5 GHz or 2.5 dBi to 5.0 dBi tri-band, high-gain, omnidirectional detachable antenna. RP-SMA, indoor use only
AP-ANT-13	2.4 GHz to 2.5 GHz (2.5dBi) or 4.9 GHz to 5.9 GHz (3 dBi), down-tilt, smallest form factor omnidirectional single antenna with ceiling-mount hardware, RP-SMA connector
AP-ANT-19	Dual-band, omnidirectional 3dBi6dBi, indoor and outdoor, RP-SMA connector with 36 in. integrated pigtail cable; Pole-mount, I-beam, and ceiling tile-mount hardware included

Table 1. TX and RX specifications

RATE	IAP92/IAP93				IAP105			
	MAXIMUM TX POWER PER ACTIVE TX CHAIN (DBM)	RX SENSITIVITY (DBM)	MAXIMUM TX POWER PER ACTIVE TX CHAIN (DBM)	RX SENSITIVITY (DBM)	MAXIMUM TX POWER PER ACTIVE TX CHAIN (DBM)	RX SENSITIVITY (DBM)	MAXIMUM TX POWER PER ACTIVE TX CHAIN (DBM)	RX SENSITIVITY (DBM)
802.11B								
1 Mb/s	18	-96			20	-96		
2 Mb/s	18	-96			20	-96		
5.5 Mb/s	18	-94			20	-94		
11 Mb/s	18	-93			20	-93		
802.11A/G								
6 Mb/s	18	-93	18	-93	20	-96	20	-96
9 Mb/s	18	-93	18	-93	20	-96	20	-96
12 Mb/s	18	-87	18	-87	20	-96	20	-96
18 Mb/s	18	-87	18	-87	20	-95	20	-95
24 Mb/s	18	-85	18	-85	20	-92	20	-91
36 Mb/s	15	-82	15	-82	19	-89	19	-88
48 Mb/s	14	-80	14	-80	18	-85	18	-84
54 Mb/s	14	-80	14	-80	17	-83	17	-83
802.11N HT 20								
MCS0	18	-93	18	-93	20	-96	20	-96
MCS1	17	-93	17	-93	20	-95	20	-94
MCS2	17	-87	17	-87	20	-93	20	-92
MCS3	16	-87	16	-87	20	-90	20	-89
MCS4	16	-83	16	-83	19	-87	19	-86
MCS5	15	-80	15	-80	18	-82	18	-82
MCS6	14	-77	14	-77	17	-81	17	-80
MCS7	13	-75	13	-75	15	-80	15	-79
MCS8	18	-93	18	-93	20	-95	20	-95
MCS9	17	-93	17	-93	20	-93	20	-92
MCS10	17	-87	17	-87	20	-91	20	-90
MCS11	16	-87	16	-87	20	-87	20	-87
MCS12	16	-83	16	-83	19	-84	19	-84
MCS13	15	-80	15	-80	18	-81	18	-80
MCS14	14	-77	14	-77	17	-80	17	-78
MCS15	13	-75	13	-75	15	-77	15	-77
802.11N HT 40								
MCS0	18	-90	18	-90	20	-93	20	-92
MCS1	17	-90	17	-90	20	-93	20	-92
MCS2	17	-87	17	-87	20	-90	20	-89
MCS3	16	-84	16	-84	20	-86	20	-86
MCS4	16	-80	16	-80	19	-83	19	-83
MCS5	15	-77	15	-77	18	-79	18	-80
MCS6	14	-77	14	-77	17	-77	17	-77
MCS7	13	-73	13	-73	15	-76	15	-76
MCS8	18	-90	18	-90	20	-92	20	-92
MCS9	17	-90	17	-90	20	-89	20	-90
MCS10	17	-87	17	-87	20	-87	20	-87
MCS11	16	-84	16	-84	20	-84	20	-84
MCS12	16	-80	16	-80	19	-82	19	-81
MCS13	15	-77	15	-77	18	-76	18	-77
MCS14	14	-77	14	-77	17	-76	17	-75
MCS15	13	-73	13	-73	15	-73	15	-73

Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.

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