



AIC900E-K

## DESCRIPTION

The **AIC Wireless AIC900E-K Series** of wireless ethernet devices are readily available for any building automation, control or monitoring application. The devices are a reliable lowcost alternative to long runs of communication cable to previously hard to reach locations, due to a lack of existing communications architecture. The **AIC900E-K Series** wireless devices are shipped ready to install, with a true plug-and-play set-up requiring no special programming or network management tools.

## FEATURES

- **902-928 MHz frequency provides excellent non-line-of-sight performance to penetrate foliage, building walls, and floors**
- **Highest Quality of Service (QoS) available-synchronous point-to-multipoint protocol enables extremely low data latency and jitter**
- **128 bit encrypted payload protection provides secure data delivery**
- **Simple plug-and-play setup with minimal configuration required**
- **Flexible input power, 12-24 VAC/DC**
- **Up to 40 mile range**

## ANTENNA SELECTION CHARTS

## Range vs. Antenna Used in System Design

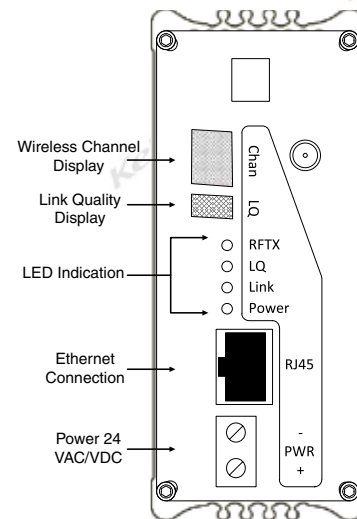
Antenna	Maximum Line-of-Sight*	Maximum Non-Line-of-Sight*
RD3DB	.25 mile	5 walls/300 feet
RD5DB	.5 mile	6 walls/500 feet
3dB Low Profile	.5 mile	6 walls/500 feet
3dB Base	5 miles	1500 feet w/ trees
6dB Base	20 miles	2000 feet w/ trees
6dB Yagi**	20 miles	1500 feet w/ trees
AIC10.5P	2 miles	1200 feet w/ trees
AIC12.5P	5 Miles	1300 feet w/trees
AIC11AW	20 miles	1200 feet w/ trees
AIC15AW	40 miles	1500 feet w/ trees

\*Range may vary based on terrain and noise environment

\*\* Used only with WLD900 model

This information is based on limited testing and is to be used as a guide in antenna selection.

## WIRING



## SPECIFICATIONS

## DEVICE OPERATION

<b>Supply Voltage</b>	24 VAC/VDC @ 100ma (Isolated power required)
<b>Comm Input/Output</b>	Any Ethernet signal into RJ45
<b>Protocols</b>	Ethernet, 10/100 Base T
<b>Default IP</b>	192.168.17.17, presents splash screen
<b>Password</b>	"password" [enter] to display radio stats and info
<b>Indication</b>	Dedicated LED and 9 segment display
<b>Display</b>	2 digit channel indication (01-12) 1 digit Link Quality 4, (RFTX, RFRX, Link, Power)
<b>LED</b>	DIN rail
<b>Mounting</b>	
<b>Wiring</b>	
<b>Power</b>	2 plug-in terminals
<b>Comm.</b>	RJ45
<b>Antenna</b>	RPSMA female
<b>Operating Temperature</b>	-4° to 158°F (-20° to 70°C)
<b>Operating Humidity</b>	10 to 90% RH (non-condensing)
<b>Construction</b>	Aluminum case w/DIN rail clip
<b>Enclosure Rating</b>	NEMA 1
<b>Dimensions</b>	4.30"H x 1.75"W x 3.35"D, (10.9 x 8.5 x 4.45 cm)
<b>Weight</b>	0.65 lb (0.28 Kg)
<b>Warranty</b>	1 Year

RADIO  
Protocol  
FrequencyModulation  
Transmit Power  
Receiver Sensitivity  
Open Air RangeRF Transmission time  
Data Throughput  
Server/ClientsAntenna  
Channels  
Device Addresses  
Programming  
Repeater Capable  
Compliance

Proprietary  
902-928 MHz (12 channel selectable), 128 bit encryption  
Direct Sequence Spread Spectrum - (DSSS)  
21 dBm (121mW)  
-97 dBm, (-112 dBm with 15 dBi antenna)  
See antenna selection table (1300' to 40 miles)  
20 feet separation min. XMTR to RCVR  
1.536 Mb/s  
935 Kb/s  
Up to 16 Clients per Server, (Best results with 1 to 1)  
Remote (order separately)  
12 channels fixed or auto selectable  
17, however 2- (1 to 1) works best  
Direct to laptop  
Yes, Each unit can serve as a repeater  
FCC ID: R4N-AW900M, IC:5303AAW900M, RoHS



# WIRELESS

## AIC WIRELESS ETHERNET TRANSCEIVER

**AIC900E**

### CABLES



**CC1 (Custom Cable 1)**  
Length: 1 ft

Use when connecting to  
another listed cable



**CC2 (Custom Cable 2)**  
Length: 6 ft

Must be used with CC1



**CC3 (Custom Cable 3)**  
Length: 1 ft

Used when connecting antenna  
directly to transceiver



**LMR600-15**  
Length: 15 ft

Must be used with CC1



**LMR600-30**  
Length: 30 ft

Must be used with CC1

### ORDERING INFORMATION

**MODEL**  
**AIC900E-K**  
**AIC900-E-51**

**DESCRIPTION**  
Wireless Ethernet transceiver 900 MHz (Antenna not included)  
AIC900-E, CC3 cable, WPENCL100808 NEMA 4X enclosure, 3dB low profile antenna

	ACCESSORIES	PAGE
<b>3DB BASE</b>	3dB Base Station, Omni-Directional Antenna	<b>765</b>
<b>3DB LOW PROFILE</b>	3dB Low Profile Omni-Directional Antenna	<b>765</b>
<b>6DB BASE</b>	6dB Base Station, Omni-Directional Antenna	<b>765</b>
<b>AIC11AW</b>	9dB Yagi Antenna	<b>765</b>
<b>AIC12.5P</b>	12.5dBi Panel Antenna	<b>765</b>
<b>AIC15AW</b>	13dB Yagi Antenna	<b>765</b>
<b>CC1</b>	Custom cable, RPSMA – N-female bulkhead	
<b>CC2</b>	Custom cable, N-male to N-male, 6' (LMR195)	
<b>CC3</b>	Custom cable, N-male to N-male, 6' (LMR195)	
<b>COAX SURGE</b>	Coax surge suppressor, in-line	
<b>LMR600-15</b>	LMR600 Cable, 15' with N-male connectors	
<b>LMR600-30</b>	LMR600 Cable, 30' with N-male connectors	
<b>POLE CLAMP</b>	Pole clamp assembly (for 3db and 6db base antenna)	
<b>RD3DB</b>	3 dBi Rubber Duck Style Antenna	<b>765</b>
<b>RD5DB</b>	5 dBi Rubber Duck Style Antenna	<b>765</b>
<b>WPENCL100804</b>	10X8X4 NEMA 4X, Weatherproof enclosure with hinged clear lid	