

## **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

## IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

<b>Products</b>		<b>Applications</b>	
Amplifiers	<a href="http://amplifier.ti.com">amplifier.ti.com</a>	Audio	<a href="http://www.ti.com/audio">www.ti.com/audio</a>
Data Converters	<a href="http://dataconverter.ti.com">dataconverter.ti.com</a>	Automotive	<a href="http://www.ti.com/automotive">www.ti.com/automotive</a>
DLP® Products	<a href="http://www.dlp.com">www.dlp.com</a>	Communications and Telecom	<a href="http://www.ti.com/communications">www.ti.com/communications</a>
DSP	<a href="http://dsp.ti.com">dsp.ti.com</a>	Computers and Peripherals	<a href="http://www.ti.com/computers">www.ti.com/computers</a>
Clocks and Timers	<a href="http://www.ti.com/clocks">www.ti.com/clocks</a>	Consumer Electronics	<a href="http://www.ti.com/consumer-apps">www.ti.com/consumer-apps</a>
Interface	<a href="http://interface.ti.com">interface.ti.com</a>	Energy	<a href="http://www.ti.com/energy">www.ti.com/energy</a>
Logic	<a href="http://logic.ti.com">logic.ti.com</a>	Industrial	<a href="http://www.ti.com/industrial">www.ti.com/industrial</a>
Power Mgmt	<a href="http://power.ti.com">power.ti.com</a>	Medical	<a href="http://www.ti.com/medical">www.ti.com/medical</a>
Microcontrollers	<a href="http://microcontroller.ti.com">microcontroller.ti.com</a>	Security	<a href="http://www.ti.com/security">www.ti.com/security</a>
RFID	<a href="http://www.ti-rfid.com">www.ti-rfid.com</a>	Space, Avionics & Defense	<a href="http://www.ti.com/space-avionics-defense">www.ti.com/space-avionics-defense</a>
RF/IF and ZigBee® Solutions	<a href="http://www.ti.com/lprf">www.ti.com/lprf</a>	Video and Imaging	<a href="http://www.ti.com/video">www.ti.com/video</a>
		Wireless	<a href="http://www.ti.com/wireless-apps">www.ti.com/wireless-apps</a>

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2010, Texas Instruments Incorporated