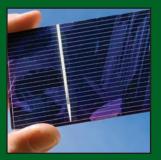
# WIRELESS PRODUCT SELECTOR GUIDE









**FALL 2012** 

www.silabs.com



#### **Complete Family of Wireless Solutions**

Silicon Labs offers a broad portfolio of low-power wireless solutions – from single-chip sub-GHz ISM band receivers, transmitters, transceivers and wireless MCUs designed to support a wide range of wireless applications to high-performance 2.4 GHz ZigBee solutions for mesh networking applications.



#### **Robust Tools, Software and Support**

Complete tools help you throughout the entire development cycle, including in-depth documentation, development hardware, and robust software platforms to help you easily set up, configure and monitor your system.



#### **Perfect for Your Application**

Optimized for power efficiency, the high-performance, low-power, mixed-signal wireless family reduces system cost, improves reliability and enables new features for a variety of end equipment solutions.

FALL 2012



Smart solutions for metering, home automation, industrial, consumer and medical applications

#### Wireless Products

REQUEST SAMPLES AND DOWNLOAD DOCUMENTATION AT www.silabs.com/wireless

#### EZRadio® Universal ISM Band RF ICs: www.silabs.com/ezradio

Fully integrated, low-power, low data rate, low cost transmitter, receiver and transceiver ICs

| PART NUMBER | ТҮРЕ    |     | ON SCHEME<br>KBPS)<br>OOK | FRE<br>315 | QUENCY<br>434 | BANDS (1<br>868 | MHz)<br>915 |    | OWER MAX<br>3m)<br>434 MHz<br>BAND | SUPPLY<br>VOLTAGE (V) | SENSITIVITY<br>(dBm) | PACKAGE       |
|-------------|---------|-----|---------------------------|------------|---------------|-----------------|-------------|----|------------------------------------|-----------------------|----------------------|---------------|
| Si4010      | MCU +TX | 100 | 50                        |            | 27 -          | 960             |             | 1  | 0                                  | 1.8-3.6               | _                    | MSOP10/SOIC14 |
| Si4012      | TX      | 100 | 50                        |            | 27 -          | 960             |             | 1  | 0                                  | 1.8-3.6               | _                    | MSOP10/SOIC14 |
| Si4313      | RX      | 256 | 40                        | •          | •             | •               | •           |    |                                    | 1.8-3.6               | -118/-107            | QFN20         |
| Si4355      | RX      | 500 | 120                       | •          | •             | •               | •           |    |                                    | 1.8-3.6               | -116                 | QFN20         |
| Si4455      | TRX     | 500 | _                         | •          | •             | •               | •           | 12 | 13                                 | 1.8-3.6               | -116                 | QFN20         |

#### EZRadioPRO® Radio with Enhanced Features: www.silabs.com/ezradiopro

 $Sub-GHz\ radios\ supporting\ continuous\ frequency\ tuning\ from\ 119\ to\ 1050\ MHz\ and\ output\ power\ up\ to\ +20\ dBm$ 

