



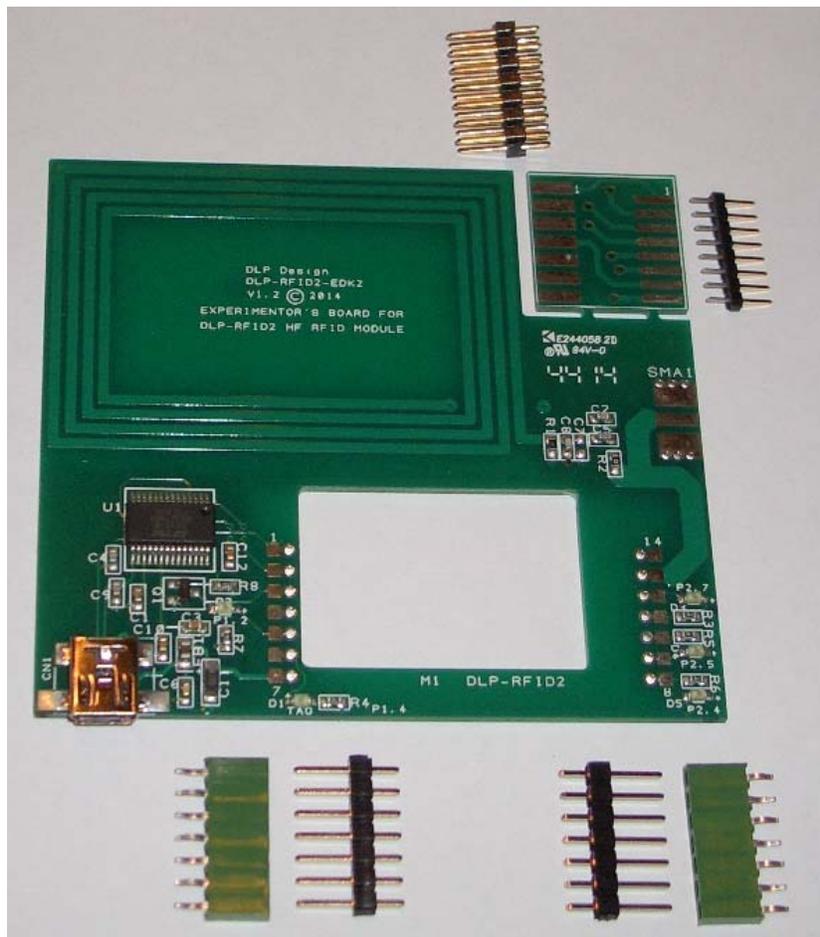
DLP-RFID2-EDK2 SETUP PROCEDURE

This product is designed to make it easy to both test the DLP-RFID2 module without developing your own hardware and provide an easy-to-use platform for those wishing to program, modify, test and debug the source code for the DLP-RFID2 reader module.

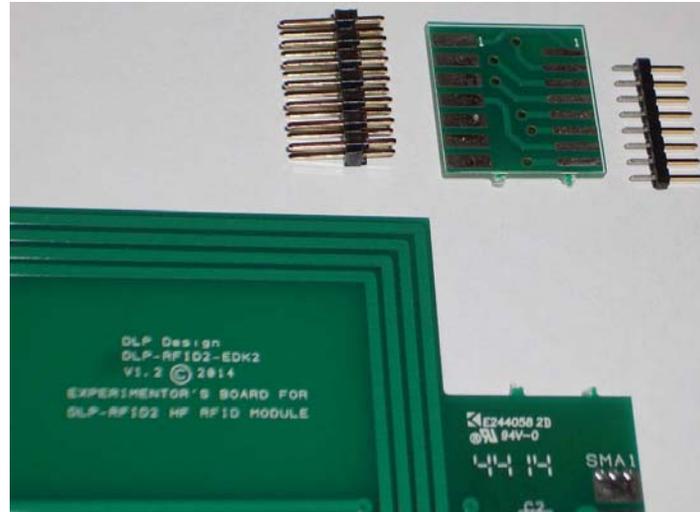
The Texas Instruments MSP-FET430UIF programmer/debugger and DLP-RFID2 RFID reader/writer module are not included with this product and must be purchased separately.

1. Seven headers in total are provided with the DLP-RFID2-EDK2. One of the seven, a female header (not shown below), can be mounted directly to the DLP-RFID2 module.

