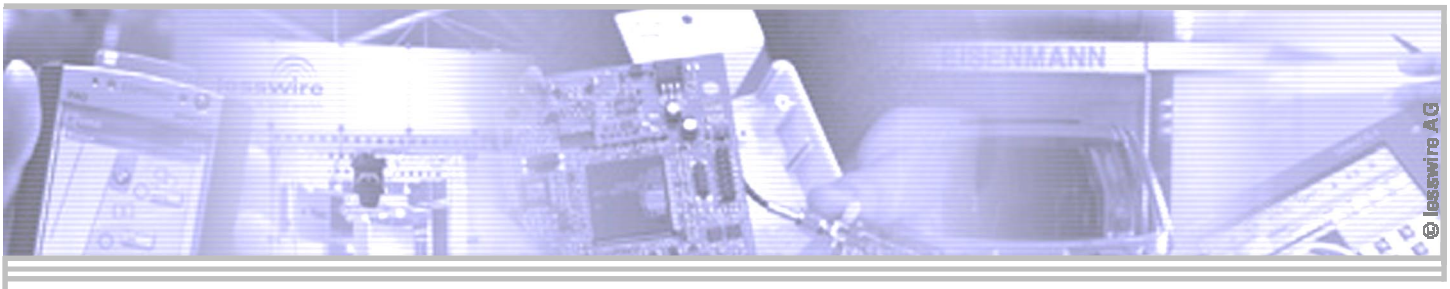


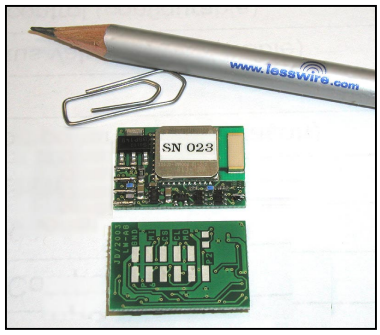
Stand March 2004

The adapting solution for OEM Partner

Industrial Serial Bluetooth® Adapter

lesswire's industrial serial Bluetooth adapter board is designed for an integration into multiple products of OEM Partner. It enables easily to setup wireless connections between devices using the 5Volt TTL RS232 interface and other Bluetooth devices.

- **Class 2 output power for medium ranges**
- **Easy to use configuration over AT commands**



Typical use cases are serial cable replacement, wireless machine interfaces or „Remote Control".

The ***Industrial Serial Bluetooth® Adapter board*** offers you two types of services: communication and configuration. With help of AT commands the ***Industrial Serial Bluetooth® Adapter board*** can be configured within configuration mode.

Functions

Bluetooth
- Bluetooth module with CSR/BC02 chip set
- RF output power: Class2
- Integrated Serial Port Profile (SPP)

Communication Interface
- RS232 (see Pin layout below)
- 5 PIO's at soldering pads

Power supply
- 5V DC/120 mA

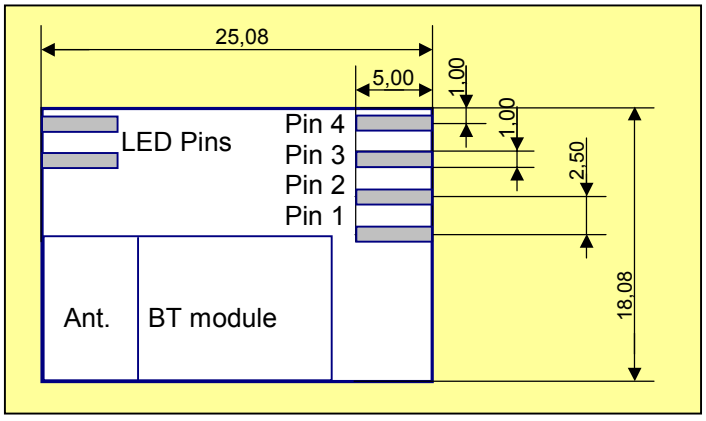
Antenna
- Antenna on board

User Interface
- Service-channels for configuration and operation
- Configuration using AT commands over Bluetooth

Display
- Output pad for LED signal „operation status"

Configuration / Programming
- Setup of system parameters can be done using AT commands
- Data are stored persistently in the module
- Serial Peripheral Interface (SPI) for programming (Firmware Update)

Dimensions and Interfaces
Component side



PIN allocation:

