PRODUCT INFORMATION

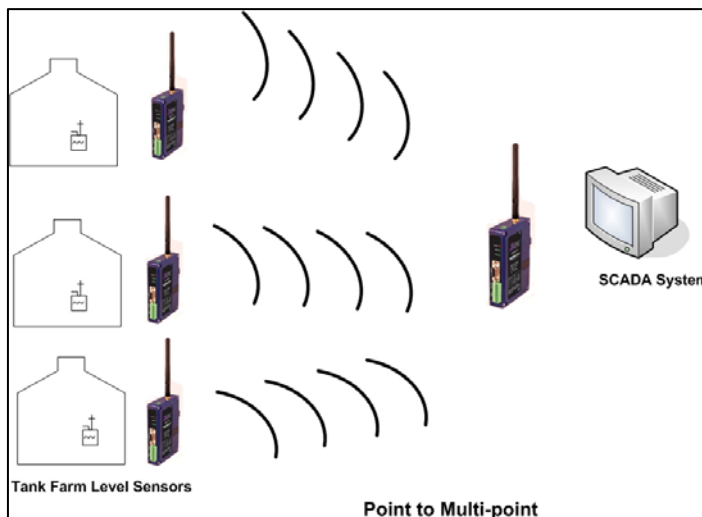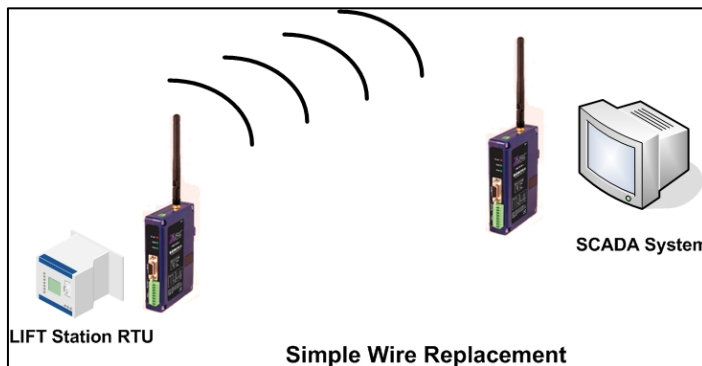**B&B ELECTRONICS**

ZP8D-24RM-LR

Industrial Long Range 868 MHz Radio Modem

✓ **RS-232/422/485 Wire Replacement**

✓ **Serial Data Rates up to 230.4 Kbps**

✓ **Modbus ASCII/RTU**

✓ **Long Range**

✓ **Adjustable Transmitter Power**

✓ **Wide Operating Temperature**

✓ **10 – 48 VDC or 18 – 30 VAC Operation**

Ideally suited for applications in which running cable is either to expensive or not practical. If you need to get a serial signal across a river, highway, or just to the other end of your warehouse Zlinx ™ Radio Modems can do the job easier, faster, and less expensive than running cable. Easy plug-and-play setup saves installation time. Since they are Modbus compatible, no external converters are required.

Setting up and programming the modem is easy with the Zlinx™ Manager software. The software covers everything from basic to advanced settings and firmware updates.

- Long Range
- Industrial Grade DIN Mount Case
- European SRD G3 868 MHz Band
- Wide Operating Temperature, -40 to 85 C
- FSK Modulation
- LED Signal Strength Display
- Compact Omni Directional Antenna Included
- Software Adjustable Transmitter Output
- Point to point or point to multi-point operation

Simple Wire Replacement

Point to Multi-point

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Specifications

RS-232
Connector	DB9 F, DCE
Signals	TD, RD, RTS, CTS, GND
Connector	Removable Terminal Block
Signals	TD, RD, GND

RS-422
Connector	Removable Terminal Block
Signals	TDA(-), TDB(+), RDA(-), RDB(+), GND
Termination	120 Ohm, DIP Switch Selectable

RS-485
Connector	Removable Terminal Block
Signals	TDA(-), TDB(+), RDA(-), RDB(+), GND
Modes	2 or 4 Wire
SD Control	Bit wise enabled
Termination	120 Ohm, DIP Switch Selectable

Serial Data
Baud	1200 to 230.4
Data bits	7, 8
Parity	None, even, odd, mark, space
Stop bit	1, 2

Link Failure Output
Connector	Removable Terminal Block
Type	Open Collector (PNP), Dry Contact
Current	40 mA

Industrial Bus
	Modbus ASCII/RTU Compatible

Power
Connector	Removable Terminal Block
Voltage	10 to 48 VDC or 18 to 30 VAC
Power Consumption	6.0W Maximum
Source	External – Power supply is not included

Terminal Blocks
Wire Size	28 to 16 AWG
Torque	0.2 Nm (Newton-Meters)

LED Indicators
Power (RED)	ON = Power Applied, OFF = No Power
RSSI / Signal Level	GEEEN = Strong
	Yellow = Adequate
	Red = Weak
Wireless Data	GREEN – Flashes with data

Enclosure
Material	Plastic
IP Rating	30
Dimensions	3.05 x 8.38 x 11.94 cm (without antenna)
Mounting	35 mm DIN Rail, Panel mount adapter is available, see ordering information

Environmental
Intended use	Indoor outdoor within an enclosure
Op Temperature	-40 to 85 C
Storage Temp	-40 to 85 C
Op Humidity	10 to 95% Non-condensing
MTBF	172981 hours
MTBF Calc Method	Parts Count Reliability Prediction

Agency Approvals
CE	Declaration of Conformity available For download
RoHS	Yes

Radio Frequency
Standard	Proprietary RF
Range	Range depends on various conditions Ranges up to 40 km are possible
Frequency Band	869.4 to 869.65 (868) MHz
Transmitter Power	1mW, 23mW, 100mW, 158mW, 316mW
Receiver Sensitivity	-112dBm @ 24Kbps
RF Data Rate	24 Kbps
Duty Cycle	10% hourly duty cycle restriction

Included Antenna
Connector	RP-SMA
Gain	3 dBi
Horizontal Beam	360 degrees
Impedance	50 Ohm
VSWR	< 2.0
Length	21.9 cm
Polarization	Vertical
Other	Articulated to allowing it to be used vertically, at a right angle, or any angle in between

Security
Number of Channels	Single Channel
Addressing	PAN ID, 64-bit addresses
Encryption	128 bit AES

Software
Programming	Zlinx Manager Software on CD
OS	Windows 2000, 2003 Server, XP, and and Vista
Features	AT Command
	Terminal Emulation
	RSSI Signal Range Test
	Modem Emulation

Ordering Information
ZP8D-24RM-LR	868 MHz Long Range Radio Modem
RM-LR824-KIT	868 MHz Radio Modem Kit Includes two radio modems, two 30W, 24V, DIN Rail Power Supplies, and one 6 foot serial cable for programming.
Power Supply	An external power supply is required but not included. Model DR-30-24 (30W, 24V, DIN Mount) should work in most applications.
DRPM25	Panel Mount Adapter
High Gain Antennas	B&B Electronics has a full line of optional high gain antennas

Replacement Items
ZP9D-ANT1	Replacement antenna
ZP9D-DIN1	Replacement DIN clip and spring
ZP9D-TB1	Replacement terminal block and DIP Switch cover

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2.96

3.56 0.25 11.94 13.24

8.03

9.69 1.04

Ⓐ DESIGNED TO FIT ON A STANDARD 35mm DIN RAIL

Units = CM

0.51" (13.1mm)

90°

1.18" (30mm) 7.44" (189mm)

8.62" (219mm)

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