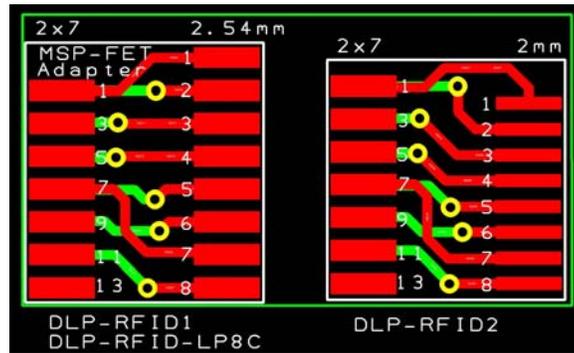
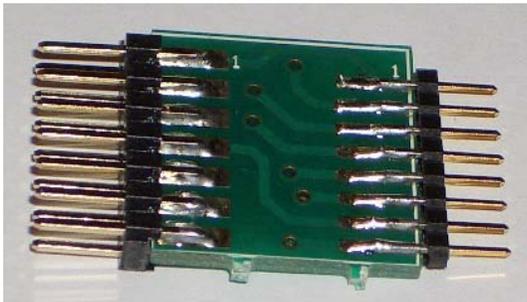
Please note that all seven headers are not required if you only want to reprogram a module with new firmware. We recommend that you read this entire guide before proceeding.



2. Break the smaller PCB away from the larger PCB:



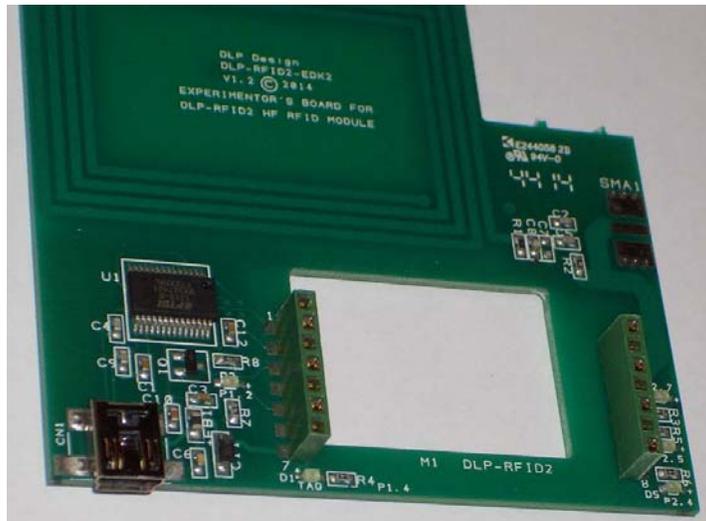
3. Solder the two provided male headers to the smaller PCB. (The dual-row male header must be soldered onto both sides of the PCB.)



2x7 Pin Header	8 Pin Header
MSP-FET Programmer	Single Row
Pin #	Pin #
1	1
2	2
3	NC
4	3
5	NC
6	4
7	7
8	5
9	NC
10	6
11	NC
12	8
13	NC
14	NC

NC = No Connect

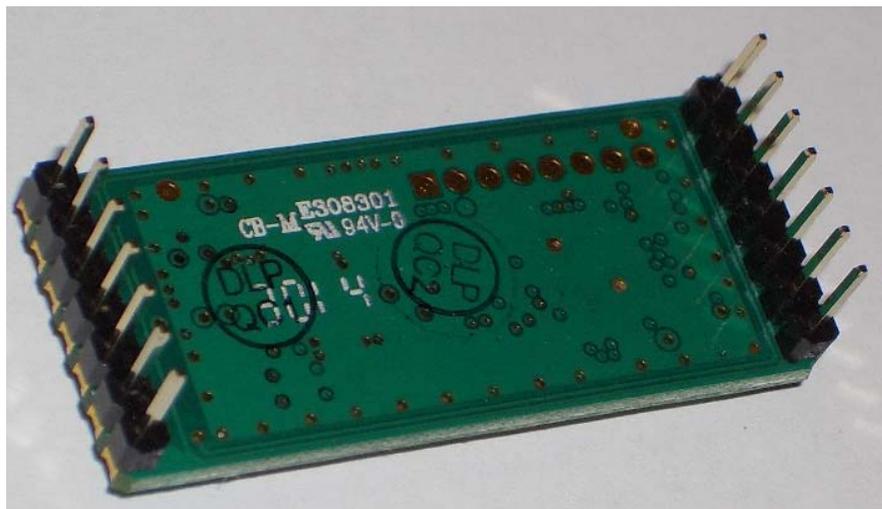
4. Mount the two provided 7-pin female headers to the top side of the DLP-RFID2-EDK2 PCB. (Solder these two headers in place.)



