NFC EZ430 Reader Module Reference Design

(ACTIVE) TIDM-NFC-EZ430-MODULE

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Description

This reference design provides a complete hardware and firmware example for a Near Field Communication (NFC) Module. The Module uses TI's eZ430 UART connection for simple interfacing. The firmware example demonstrates NFC Reader/Writer functionality by reading ISO15693, ISO14443A, ISO14443B, and Felica tags. Unlike some evaluation modules, this NFC module was designed specifically easy integration into existing applications. This reduces the resource demand on the developers while still supporting full functionality.

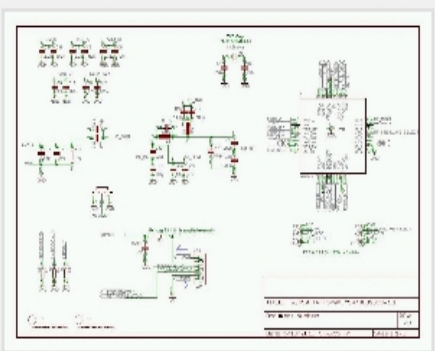
Features

- UART EZ430 115.2 kbaud Interface
- Reads ISO15693, ISO14443A, ISO14443B, and Felica Tags
- Module includes onboard MCU and stack to reduce demand of Host MCU
- Designed to be a drop in ready module with simple communication interface
- Anti-collision allows reading multiple NFC tags at once
- Design is tested and includes firmware, GUI Software, hardware design, and application report

Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

Schematic/Block Diagram

Quickly understand overall system functionality.



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Design Guide

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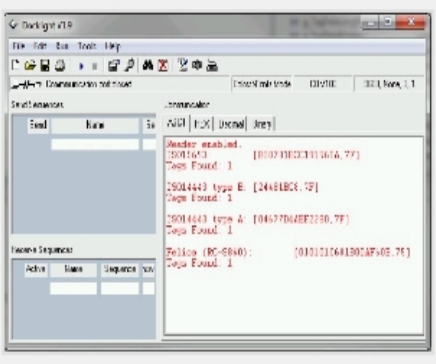

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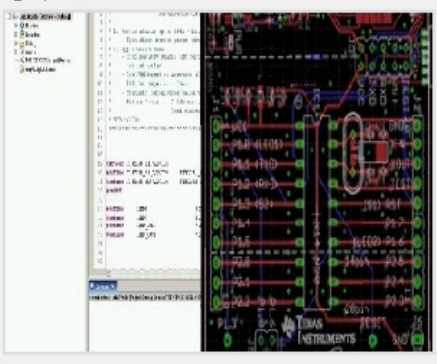
Source Files

Download ready-to-use system files to speed your design process. Get Viewer.



Download Source Files

Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

TI Devices (2)

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
MSP430G2553	MSP430G2x53, MSP430G2x13 Mixed Signal Microcontroller	Ultra-low Power	Sample & Buy	View Design Kits & Evaluation Modules
TRF7970A	Multi-Protocol Fully Integrated 13.56-MHz RFID/NFC Transceiver IC	NFC / RFID	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
MSP430G2553	TSSOP (PW) | 20	Download	Download
	TSSOP (PW) | 28	Download	Download
	VQFN (RHB) | 32	Download	-
TRF7970A	VQFN (RHB) | 32	Download	-

Texas Instruments and Accelerated Designs Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

Step 1: Download and install the Ultra Librarian software ZIP: 62MB

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Technical Documents

Application Notes (1)

Title	Abstract	Type	Size (KB)	Date	Views
TRF7970A + MSP430G2xx NFC/RFID Module Reference Design	Read Abstract	Multiple Files		25 Aug 2014	2,315

Design Files (4)

Title	Abstract	Type	Size (KB)	Date	Views
Gerber Files View NFC EZ430 Reader Module Reference Design PCB Layout		PDF	82	28 Aug 2014	186
NFC EZ430 Reader Module Reference Design Bill of Materials (BOM)		PDF	55	28 Aug 2014	154
NFC EZ430 Reader Module Reference Design Gerber Files		ZIP	65	28 Aug 2014	154
NFC EZ430 Reader Module Reference Design Schematic		PDF	65	28 Aug 2014	754

Related Tools & Software

Software (1)

TRF7970A + MSP430G2xx NFC/RFID Module Reference Design Software
(ZIP, 345 KB) 422 views, 30 Jul 2014

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