

## Serial to Wireless Converter

RS232-ANT-BLUETOOTH    RS232-ANT-WLAN    RS232-ANT-IEEE802

This wireless rugged serial port converter is a complete wireless serial cable replacement supporting either Bluetooth, WLAN or IEEE 802.15.4 (expandable to support ZigBee). It can be used with the JVL wireless expansion modules MAC00-FB4, MAC00-EW4 and MAC00-FZ4 to convert and transmit data from RS232.

The adapter is developed to meet the tough demands of industrial environments.

The rugged IP65 housing ensures durability in moisty (non-condensing), greasy, cold and warm environments typical for automotive or industrial use. The adapter is easily configured using the standard configuration software (included) or using AT-commands over the serial connection, even remote wireless configuration is supported. The adapter firmware can be adapted to meet your exact demands.

This adapter supports the following modules used with the MAC-motor series:



MAC00-FB4 for BlueTooth  
MAC00-EW4 for WLAN  
MAC00-FZ4 for IEEE 802.15.4 (expandable to support ZigBee).

- Standard AT Command support
- Customer developed applications can be executed in the module
- Designed for high performance
- Radio Type Approved for Europe, US, Canada

- Compliant with EMC, Safety and Medical standards
- Industrial and Automotive temperature range -40 to +85°C
- Rugged IP65 classed casing with adjustable mounting brackets
- External stub antenna
- RS232/422 serial data interface
- Only high quality components used
- Individually tested and tuned in production



# Serial to Wireless Converter

## Specifications

### IEEE 802.15.4 Support

+3 dBm (200 m)

### IEEE 802.15.4 Chipset and CPU

Product based on ATMEL AT86RF230 radio chipset and ATMEL ATmega 1281 host CPU

### Software

All software is included in the device, including the connectBlue Serial Port Adapter firmware for serial cable replacement.

ZigBee application layer and/or customer developed software can, by the customer, be embedded and executed in the device.

Configurable locally or over IEEE 802.15.4 using AT commands or configuration software.

### Bluetooth Support

Bluetooth version 2.0 (Qualified and Listed as End Product)

Wireless Multidrop™ with up to 7 slaves

### Supported Bluetooth Profiles:

Generic Access Profile (GAP)

Serial Port Profile (SPP)

Dial-up networking Profile (DUN GW, DUN DT)

Class I +20 dBm (>300 m)

### Bluetooth Chipset and Stack

Product based on Philips well known BGB204 chipset and Philips Host Stack

### Software

All software is included in the module.

Configurable locally or over Bluetooth using AT Commands or PC Wizard

ECI protocol

ECI Toolbox available

### Wireless LAN Support

802.11 specification

Security: Supports WEP, WPA and WPA2

### PHY/MAC

802.11b and 802.11g

Extended rate protection

Regulatory domain support

Power save control

Defragmentation

Infrastructure modes

BSS, IBSS

### Security

WEP64, WEP128, WPA-PSK, WPA2-PSK, TKIP, CCMP (AES), LEAP

### Software

All software including TCP/IP stack is included in the module

Configurable locally or over Wireless LAN using

AT commands or Windows Software

### Serial Interface

RS232/422

Supported baud rates: 300 bit/s - 57.6kbit/s.

Support for non-standard baud rates

Flow control: CTS/RTS or none.

### Housing

IP65-classed rugged aluminum box

Mounting brackets.

### Connectors

Male 9-pin DSUB for serial interface

Binder 712 rugged plug for power supply.

### Power Supply

8-30 VDC.

### Current Consumption

Not connected, idle: 24 mA @ 9V

Transmitting (average): 29 mA @ 9V.

### Dimensions

75.5 x 84.6 x 34.6 mm.

### Type Approval

R&TTE (Europe)

FCC/CFR 47 part 15 unlicensed modular transmitter approval

IC (Industrie Canada).

### Environmental

Operating temperature without JST connector: -40 to +85°C.

Storage temperature: -50 to +125°C

Humidity RH 5-90% non-condensing.

### Certifications and Compliance

R&TTE Directive 1999/5/EC.

EN 300 328 V1.7.1 (2006-05).

### EMC

EN 301 489-1 V1.4.1 (2002-08).

EN 301 489-17 V1.2.1 (2002-08).

EN 61000-6-2 (2001).

### Safety Compliance

EN 50371:2002.

EN 60950-1:2001 and/or IEC 60950-1:2001 (1st Edition).

EN 60950-1/A11:2004 + Corrigendum: 2004.

### Medical Electrical Equipment

IEC 60601-1-2 (2001).



## Accessories:

RS-ANT-PCON 2-pin female power connector for 24 VDC supply



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