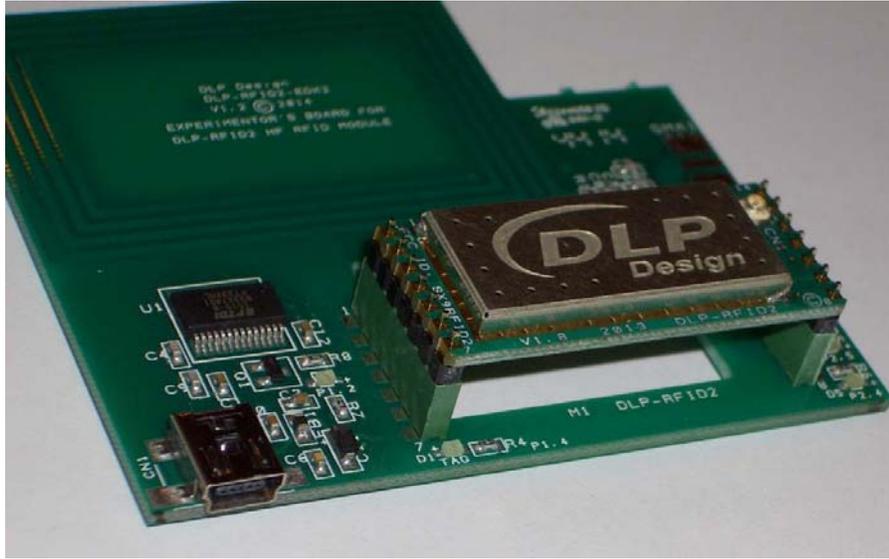
Note: If you intend to use an external antenna (purchased separately) with the DLP-RFID2-EDK2 module, you must first disable the on-board antenna by removing Resistor R2. A PCB position (SMA1) is available for mounting an SMA connector [Ex: CONSMA003.062 (purchased separately)].

5. Mount the two provided male headers to the DLP-RFID2 module. Carefully solder these two headers in place, ensuring that no solder bridges are created between adjacent pins.

Note: If you only want to reprogram (not debug) the firmware in the RFID2, then these connectors are not required. The small adapter PCB's 2mm male header can be held in place by hand for the few seconds required by the program process.

