

LS RESEARCH Wireless Modules and Dev Kits

	Si-FLEX LS900-SI-02	Pro-FLEX LS240-ZP-01	Ti-Wi LS240-WI-01
Frequency	900 MHz	2.4 GHz	2.4 GHz
Standard	IEEE 802.15.4 / ZigBee	IEEE 802.15.4 / ZigBee	802.11b/g/n, Bluetooth
Processor	Atmel Atxmega a128A3	TI MSP430F5437	N/A
Operating Current	205mA (Tx mode) 30mA (Rx mode)	145mA (Tx mode) 30mA (Rx mode)	300mA (Tx mode) 110mA (Rx mode)
Data Rate	UP to 1 MBps	250 Kbps	Per Standard
Operating Voltage	2.0 V – 3.45 V	2.0 V – 3.3 V	2.7 V – 3.6 V
Output Power	24 dBm	20 dBm	WLAN 16 dBm, BT12 dBm
Receiver Sensitivity	-102 dBm	-98 dBm	WLAN -75 dBm, BT -88 dBm
Memory	256K Flash 16K RAM 4K EEPROM	256K Flash 16K RAM	N/A
Integrated Antenna	•	•	
External Antenna Support	•	•	•
Host Interface	UART	UART	UART
AES Encryption	•	•	•



PRO-FLEX

The Pro-FLEX module is a high performance 2.4GHz IEEE 802.15.4 radio (CC2520 & CC2591) and microcontroller (MSP430F5437) in a cost effective, pre-certified footprint. The module comes preloaded with the TI MAC-Stack that can be used with the LSR host serial interface.

Full debug and programming capabilities are included to develop custom applications. Easily load the TI ZigBee stack or MAC onto the module and create your own network.

Features:

- 100mW 2.4 GHz Zigbee / 802.15.4 Transceiver
- Supports Zigbee Pro and Smart Energy Profile
- Very Versatile, Ultra Low Power Microcontroller Platform
- Integrated PCB F antenna or U.FL connector for external antenna

Specifications:

- MSP430F5437 Microcontroller
- 100mW RF Output Power
- RF Sensitivity up to -99 dBm
- 2.2V to 3.3V Operation
- 256K Flash / 16K RAM
- Power Consumption:
 - 145mA in Transmit
 - 30mA in Receive

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	LS Research Part No.	Description	Price Each			
			1	50	100	1000
741-LS240-ZP-01-A10	LS240-ZP-01-A10	Pro-FLEX Module with Inverted-F Antenna				
741-LS240-ZP-01-A20	LS240-ZP-01-A20	Pro-FLEX Module with U.FL Connector				
741-LSDEV-ZP01-A10	LSDEV-ZP01-A10	Pro-FLEX Development Kit				

SI-FLEX

The SiFLEX module is a high performance 900MHz IEEE 802.15.4 radio (AT86RF212 & RF amplifier circuit) and microcontroller (ATXMEGA256A3) in a cost effective, pre-certified footprint.

Full debug and programming capabilities are included to develop custom applications. Easily load the ZigBee or MAC stack onto the module and create your own network.

Features:

- 900 MHz DSSS Transceiver
- Si-Flex Star Network Protocol – fast, simple, ultra reliable wireless protocol
- Data Rate up to 1 Mbps
- Low Latency
- AES Encryption for Secure Network
- FCC/IC Certified (pending)

Specifications:

- Atmel AT86RF212 900 MHz Direct Sequence Spread Spectrum Transceiver
- ATxmega128A3 Processor
- 250mW RF Output Power
- RF Sensitivity up to -102 dBm
- 2.0V to 3.45V Operation
- 256K Flash / 16K RAM / 4K EEPROM
- Power Consumption:
 - 205mA in Transmit
 - 30mA in Receive

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	LS Research Part No.	Description	Price Each			
			1	50	100	1000
741-LS900-SI-02-A30	LS900-SI-02-A30	Si-FLEX with Wire Antenna				
741-LS900-SI-02-A20	LS900-SI-02-A20	Si-FLEX with U.FL Connector				
741-LSDEV-SI02-A30	LSDEV-SI02-A30	Si-FLEX Development Kit				

TI-WI

The TiWi LS240-WI-01 is a multi standard module with support for 802.11b/g/n, Bluetooth, FM Broadcast Receiver, and FM Transmitter.

Features:

- Low Cost Embedded 802.11 b/g/n , Bluetooth, FM Module
- Compact Module with U.FL Connector with Approved Antennas
- WLAN Features include:
 - Output Power 16 dBm, 802.11g 54Mbps, EVM <3.5%
 - RF Sensitivity up to -75dBm
- Bluetooth Features include:
 - Bluetooth 1.1, 1.2, 2.0+EDR and 2.1+EDR specification compliant up to HCI level
 - Output Power 12dBm, Class 1.5
 - RF Sensitivity up to -88dBm, GFSK, BER=0.1%

Specifications:

- SPI/SDIO Interface to OMAP processor
- Hardware-Based Encryption/Decryption Using 64-, 128-, and 256-Bit WEP, TKIP or AES Keys,
- Operating Voltage: 2.7V to 3.6V
- FCC/IC Certified (pending)
- Integral TXCOs, Fast and Slow Clocks
- Power Consumption- 300mA max in Transmit, 110mA max in Receive

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	LS Research Part No.	Description	Price Each			
			1	50	100	1000
741-LS240-WI-01-A20	LS240-WI-01-A20	Multi-Standard Module with U.FL Connector				
741-LSDEV-WI01-A20	LSDEV-WI01-A20	TiWi RF Development Kit				