eZ430-TMS37157 Development Tool FAQ (PaLFI Evaluation Kit TMS37157)

1 What do I get for $199?

The eZ430-TMS37157 is a complete USB-based MSP430 wireless development tool providing all the hardware and software to evaluate the MSP430F2274 microcontroller and the TMS37157 passive low frequency interface RFID transponder.

The EVM kit contains one RFID reader module, one eZ430-TMS37157 target board, one eZ430-USB debugging interface and one AAA battery pack with expansion board (batteries included).

A demo application is programmed into the EVM and can be executed using the GUI available for download.

2 If I only request literature what will I receive?

- eZ430-TMS37157 Development Tool (SLAU281)
- Datasheet Passive Low Frequency Interface Device With EEPROM and 134.2 kHz (SWRS083)

3 What does the eZ430-TMS37157 development tool do?

The TMS37157 combines a low frequency RFID transponder with EEPROM memory and an SPI interface to connect to a microcontroller.

The EEPROM memory is accessible via the LF- and SPI interface without battery support.

If connected to a battery the device can enter different power modes down to a current consumption of only 50 nA.

4 Can I get the board design/gerber files/artwork for the base station and the target board?

Yes, circuit and gerber files are available for download:

http://www.ti.com/litv/zip/slac342

5 Can I get the FW for the base station and the target board?

Yes, demo FW files are available for both boards and can be downloaded:

Base Station: http://www.ti.com/litv/zip/slac350

Target Board: http://www.ti.com/litv/zip/swrc165

6 Can I purchase more than one?

Yes.

7 How long will it take to receive the EVM?

You should receive the EVM within 5 working days.

8 Where can I get samples of the eZ430-TMS37157?

By contacting your local TI authorized distributor or at TI's eStore: http://www.ti-estore.com/

9 What if I have a technical question?

Contact the product information center (PIC) at (972) 644-5580 from 8 am to 6 pm central time.

10 Does the eZ430-TMS37157 support fuse blow?

The eZ430-RF USB debugging interface lacks the JTAG security fuse-blow capability. To ensure firmware security on devices going to production, the USB flash emulation tool or the gang programmer, which include the fuse-blow feature, are recommended.

11 What is the voltage supplied to the eZ430-TMS37157 target board from the debugging interface?

The eZ430-RF USB debugging interface supplies a regulated 3.6 V to the eZ430-TMS37157 target board.

12 Can other programming tools interface to the eZ430-RF2500T target board?

The eZ430-TMS37157 target board works with any programming tool supporting the 2-wire Spy-Bi-Wire interface. Both the MSP430 USB FET (MSP-FET430UIF) and the gang programmer (MSP-GANG430) support these devices. See MSP-FET430 Flash Emulation Tool User's Guide (SLAU138) for details on using MSP430 USB FET and the gang programmer for a 2-wire Spy-Bi-Wire interface.

13 What versions of IAR Embedded Workbench and Code Composer Essentials are supported?

The eZ430-TMS37157 hardware is supported by IAR Embedded Workbench KickStart Release 4.64 (IAR 3.42F) and Code Composer Essentials v2.03 (SP3) or higher.

14 What are the part numbers for the connectors between the eZ430-RF USB debugger and the eZ430-TMS37157 target board?

Header: Mill-Max 850-10-006-20-001000

Socket: Mill-Max 851-93-006-20-001000

Mill-Max: http://www.mill-max.com

15 Where can I obtain more information about the 134.2-kHz chip antenna?

Part Number: Neosid MS32ka/2.66mH

http://www.neosid.de

16 I am not able to select the MSP430 Application UART, cannot receive data, or the demo app doesn't appear to change.

- Ensure that the Application UART driver is correctly installed. This is done by either running the installer for the RFID demo software or IAR KickStart 3.42F or higher and following the directions in eZ430-TMS37157 User's Guide (SLAU281), Section 6.1.2.
- To determine if the driver is correctly installed:
  - Plug in the eZ430-RF USB debugging interface.
  - Right click My Computer and select Properties.
  - Select the Hardware tab and click on Device Manager.
  - Under Ports (COM & LPT) should be an entry for "MSP430 Application UART (COM xx)".
  - If the entry is there, but no characters are received, restart the PC.
  - If the Application UART is not listed, please install the driver by following the instructions in Section 6.1.2: Base Station USB Driver Installation (SLAU281).

17 Is the demo firmware compatible to IAR?

To debug the firmware with IAR, one file has to be replaced, delete the file dco_library.asm in the PaLFI embedded demo folder and replace it by dco_library.s43 from IAR subfolder. The source files can be included in a new IAR Project now.

18 Is it possible to power the RFID base station externally?

To power the RFID base station with external power supply, move the 0-Ω resistor from R34 to R35. Additional information can be found on eZ430-TMS37157 Development Tool User's Guide (SLAU281), Section 6.1

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