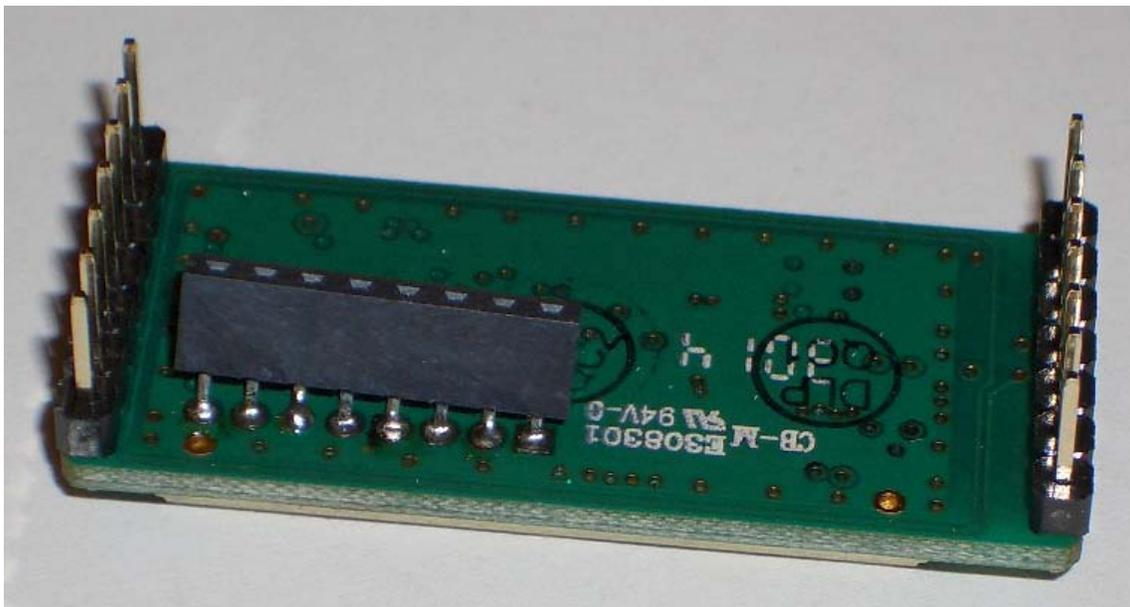


6. Mount the DLP-RFID2 module to the DLP-RFID2-EDK2 PCB as shown below. Pay attention to the orientation of the RFID2 module relative to the DLP-RFID2-EDK2 PCB. The RFID2 module must not be plugged in backwards.

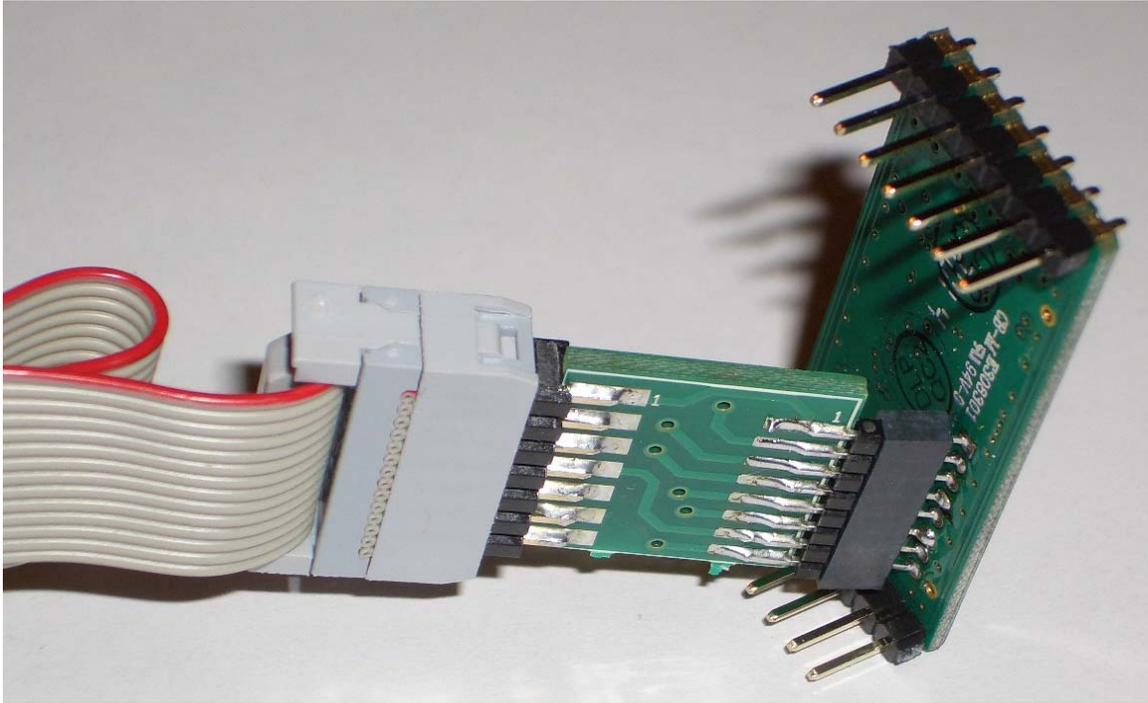


7. If you intend to program/debug the source code in the RFID2 module, then you must mount the provided 8-pin, 2mm female connector as shown below. Be careful when soldering so that no solder bridges are formed between the pins.

