

# NETWORK & WIRELESS

## AIC WIRELESS BACNET MSTP AND BACNET IP WIRELESS TRANSCEIVER. WBT900, WBT900-IP



### DESCRIPTION

The **WBT900-K** and **WBT900-IP-K** transceivers allow you to install a close or long range, non line-of-sight, point-to-multipoint, wireless BACnet MSTP or BACnet IP network, at a fraction of the cost of installation labor, conduit and cable.

The **WBT900-K** and **WBT900-IP-K** transceivers are plug and play, requiring no special programming tools or network management software.

### 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 50 mile range



WBT900-K



WBT900-IP-K



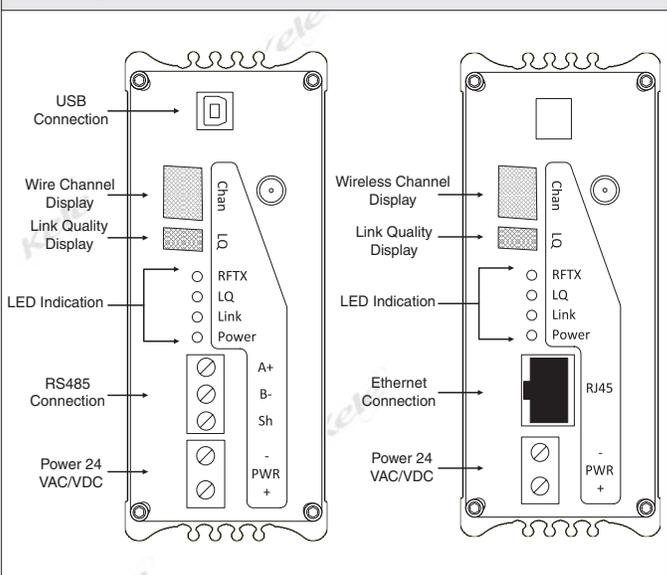
### ANTENNA SELECTION CHARTS

#### 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.

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### SPECIFICATIONS

<b>Supply Voltage</b>	24 VAC/VDC (requires isolated power supply)	<b>Receiver Sensitivity</b>	-97 dBm at 10e-4 BER (-112 dBm with 15 dBi antenna)
<b>Supply Current</b>	100 mA @ 24 VAC	<b>Modulation</b>	DSSS (Direct Sequence Spread Spectrum)
<b>Frequency Connections</b>	902-928 MHz RPSMA female	<b>Channels</b>	12 non-overlapping
<b>Protocol</b>		<b>Operating Temperature</b>	-4° to 158°F (-20° to 70°C)
<b>WBT900-K</b>	BACnet MS/TP	<b>Operating Humidity</b>	10 to 90% RH (non-condensing)
<b>WBT900-IP-K</b>	BACnet IP	<b>Dimensions</b>	4.3"H x 1.75"W x 3.35"D (10.9 x 8.5 x 4.45 cm)
<b>Transmission Power</b>	+21 dBm (4 Watts EIRP when used with 15 dBi antenna)	<b>Weight</b>	0.65 lb (0.28 kg)
<b>Range</b>	Up to 40 miles (64 km)- Requires 15 dBi antenna	<b>Approvals</b>	FCC ID: R4N-AW900M IC:5303A-AW900M
		<b>RoHS Statement</b>	Yes
		<b>Warranty</b>	1 year

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## AIC WIRELESS BACNET MSTP AND BACNET IP WIRELESS TRANSCEIVER WBT900, WBT900-IP

### 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

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### ORDERING INFORMATION

MODEL	DESCRIPTION
<b>WBT900-K</b>	Wireless BACnet MSTP Transceiver 900m MHz (Antenna not included)
<b>WBT900-51</b>	WBT900, CC 3 cable, WPENCL100808 NEMA 4X enclosure, 3DB LOW PROFILE antenna
<b>WBT900-IP-K</b>	Wireless BACnet IP Transceiver 900 MHz (Antenna not included)
<b>WBT900-IP-51</b>	WBT900-IP, CC 3 cable, WPENCL100808 NEMA 4X enclosure, 3DB LOW PROFILE antenna

	ACCESSORIES	PAGE
<b>3DB BASE</b>	3dB Base Station, Omni-Directional Antenna	765
<b>3DB LOW PROFILE</b>	3dB Low Profile Omni-Directional Antenna	765
<b>6DB BASE</b>	6dB Base Station, Omni-Directional Antenna	765
<b>AIC10.5P</b>	10.5dBi Panel Antenna	765
<b>AIC11AW</b>	9dB Yagi Antenna	765
<b>AIC12.5P</b>	12.5dBi Panel Antenna	765
<b>AIC15AW</b>	13dB Yagi Antenna	765
<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	765
<b>RD5DB</b>	5 dBi Rubber Duck Style Antenna	765
<b>WPENCL100804</b>	10X8X4 NEMA 4X, Weatherproof enclosure with hinged clear lid	