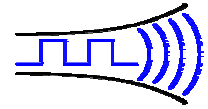


NEW

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TDL2A Eval Kit

TDL2A Evaluation Kit

With onboard RS232 driver, serial port and antenna connector

TDL2A Evaluation Kit enables user to evaluate transparent data link capability of TDL2A OEM modems. The eval kit is also useful for range testing and it enables evaluation of TDL2A for various antenna types, areas of weak coverage (inc null spots), packet errors etc.



Range of Features

- RS232 driver and DB9F connector for direct interface to PC serial port
- Setup is simple as Plug-and-Play
- Set-up and configuration using HyperTerminal
- Access to internal diagnostic/Test modes using HyperTerminal
- On board SMA antenna connector
- Signal LED for visual indication of valid code received
- RF Remote Control Demonstration
- PP3 9V battery powered.
- Size: 73 x 70 x 17mm (excluding helical antenna length of 50mm)

The Eval kit feature an on board MAX232 RS232 driver, 9 way D connector, 5V voltage regulator, SMA RF connector and helical antenna, hence requires just a Voltage supply to power up and operate a TDL2A without any additional interface circuitry. The snap off feature of the PP3 battery holder reduces the board size by half (73 x 33 x 17mm) and allows external power supply connection.

Kit Contents

The TDL2A Evaluation Kit is supplied with the following contents:

- 2 TDL Evaluation Board
- 2 TDL2A modules (ordered separately)
- 2 1/4-wavelength monopole or helical antennas (ordered separately)
- 2 9V alkaline battery (PP3)
- 1 Jumper
- 1 TDL2A data sheet
- 1 TDL2A Eval Kit manual

Additional requirements

1. DB9M - DB9F straight through serial cable
2. External power supply or DC power adaptor (optional)
3. PC/PDA with terminal program (e.g. Hilgraeve HyperTerminal)

Configuring the TDL2A

In order to use all the functions embedded in the on board TDL2A modem, the user must be aware of the setup /programming facility, which allow different addresses and frequency channels to be set up, and if necessary accesses diagnostic test modes.

The TDL2A is programmed through the same RS232 port that is used for sending/receiving data. An RS232 terminal emulator (such as Aterm or HyperTerminal) is an ideal tool.

Connect the TDL2A eval kit directly (or via serial straight through cable) to the PC serial port.

To enter program mode, insert the PGM jumper (to pull the SETUP pin of TDL2A low) and run the PC HyperTerminal program. In this mode the radio link is disabled, but characters sent (at 9600 baud, as normal) to the unit are echoed back on the RXD pin.

The HyperTerminal should be set with the following settings.

9600 baud RS232, 8 bit data, no parity, 1 start bit, 1 or 2 stop bits. No flow control.
ASCII Setup should be left at default settings with no ticks on Send line ends with line feeds and Append line feeds to incoming line ends

The unit will only respond to certain command strings:

ADDR0 to **ADDR7** <CR><LF> These commands set up one of 8 unique addresses. A TDL2I will only communicate with a unit set to the same address.

CHAN0 to **CHAN4** <CR><LF> These commands select one of 5 preset channels

A TDL2I will only communicate with a unit set to the same address and the same channel.

Address and channel numbers are stored in volatile memory. On power-up the TDL2I reverts to the default in EEPROM (as supplied this is always address 0 and Channel 0)

SETPROGRAM <CR> Writes the current set address into EEPROM as the new default.
A tilde character (~, ascii 126dec) sent by the unit indicates end of EEPROM write sequence

(The following commands are normally only used for factory diagnostics)

NOTONE <CR> Transmit unmodulated carrier
LFTONE <CR> Transmit carrier modulated with 8KHz squarewave
HFTONE <CR> Transmit carrier modulated with 16KHz squarewave
<CR> Transmitter off

A Carriage Return '<CR>' (00Dhex) should be entered after each command sequence to execute it. Releasing the SETUP (by removing the PGM jumper) to high state returns the TDL2A to normal operation

