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 allow clients to seamlessly maintain their communications as they move from one access point to another. The advanced Moxa Wireless Access Controller, the WAC-2004, together with Controller-based Turbo Roaming technology, enables millisecond-level roaming over different IP subnets. The advanced roaming algorithm along with Mobile IP technology allows wireless client to roam between APs in different IP subnets within milliseconds while upholding stringent security in extremely demanding environments. The WAC-2004 is rated to operate at temperatures of 0 to 50°C and is rugged enough for on-site 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 versions of AWK series

Interface
LAN Port: 10/100/1000BaseT(X), auto negotiation speed (RJ45-type)
• P1: communication port for WAC/HA
• P2-4: reserved
Console: 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
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: AWK AP/Client connection status monitoring

Physical Characteristics
Housing: SECC sheet metal (1 mm)
Weight: 5.48 kg
Dimensions: 325 x 440 x 44 mm (12.80 x 17.32 x 1.73 in) (without rackmount ears)
Installation: Standard 19-inch rackmounting

Environmental Limits
Operating Temperature: 0 to 50°C
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/VDC auto-ranging, 47 to 63 Hz, redundant dual AC power inputs
Power Consumption: 80 W

Standards and Certifications
Safety: UL 60950-1
EMC: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, EN 55024, FCC Part 15 Subpart B Class A
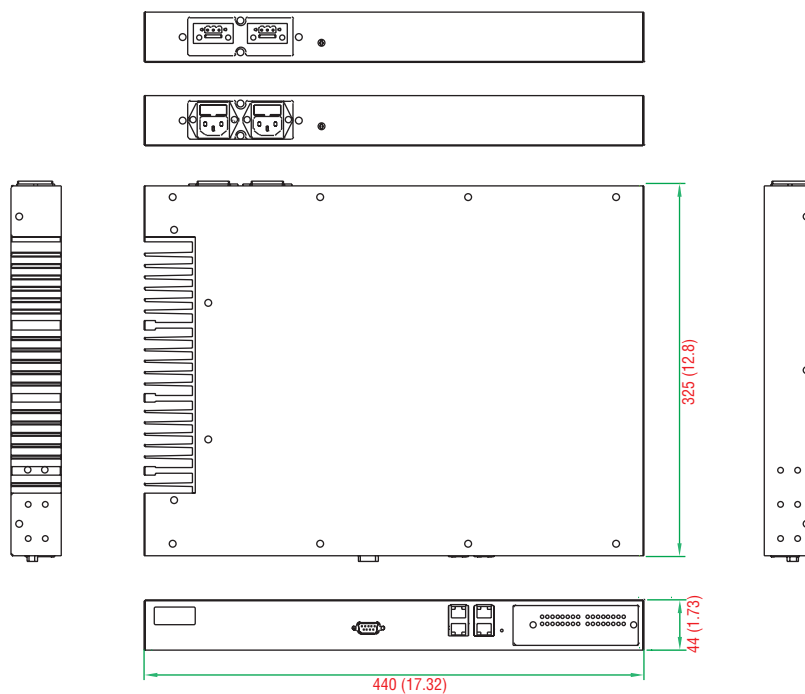**Green Product:** RoHS, CRoHS, WEEE

Reliability
MTBF (mean time between failures): 383,478 hrs

Warranty
Warranty Period: 3 years

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
- Rackmount kit
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card