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Data Sheet

OEM-MIFARE-ICODE.PDF

7 Pages

Last Revised 27/01/09

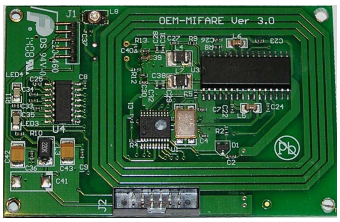
OEM-MIFARE-ICODE Reader Board

The OEM-MIFARE-ICODE Reader Board is a complete Read/Write system for ISO14443A Mifare 1k, 4k, Ultralight and ISO15693 ICODE / TAG-IT cards and tags. It has an integrated PCB track antenna, LEDs, TTL serial and I/O interface and is available in two versions; with RS232 connector or USB (RS232 interface version requires 5 volt supply, USB version uses USB bus for power supply).

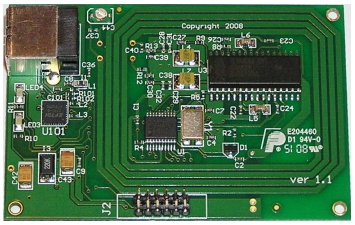
The OEM boards are based on the proven RWD-MIFARE-ICODE module design with components laid out inside a PCB track antenna and they function in exactly the same way as the module with an antenna fitted. The design incorporates power supply filtering to ensure optimum performance, antenna-trimming capacitor to adjust tuning for different environments and LEDs for visual indication of card acceptance. The J2 connector also allows the OEM-MIFARE-ICODE board to be reprogrammed with custom firmware.

- **Complete "plug-and-go" RFID Read / Write system based on proven design.**
- **Integrated PCB antenna, LEDS, RS232 or USB interface.**
- **Supports Mifare 1k, 4k, Ultralight and ICODE / Tag-it (including contactless read/write to Mifare ProX, SmartMX / JCOP cards).**
- **Average current consumption down to 100μA (micro Amps) even when fully active.**
- **Auxiliary output options for automatic data output as serial or Weigand protocol.**
- **"Reference Design Pack" available for ultra low-cost higher volume applications.**

OEM-MIFARE-ICODE-RS232



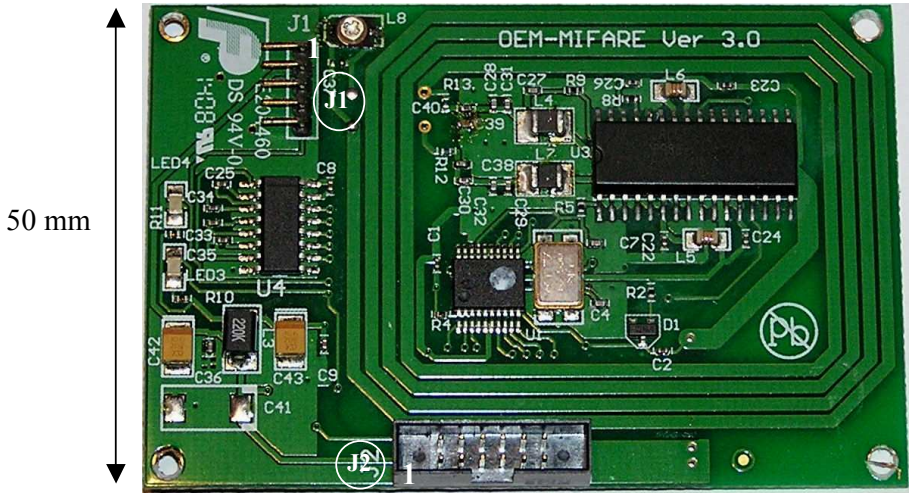
OEM-MIFARE-ICODE-USB



This document should be read in conjunction with the **MFPROT and MF_ICPROT** data sheets that detail the operation and command protocol for the RWD-MIFARE-ICODE modules (and therefore OEM boards also). Because they use the same design and firmware as the RWD module (and the Universal RFID base board) the Mifare Windows applications and RS232 HEX COM utility can be used in the usual manner.

A “Reference Design Pack” is also available for customers who want to copy the board layout on their own PCB and then just purchase the pre-programmed microcontroller from IB Technology. For higher volume applications this “Reference Design” chipset solution will achieve a proven, quick time-to-market embedded Reader product at the **lowest possible cost and with minimum effort.**

OEM-MIFARE-ICODE-RS232



Mounting holes, 2 mm diameter (for M2 screws)

45 mm and 70 mm between centres.

OEM-MIFARE-ICODE-RS232 connectors (note Pin 1 positions on diagram), note same J2 connector and pin out as USB version.

J2 connector: 2 x 6 way, TOBY boxed IDC header, 2mm pitch (www.toby.co.uk, C05-12-AG1-G), mates with TOBY A05-12 socket or equivalent.

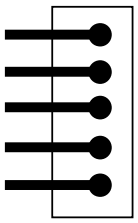
Connector J2 provides all the power, communication and control signals of the RWD-MIFARE-ICODE module on a single connector.

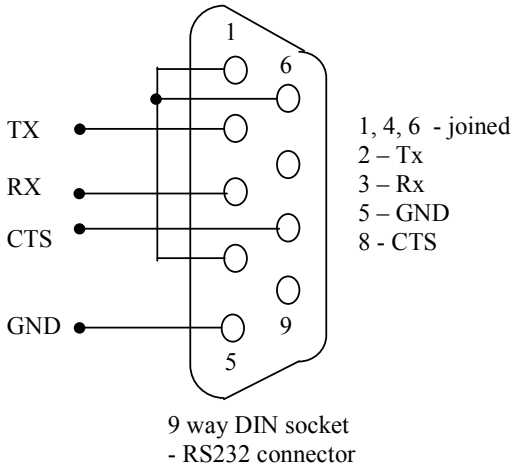
PIN 1:	GND	PIN 2:	OP0
PIN 3:	5v (Vcc IN)	PIN 4:	Red LED
PIN 5:	CTS (5v)	PIN 6:	OP1
PIN 7:	GND	PIN 8:	Green LED
PIN 9:	RX (5v)	PIN 10	SW1
PIN 11:	Reset (MCLR)	PIN 12:	TX (5v)

J1 connector: 5 way, 2 mm pitch header.

Connector J1 is used to connect the OEM-MIFARE-ICODE board to an RS232 serial port (as on a PC). Note that if J1 is connected to a standard 9-way D-type serial connector then pins 1, 4 and 6 must be joined on the D-type connector. 5-volt supply must be connected to J1 pin 2 as shown.

PIN 1: Supply GND
PIN 2: 5V (Vcc IN)
PIN 3: CTS (12v)
PIN 4: RX (12v)
PIN 5: TX (12v)





9 way DIN socket
- RS232 connector

Specifications:

Power Supply: 5 volts, **average** current consumption typically less than 50 mA. Power supply capable of providing 200mA is recommended.
Communication: 9600 baud, 8 bits, 1 stop, no parity.