WAC-2004 Series

Industrial wireless access controller

> 2-in-1 AP controller and mobile IP home agent
> Millisecond-level controller-based Turbo Roaming
> IEEE 802.11i-compliant wireless security
> Layer-3 mobile IP technology
> Up to 450 Mbps throughput for tunneling
> Scalable tunneling capacity

: Introduction

The goal of zero-latency-roaming is to create networks that maintain seamless communications as clients switch from one access point to another. Moxa's advanced WAC-2004 wireless access controller uses controller-based Turbo Roaming technology to achieve millisecond-level roaming over different IP subnets. The combination of an advanced roaming algorithm and mobile IP technology allows wireless clients to roam between different IP subnets within milliseconds, while maintaining stringent security in extremely demanding environments. The WAC-2004 is rated to operate at temperatures ranging from 0 to 50°C, and is rugged enough for installation in any harsh industrial environment.

Maximum Availability
• Device-level redundancy via hot standby controller

Minimum Handover Time
• Millisecond-level Turbo Roaming
• Inter-controller roaming

Maximum Mobility in L3 Networks
• Mobile IP tunneling
• Care-of-Address (CoA) assignment
• Cross layer 3 subnet roaming

: Specifications

WLAN Interface
Standards:
IEEE 802.11i for Wireless Security
IEEE 802.3 for 10Base5
IEEE 802.3u for 10/100BaseT(X)
IEEE 802.3ab for 1000BaseT
Security: WPA/WPA2-Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP, and AES)
Supported Models:
• AWK-RTG series
• Customized AWK series products
• TAP-6226

Interface
LAN Port: 10/100/1000BaseT(X), auto negotiation speed (RJ45-type)
• P1: communication port for WAC/HA
• P2-4: reserved
Console Port: RS-232 (DB9-type, male)
• Serial signals: TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND
LED Indicators: PWR1, PWR2, FAULT, STATE, 100M x 4, 1000M x 4

Wireless Access Control
AP Support: AWK-RTG series, TAP-6226, WAC-1001
WAC Failover: 1-on-1 hot backup
Roaming Support: single/multi-channel roaming (up to 3 channels), inter-controller roaming
Handover Time: millisecond-level with wireless security

Mobile IP Tunneling
Tunneling: home agent to mobile node
Tunneling Capacity: up to 450 Mbps
CoA Assignment: WAC-based management
HA failover: 1-to-1 hot backup

Management
Device Management: Web console, Telnet, and SSH access
Remote Management: External management utility and SNMP support
Network Monitoring: AP/Client connection status monitoring

Physical Characteristics
Housing: SECC sheet metal (1 mm)
Weight: 5480 g (12.08 lb)
Dimensions: 440 x 44 x 325 mm (17.32 x 1.73 x 12.80 in) (without rackmount ears)
Installation: Standard 19-inch rackmount

Environmental Limits
Operating Temperature: 0 to 50°C (32 to 122°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements
Input Voltage: 100 to 240 VAC
Input Current: 1.2 A @ 100 VAC

Standards and Certifications
Safety: UL 60950-1
EMC: EN 55032/24, EN 61000-6-2/6-4, EN 61000-3-2/3-3
EMI: CISPR 32, FCC Part 15B Class A
EMS:
IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV
IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m
IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV
IEC 61000-4-5 Surge: Power 2 kV; Signal: 1 kV
IEC 61000-4-6 CS: 10 V
IEC 61000-4-8
Green Product: RoHS, CRoHS, WEEE

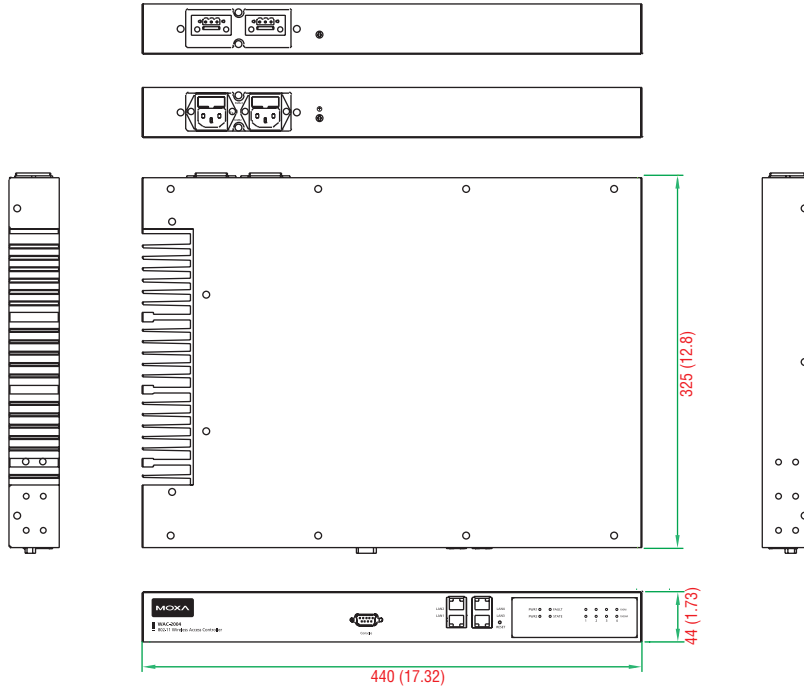**MTBF** (mean time between failures)
Time: 383,478 hrs
Standard: Telcordia SR332

Warranty
Warranty Period: 3 years
Details: www.moxa.com/warranty

Dimensions

Unit: mm (inch)

325 (12.8)

44 (1.73)

440 (17.32)

Ordering Information

Available Models
WAC-2004: Industrial wireless access controller, 0 to 50°C operating temperature

Package Checklist
- WAC-2004 wireless controller
- 1 AC power cord (C13-type, US or EU)
- 1 serial console cable (DB9-type, female-to-female)
- 4 RJ45 connector protective caps
- 2 rackmount ears
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card