# WAC-1001 Series

## *Industrial wireless access controller*

> Redundant 12 to 48 VDC power inputs
> Less than 50 ms controller controller empowered Turbo Roaming
> Supported models: AWK-RTG series
> Complies with a portion of EN 50155 specifications
> IEEE 802.11i-compliant wireless security
> DIN-rail or wall mounting for onsite installation
> -40 to 75°C operating temperature range (T model)

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## : Introduction

The goal of zero-latency-roaming is to create networks that maintain communications seamlessly as clients move from one access point to another. For this, as a part of the AWK-RTG series, Moxa has introduced the WAC-1001 with Controller-based Turbo Roaming technology, a wireless access controller that can achieve less than 50 ms roaming on three channels. This advanced roaming capability securely hands off clients at speeds so high that wireless clients may roam between APs almost seamlessly, with virtually no interruption in connectivity. Moreover, the WAC-1001 complies with a portion of EN 50155 specifications, covering operating temperature, power input voltage, surge, ESD, and vibration, making them suitable for a variety of industrial applications.

### Maximum Availability

- Sub-50 ms Turbo Roaming
- Configuration back-up
- Dual redundant DC power inputs

### Advanced Security

- IEEE802.1X/RADIUS supported
- WPA/WPA2/802.11i supported
- Integrated DI/DO for on-site monitoring and warnings

## : Specifications

### WLAN Interface
**Standards:**
IEEE 802.11i for Wireless Security
IEEE 802.3u for 10/100BaseT(X)
IEEE 802.3af for Power-over-Ethernet
**Security:** WPA /WPA2-Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP, and AES)

### Interface
**LAN Port:** 10/100BaseT(X), auto negotiation speed (RJ45-type)
**Console:** RS-232 (RJ45-type)
**LED Indicators:** PWR1, PWR2, PoE, FAULT, STATE, 10M, 100M
**Alarm Contact:** 1 relay output with current carrying capacity of 1 A @ 24 VDC
**Digital Inputs:** 2 electrically isolated inputs
• +13 to +30 V for state "1"
• +3 to -30 V for state "0"
• Max. input current: 8 mA

### Physical Characteristics
**Housing:** Metal, providing IP30 protection
**Weight:** 700 g
**Dimensions:** 52.85 x 135 x 105 mm (2.08 x 5.31 x 4.13 in)
**Installation:** DIN-Rail mounting, wall mounting

### Environmental Limits
**Operating Temperature:**
Standard Models: 0 to 60°C (32 to 140°F)
Wide Temp. Models: -40 to 75°C (-40 to 167°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

### Power Requirements
**Input Voltage:** 12 to 48 VDC, redundant dual DC power inputs or 48 VDC Power-over-Ethernet (IEEE 802.3af compliant)
*Compliant with EN 50155 on 24 VDC
**Connector:** 10-pin removable terminal block
**Power Consumption:**
12-48 VDC, 0.121-0.494 A (max.)
Maximum 5.6 watts
**Reverse Polarity Protection:** Present

### Standards and Certifications
**Safety:** UL 60950-1, EN 60950-1
**EMC:** FCC Part 15 Subpart B Class A, EN 55022/55024
**Rail Traffic:** EN 50155*, EN 50121-1/4
*Complies with a portion of EN 50155 specifications. Please contact Moxa or a Moxa distributor for details.
Note: Please check Moxa's website for the most up-to-date certification status.

### Reliability
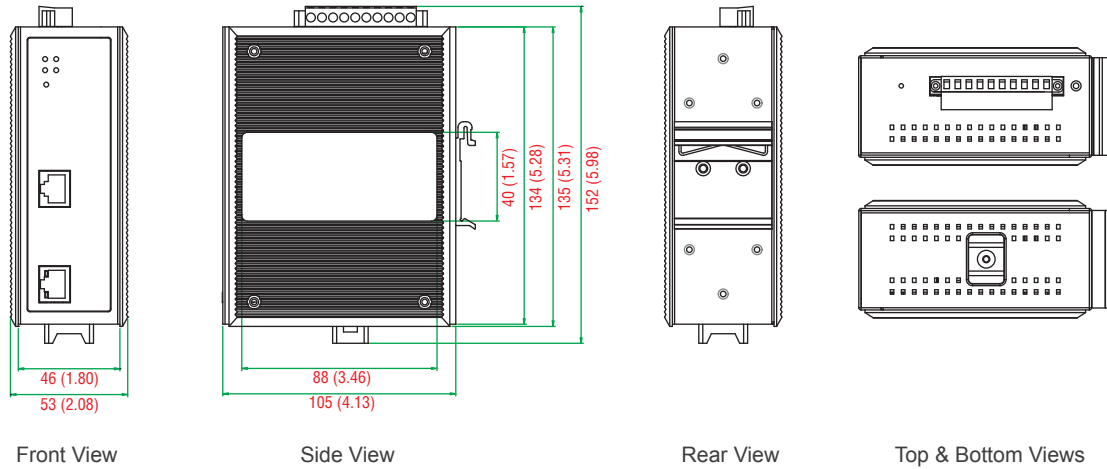**MTBF (mean time between failures):** 485,432  hrs

### Warranty
**Warranty Period:** 5 years
**Details:** See www.moxa.com/warranty

## Dimensions

Unit: mm (inch)



Front View      Side View      Rear View      Top & Bottom Views

Front View dimensions: 46 (1.80), 53 (2.08)

Side View dimensions: 40 (1.57), 134 (5.28), 135 (5.31), 152 (5.98), 88 (3.46), 105 (4.13)

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## : Ordering Information

### Available Models

**WAC-1001:** Industrial wireless access controller, 0 to 60°C operating temperature
**WAC-1001-T:** Industrial wireless access controller, -40 to 75°C operating temperature

### Package Checklist

- WAC-1001 wireless controller
- Wall mounting kit
- Cable holder with one screw
- 2 protective caps
- DIN-rail kit
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card