Pin 1: GND
Pin 2: +5,5V; max 150mA
Pin 3: RxD, data to the BT module; U_{IH} = 5V, U_{IL} = 0V
Pin 4: TxD, data from BT module; U_{OH} = 5V, U_{OL} = 0V

LED (PIO 8):

Fast blinking:	"Switch on" mode approx. 8sec
Slow blinking:	ready for BT connection
Continuous light:	BT connection is established

lesswire AG | Im Technologiepark 25 | 15236 Frankfurt (Oder) | Germany | url: www.lesswire.com
Tel.: 0700 L E S S W I R E (53 77 94 73) | Fax +49 (0) 335 56 56 - 999 | e-mail: info@lesswire.com

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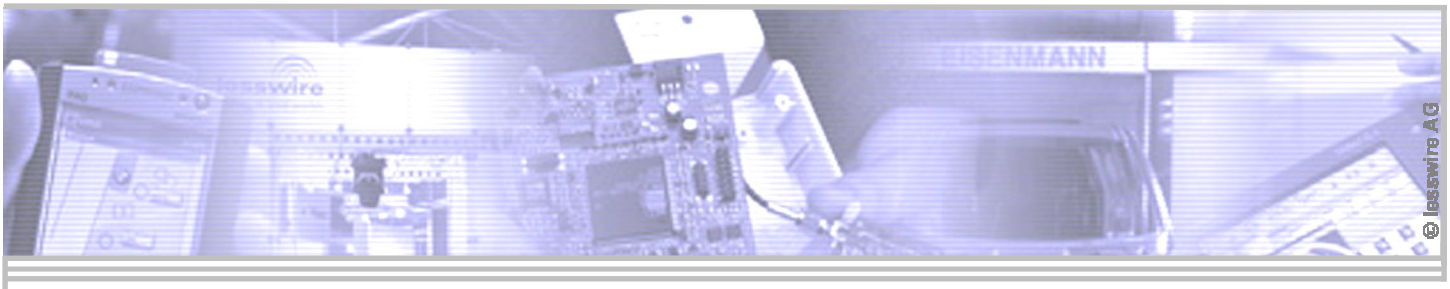
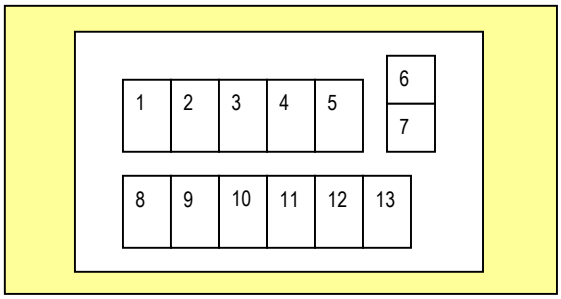


Backside (turned):



All connector pads at the backside are connected without any circuit protection directly with the Bluetooth module. All input lines work with positive 3,3V logic; max. load of 4mA.

SPI Interface	Pin 1:	GND	I/O Ports	Pin 9:	PIO 6 with 470k at 3,3V
	Pin 2:	MISO		Pin10:	PIO 5
	Pin 3:	CSB		Pin11:	PIO 4
	Pin 4:	CLK		Pin12:	PIO 3
	Pin 5:	MOSI		Pin13:	PIO 2
UART	Pin 6:	CTS			
	Pin 7:	RTS			
	Pin 8:	GND			

Technical Data

Bluetooth SIG Certification:	Bluetooth 1.1
Transmission speed:	9600 – 115.000bps
Frequency:	2.4 - 2.4835 GHz (ISM Band)
Communication type	Point-to-Point (cable replacement)
Communication protocols:	L2CAP, SDP, RFCOMM
Bluetooth profiles:	General Access Profile, Service Discovery Profile, Serial Port Profile
Radio class:	Class 2 radio
RF output power:	max. +4 dBm (Class 2)
Sensitivity:	typical – 80 dBm
Radio/Baseband chip set:	CSR/CSR
Antenna:	Integriert
Adopter:	Soldering pads on board
Management:	AT commands over terminal application (e.g. hyperterminal)
LEDs:	Operation status
Modulation:	FHSS/GSFK
Operation temperature:	0° to 55° Celsius
Powered:	5V/120mA over proprietary connector
Firmware update:	Firmware update via SPI
Security initialisation:	PIN Code
Security authentification:	Security mode 3 supported
Security encryption:	128-bit encryption
Dimensions:	26mm x 19mm x 1,5mm
Weight:	7 grammes
Package Contents:	Serial Bluetooth Adapter board, manual

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