

Zlinx® Xtreme IP67 Outdoor Rated Wireless Industrial Radio Modem

Models BB-ZXT9-RM-A, BB_ZXT24-RM

B+B SMARTWORX

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BB-ZXT24-RM

FEATURES

- Wire replacement for serial communications - cable-free, license-free
- Baud rate: 250 kbps, SW selectable (2.4 GHz, short range); 9.6 or 115.2 kbps (900 MHz, long-range, North America only)
- Wide operating temperature range: -40 to +74 °C
- Heavy-duty, industrial grade, DIN rail mount (panel mount w/ optional adapter)
- 10-30 VDC power input (power supply required, not included, sold separately)
- IP67, UL C1/D2, NEMA TS2, CE (2.4 GHz only)
- Range up to 64 km (40 mi), line-of-sight & antenna dependent, 900 MHz)
- Signal Strength Indicator (SSI), AES encryption, Modbus compatible

Do you need to get a digital signal across a highway or river? Zlinx® Xtreme Radio Modems can do it faster, easier, and less expensively than stringing cable. Easy plug-and-play set-up saves installation and maintenance time. These compact and rugged IP67 units are ideal for outdoor applications requiring Serial-to-Serial (RS-232/422/485) connectivity or to connect Zlinx® Xtreme Wireless I/O's to a Modbus RTU Master over a wireless network. Point-to-Multi Point connections are also possible.

Zlinx® Industrial Wireless products operate in license-free, Proprietary RF 2.4 GHz and 900 MHz (North America only) ISM bands. Select the 900 MHz version for longer distances.

POWER - Zlinx® Xtreme wireless radio modems support a 10-30 VDC wide range power input. For further flexibility, the output power is software selectable. An external power source is required (not included, sold separately).

SECURITY - The 900 MHz units offer 256-bit AES encryption. The 2.4 GHz units have 128-bit AES encryption.

ORDERING INFORMATION

| MODEL NUMBER | DESCRIPTION |
|----------------|--|
| BB-ZXT9-RM-A * | Zlinx Xtreme IP67 900 MHz Radio Modem, Long Range, RS- 232/422/485 |
| BB-ZXT24-RM | Zlinx Xtreme IP67 2.4 GHz Radio Modem, Short Range, RS-232/422/485 |

* 900 MHz for North America only.

Check with your local distributor for availability and options.
Check wireless regulations/standards in your geographic area.

ACCESSORIES - sold separately

| | |
|---------------|---|
| BB-CLG-60-24 | Power Supply, 24VDC, 60W, IP67, Panel Mount |
| BB-ZXT9-ANT | 900 MHz Spare Antenna |
| BB-ZZ24D-ANT1 | 2.4 GHz Spare Antenna |
| BB-ZXTMT | Zlinx Xtreme Conduit Kit |

All product specifications are subject to change without notice.

ZXTx-RM_4918ds

Zlinx® Xtreme IP67 Outdoor Rated Wireless Industrial Radio Modem

Models BB-ZXT9-RM-A, BB-ZXT24-RM

BB-ZXT9-RM-A
(North America only)



SPECIFICATIONS

| RF PROPERTIES | |
|---|---|
| Physical Standard | 802.15.4 |
| FREQUENCY | |
| BB-ZXT9-RM-A | 900 MHz ISM (902 to 928 MHz) |
| BB-ZXT24-RM | 2.4 GHz ISM (2.4 to 2.5 GHz) |
| TRANSMIT POWER | |
| BB-ZXT9-RM-A (North America only) | 1 mW, 10 mW, 100 mW, 500 mW 1 W (software selectable) |
| BB-ZXT24-RM | 10 mW |
| Receiver Sensitivity | -100 dBm |
| OVER THE AIR DATA RATE | |
| BB-ZXT9-RM-A | 9.6 or 115.2 kbps |
| BB-ZXT24-RM | Software selectable 250 kbps |
| OUTDOOR RANGE | |
| BB-ZXT9-RM-A | Supplied Antenna: 23 km (14 mi) High Gain Antenna, optional: 64 km (40 mi) |
| BB-ZXT24-RM | Supplied Antenna: 2.4 km (1.5 mi) High Gain Antenna, optional: 16 km (10 mi) |
| Range estimates based on optimal RF conditions and an unobstructed line of sight. | |
| TRANSMISSION METHOD | |
| BB-ZXT9-RM-A | FHSS |
| BB-ZXT24-RM | DSSS |
| Modulation | FSK |
| CHANNEL CAPACITY | |
| BB-ZXT9-RM-A | 10 Hop Sequences Share 50 Frequencies |
| BB-ZXT24-RM | 12 Direct Sequence Channels |
| Network Topologies | Peer-to-Peer, Point-to-Point, Point-to-Multi Point |
| ENCRYPTION | |
| BB-ZXT9-RM-A | 256-bit AES |
| BB-ZXT24-RM | 128-bit AES |
| SUPPLIED ANTENNA | |
| BB-ZXT9-RM-A | Impedance – 50 Ω Connector – RPSMA Female VSWR – 2.0 max. (in-band) Gain – 3 dBi Polarization – Vertical Length – 198 mm (7.8 in) |
| BB-ZXT24-RM | Impedance - 50Ω Connector – RPSMA Female VSWR – 2.0 maximum (in-band) Gain – 2.1 dBi Polarization – Vertical Length – 113 mm (4.38 in) |
| Modem Antenna Connector | RPSMA Male |
| SOFTWARE | |
| OS Support | Windows XP, 7, 8, 8.1, 10 |
| Features | RSSI Signal Range Test |
| POWER | |
| Source | External, required (not included, sold separately) |
| Power Connector | Terminal Block |
| Input Voltage | 10 to 30 VDC |
| Power Use | BB-ZXT9-RM-A: 1.7 W (typical), 5.8 W (maximum) BB-ZXT24-RM: 1.2 W (typical), 3.5 W (maximum) |