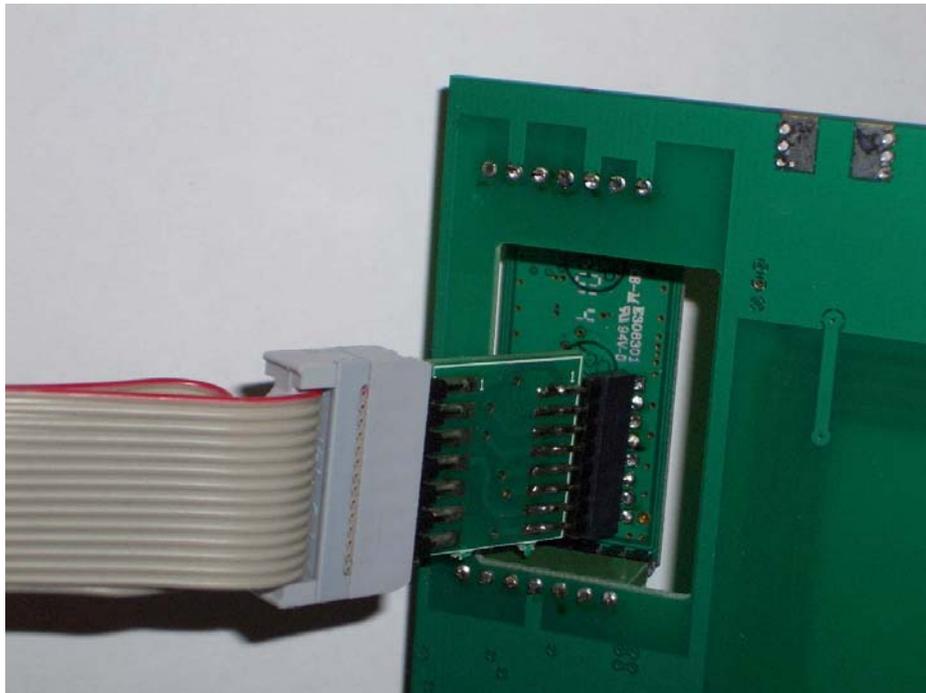
Note: If you only want to reprogram (not debug) the firmware in the RFID2, then this connector is not required. The small adapter PCB's 2mm male header can be held in place by hand for the few seconds required by the reprogramming process.



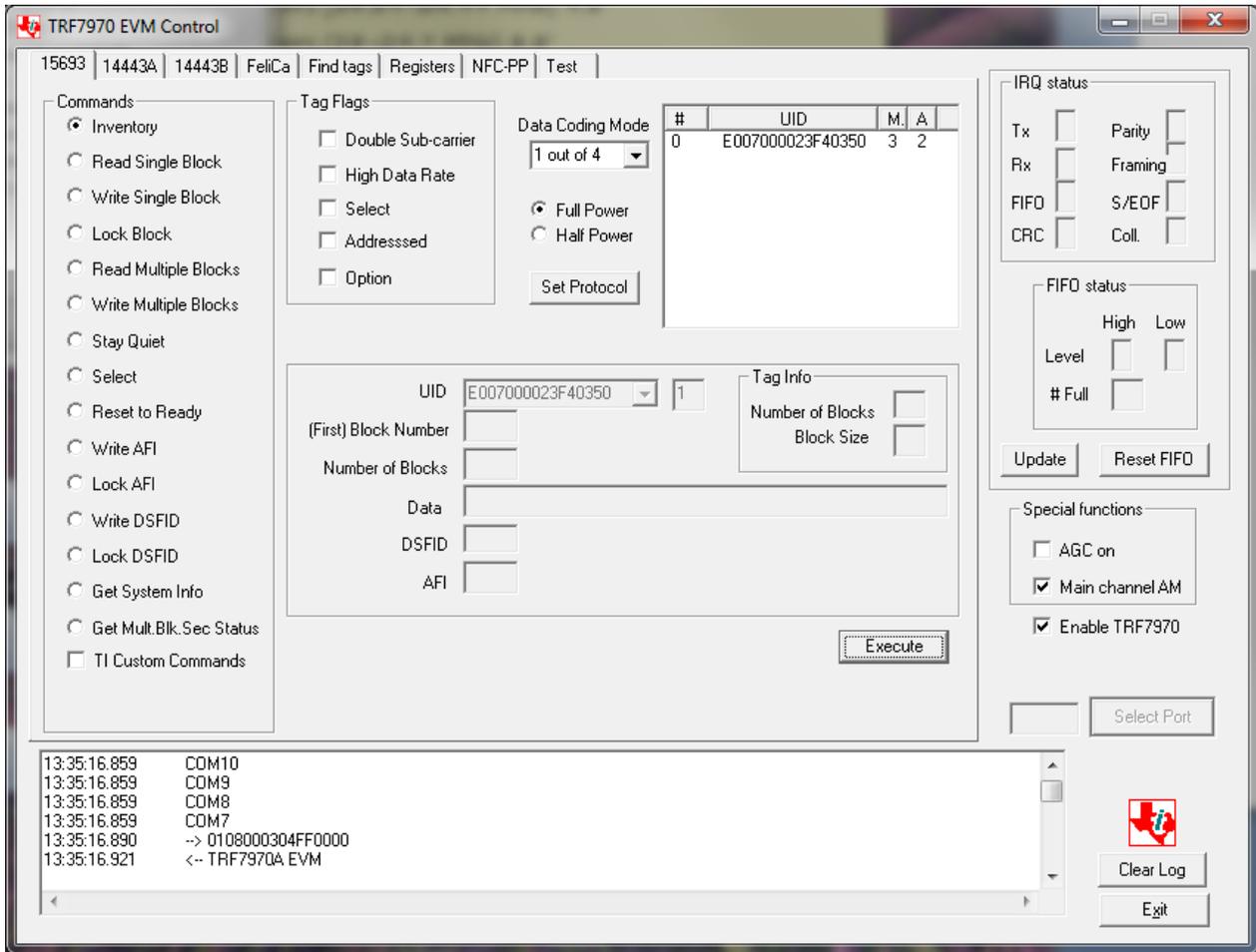
8. The image below shows the correct orientation between the Texas Instruments MSP-FET430UIF programmer/debugger cable and the small adapter PCB. The red wire in the interconnect cable aligns with Pin 1 on the adapter PCB, which aligns with Pin 1 (square pad) of the programming interface header on the RFID2 module.



