

WIRELESS

AIC WIRELESS BACNET MSTP AND BACNET IP WIRELESS TRANSCIVER. WBT900, WBT900-IP

DESCRIPTION

The AIC Wireless 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

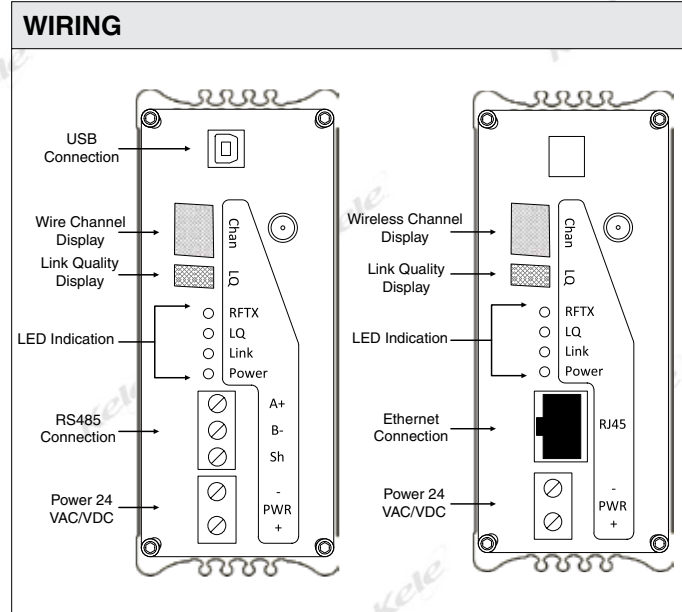
Antenna	Maximum Line-of-Sight*	Maximum Non-Line-of-Sight*
RD3DB	.25 mile	5 walls/300 feet
RD5DB	.5 mile	6 walls/500 feet
3dB Low Profile	.5 mile	6 walls/500 feet
3dB Base	5 miles	1500 feet w/ trees
6dB Base	20 miles	2000 feet w/ trees
6dB Yagi**	20 miles	1500 feet w/ trees
AIC10.5P	2 miles	1200 feet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

WIRING



SPECIFICATIONS

DEVICE OPERATION

Supply Voltage	24 VAC/VDC @ 100ma (Isolated power required)
Comm Input/Output	
WBT900-K	BACnet MS/TP
WBT900-IP-K	BACnet IP
Protocols	BACnet Signal
Indication	Dedicated LED and 9 segment display
Display	2 digit channel indication (01-12) 1 digit Link Quality
LED	4, (RFTX, RFRX, Link, Power)
Mounting	DIN rail
Wiring	
Power	2 plug-in terminals
Comm.	
WBT900-K	3 plug-in terminals & USB-B connector
WBT900-IP-K	RJ45
Antenna	RPSMA female
Operating Temperature	-4° to 158°F (-20° to 70°C)
Operating Humidity	10 to 90% RH (non-condensing)
Construction	Aluminum case w/DIN rail clip
Enclosure Rating	NEMA 1
Dimensions	4.30"H x 1.75"W x 3.35"D (10.9 x 8.5 x 4.45cm)

Weight	0.65 lb (0.28 Kg)
Warranty	1 Year
RADIO	
Protocol	Proprietary
Frequency	902-928 MHz (12 channel selectable) 256 bit encryption
Modulation	Direct Sequence Spread Spectrum - (DSSS)
Transmit Power	21 dBm (121mW), (4W EIRP w/15 dBi antenna)
Receiver Sensitivity	-97 dBm, (-112 dBm with 15 dBi antenna)
Open Air Range	See antenna selection table (1300' to 40 miles)
RF Transmission time	20 feet separation min. XMTR to RCVR
Data Throughput	1.536 Mb/s
Server/Clients	935 Kb/s Up to 16 Clients per Server, (Best results with 1 to 1)
Antenna Channels	Remote (order separately) 12 channels fixed or auto selectable
Device Addresses	17, however 2- (1 to 1) works best
Programming	Direct to laptop
Repeater Capable	Yes, Each unit can serve as a repeater
Compliance	FCC ID: R4N-AW900M, IC:5303AAW900M; RoHS



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



LMR600-15
Length: 15 ft

Must be used with CC1



CC3 (Custom Cable 3)
Length: 1 ft

Used when connecting antenna directly to transceiver



CC2 (Custom Cable 2)
Length: 6 ft

Must be used with CC1



LMR600-30
Length: 30 ft

Must be used with CC1

ORDERING INFORMATION

MODEL

WBT900-K
WBT900-51
WBT900-IP-K
WBT900-IP-51

DESCRIPTION

Wireless BACnet MSTP Transceiver 900m MHz (Antenna not included)
WBT900, CC 3 cable, WPENCL100808 NEMA 4X enclosure, 3DB LOW PROFILE antenna
Wireless BACnet IP Transceiver 900 MHz (Antenna not included)
WBT900-IP, CC 3 cable, WPENCL100808 NEMA 4X enclosure, 3DB LOW PROFILE antenna

ACCESSORIES

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