| SERIAL PROPERTIES | |
|--|---|
| Data Rates | |
| BB-ZXT9-RM-A | 1.2 to 230.4 kbps |
| BB-ZXT24-RM | 1.2 to 115.2 kbps |
| Data Bits | 8 |
| Parity | None, Even, Odd, Mark, Space |
| Stop Bits | 1 or 2 |
| Flow Control | None or Software |
| RS-232 | Connector: Terminal Block Signals: TD, RD, RTS, CTS, GND |
| RS-422 | Connector: Terminal Block Signals: TDA(-) TDB(+) RDA(-) RDB(+) GND |
| RS-485 (2 or 4-wire) | Connector: Terminal Block Signals (4-wire): TDA(-), TDB(+), RDA(-), RDB(+), GND Signals (2-wire): Data A(-), Data B(+), GND |
| SD Control | Automatic Bit Wise |
| Termination | 120Ω Ohm DIP Switch Selectable |
| Industrial Bus | Modbus RTU |
| ENVIRONMENT | |
| Dimensions | 13.01 x 13.01 x 6.02 cm (5.12 x 5.12 x 2.37 in) |
| Operating Temperature | -40 to +74 °C (-40 to +165 °F) |
| Storage Temperature | -40 to +85 °C (-40 to +185 °F) |
| Operating Humidity | 0 to 95% (non-condensing) |
| Enclosure Rating | IP67 |
| Use | Indoor and Outdoor |
| CONTROLS AND INDICATORS | |
| Signal Strength Indicators | 8 Green RSSI LEDs |
| Power | Green LED |
| Receive Data | Green LED |
| Transmit Data | Green LED |
| Programming Port | USB |
| Reset | Push-button |
| MEANTIME BETWEEN FAILURE (MTBF) MIL 271F | |
| MTBF | BB-ZXT9-RM-A: 1646998 hours BB-ZXT24-RM: 1444273 hours |
| REGULATORY, APPROVALS, DIRECTIVES, STANDARDS | |
| CE (BB-ZXT24-RM only) | CE (BB-ZXT24-RM only) FCC Part 15 CFR Title 47 – Digital Apparatus (Federal Communications Commission) ICES-003 Class B – Digital Apparatus (Industry Canada) |
| EMC: | ETSI EN 301 489-1 v1.9.2 ETSI EN 301 489-1 v2.2.1 Applied in accordance with the specific requirements of EMC and Radio Spectrum Matters: Broadband Data Systems EN 55032 Class B – Electromagnetic Compatibility of Multimedia Equipment – emission requirements EN 61000-6-3 + A1 – Generic Emission Standard for Residential, Commercial and Light-industrial Environments EN 61000-6-2 – Generic Immunity Standard for (heavy) Industrial Environments |
| SAFETY: | EN 60950-1 +A11 +A1 +A12 +A2 - Information Technology Equipment – Safety - Part 1: General Requirements EN 62479 – RF Exposure Limits |
| ENVIRONMENTAL: | IEC 60068-2-6 – Vibration, 10-500 Hz, 4G, 3 axes IEC-60068-2-27 – Shock, 50G peak, 3 axes IEC-60068-2-32 – Drop, 10 total drops from 1 meter, from sides, edges and corner |
| UL | UL, cUL, Class 1 Division 2 Groups A, B, C, D File E245458 |
| NEMA TS2 | |