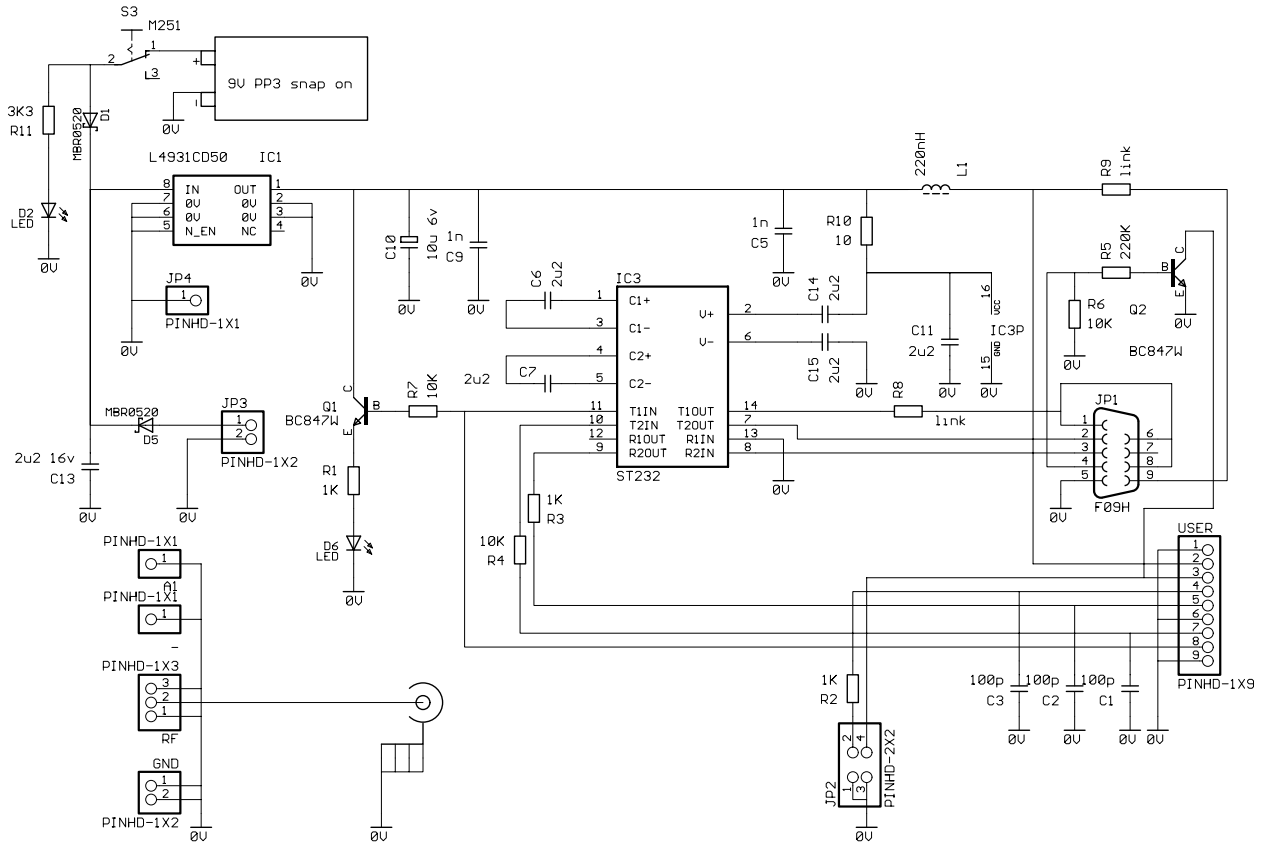


Figure 2: Schematic diagram of TDL2A Eval Kit

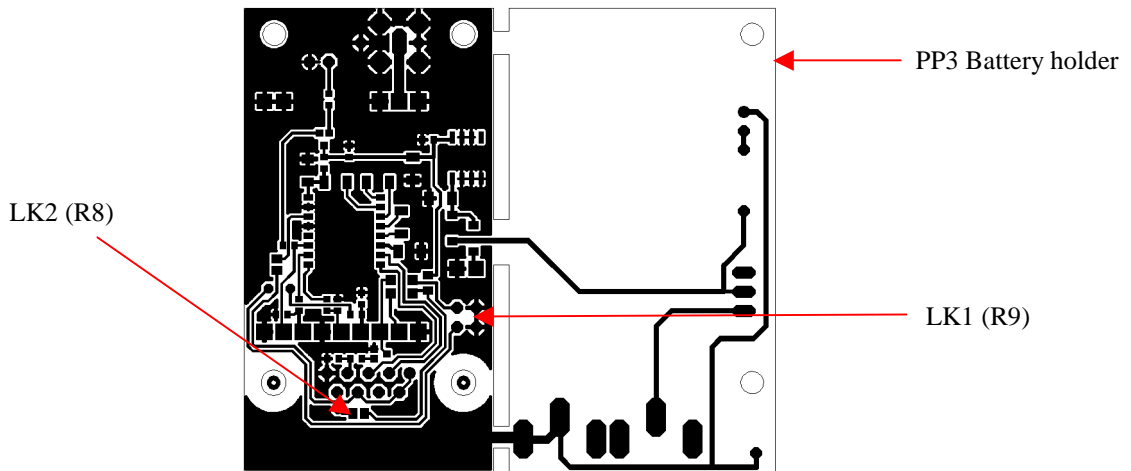


Figure 3: PCB layout of TDL2A Eval Kit

On-board regulator (L4931) can supply up to 250mA current at 5V.

R9 (LK1) connects pin 9 (Ring Indicator) on the D type to the 5V, which enables any external host to be powered from pin 9 (+5V DC) and pin 5 (GND). Certain CCD barcode scanner can make use of this feature, eliminating the need for additional external power adaptor.

R8 connects STATUS (data ready, via an RS232 buffer) to DCD, DSR and CTS. Not linking this jumper (LK2 at the back of the board) saves power.

LEDs are provided for visual indication of SUPPLY ON (Battery Vcc) and STATUS data ready.

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The Intrastat commodity code for all our modules is: 8542 6000

R&TTE Directive

After 7 April 2001 the manufacturer can only place finished product on the market under the provisions of the R&TTE Directive. Equipment within the scope of the R&TTE Directive may demonstrate compliance to the essential requirements specified in Article 3 of the Directive, as appropriate to the particular equipment.

Further details are available on The Office of Communications (Ofcom) web site:

<http://www.ofcom.org.uk/radiocomms/ifi/>

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