9. Once the RFID2 module is mounted to the RFID2-EDK2 PCB and the MSP-FET430UIF programmer is connected as shown below, then the system is ready for programming and debugging.

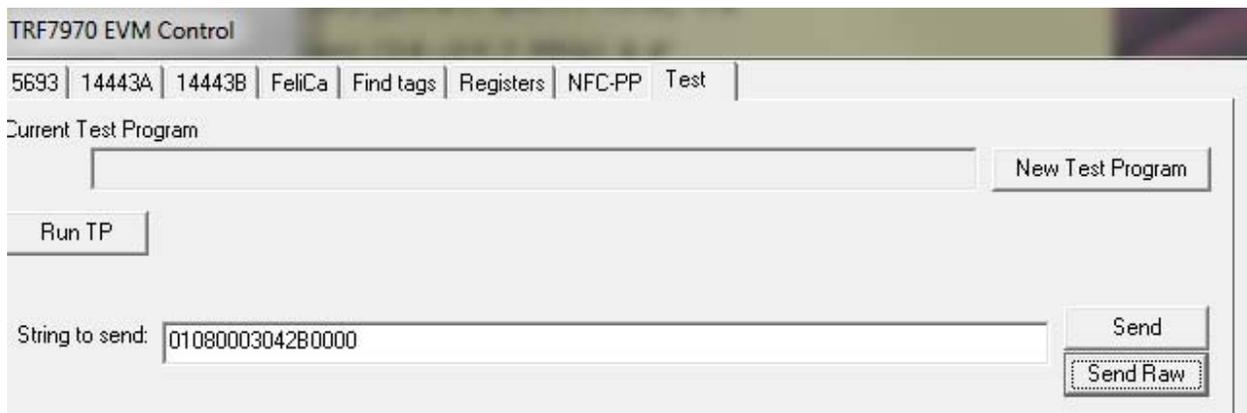


Once the drivers are loaded and a COM port is present in Device Manager, the Texas Instruments GUI can be run to test the RFID2 module's operation:



This GUI is available for download from the DLP-RFID2 download page. The URL for the download page is printed on the outer packaging of the DLP-RFID2 and DLP-RFID2-EDK2.

To select the external antenna on the DLP-RFID2-EDK2 board, you must send the correct command packet (01080003042B0000) as shown in the DLP-RFID2 datasheet. To send this packet using the TI GUI, first make the connection to the DLP-RFID2-EDK2, and then click on the Test tab. Enter the command packet as shown below and click on Send Raw.



Successive tag reads will use the external antenna built into the DLP-RFID2-EDK2.