| PART NUMBER | ТҮРЕ |      | ON SCHEME<br>KBPS)<br>OOK | FREQUENCY<br>RANGE (MHz) | OUTPUT POWER<br>RANGE (dBm) | SENSITIV<br>(2.0 KBPS)<br>(FSK) | ITY (dBm)<br>(4.8 KBPS)<br>(00K) | RX<br>CURRENT<br>(mA) | 0  | +11 | ENT (mA)<br>+13<br>3m) | +20 | PACKAGE |
|-------------|------|------|---------------------------|--------------------------|-----------------------------|---------------------------------|----------------------------------|-----------------------|----|-----|------------------------|-----|---------|
| Si4030      | TX   | 256  | 40                        | 900-960                  | -8 to +13                   | _                               | _                                | _                     | 18 |     | 30                     |     | QFN20   |
| Si4031      | TX   | 256  | 40                        | 240-930                  | -8 to +13                   | _                               | _                                | _                     | 18 |     | 30                     |     | QFN20   |
| Si4032      | TX   | 256  | 40                        | 240-930                  | +1 to +20                   | _                               | _                                | _                     |    | 35  |                        | 85  | QFN20   |
| Si4060      | TX   | 1000 | 120                       | 142-1050<br>Major Bands  | -40 to +13                  | _                               | _                                | _                     |    | 18  |                        |     | QFN20   |
| Si4063      | TX   | 1000 | 120                       | 142-1050<br>Major Bands  | -20 to +20                  | _                               | _                                | _                     |    |     |                        | 85  | QFN20   |
| Si4330      | RX   | 256  | 40                        | 240-960                  | _                           | -121                            | -110                             | 18.5 mA               |    |     |                        |     | QFN20   |
| Si4362      | RX   | 1000 | 120                       | 142-1050<br>Major Bands  | _                           | -124                            | -110                             | 10/13 mA              |    |     |                        |     | QFN20   |
| Si4430      | TRX  | 256  | 40                        | 900-960                  | -8 to +13                   | -121                            | -110                             | 18.5 mA               | 18 |     | 30                     |     | QFN20   |
| Si4431      | TRX  | 256  | 40                        | 240-930                  | -8 to +13                   | -121                            | -110                             | 18.5 mA               | 18 |     | 30                     |     | QFN20   |
| Si4432      | TRX  | 256  | 40                        | 240-930                  | +1 to +20                   | -121                            | -110                             | 18.5 mA               |    | 35  |                        | 85  | QFN20   |
| Si4460      | TRX  | 1000 | 120                       | 142-1050<br>Major Bands  | -40 to +13                  | -124                            | -110                             | 10/13 mA              |    | 18  | 25                     |     | QFN20   |
| Si4461      | TRX  | 1000 | 120                       | 142-1050<br>Major Bands  | -40 to +16                  | -124                            | -110                             | 10/13 mA              |    |     | 29                     |     | QFN20   |
| Si4463      | TRX  | 1000 | 120                       | 142-1050<br>Major Bands  | -20 to +20                  | -124                            | -110                             | 10/13 mA              |    |     |                        | 85  | QFN20   |
| Si4464      | TRX  | 1000 | 120                       | 119-960                  | -20 to +20                  | -124                            | -110                             | 10/13 mA              |    |     |                        | 85  | QFN20   |

#### Wireless MCUs: www.silabs.com/wirelessmcu

Industry's lowest power single-chip MCU with an integrated sub-GHz RF transceiver

| PART<br>NUMBER | FLASH<br>MEM-<br>ORY | MIPS<br>(PEAK) | RAM<br>(BYTES) | DIG.<br>I/O | сомм.                              | FSK/<br>GFSK<br>(KBPS) | OOK<br>(KBPS) | POWER (DBM) | 2/4.8 KBPS<br>SENSITIV-<br>ITY | +11 | JRRENT<br>+13<br>(dBm) | (mA)<br>+20 | TIMERS<br>(16-BIT) |   | INT<br>OSC | ADC                         | сомр. | OTHER                                  | PACKAGE | DEV KIT  |
|----------------|----------------------|----------------|----------------|-------------|------------------------------------|------------------------|---------------|-------------|--------------------------------|-----|------------------------|-------------|--------------------|---|------------|-----------------------------|-------|--|---------|----------|
| Si1020         | 128 kB               | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1020DI |
| Si1024         | 128 kB               | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1024D  |
| Si1030         | 128 kB               | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1020D  |
| Si1034         | 128 kB               | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1024D  |
| Si1021         | 64 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1020D  |
| Si1025         | 64 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1024D  |
| Si1031         | 64 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1020D  |
| Si1035         | 64 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1024D  |
| Si1000         | 64 kB                | 25             | 4352           | 22          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 10-bit, 18-ch.,<br>300 ksps | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1000D  |
| Si1002         | 64 kB                | 25             | 4352           | 22          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 10-bit, 18-ch.,<br>300 ksps | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1000D  |
| Si1004         | 64 kB                | 25             | 4352           | 19          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 10-bit, 15-ch.,<br>300 ksps | 2     | VREF, Temp Sensor,<br>RTC, CRC, DC-DC  | QFN42   | Si1000D  |
| Si1022         | 32 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1020D  |
| Si1026         | 32 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1024D  |
| Si1032         | 32 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1020D  |
| Si1036         | 32 kB                | 25             | 8448           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1024D  |
| Si1001         | 32 kB                | 25             | 4352           | 22          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 10-bit, 18-ch.,<br>300 ksps | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1000D  |
| Si1003         | 32 kB                | 25             | 4352           | 22          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 10-bit, 18-ch.,<br>300 ksps | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1000D  |
| Si1005         | 32 kB                | 25             | 4352           | 19          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 10-bit, 15-ch.,<br>300 ksps | 2     | VREF, Temp Sensor,<br>RTC, CRC, DC-DC  | QFN42   | Si1000D  |
| Si1023         | 16 kB                | 25             | 4352           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1020D  |
| Si1027         | 16 kB                | 25             | 4352           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>128 LCD Segments | LGA85   | Si1024D  |
| Si1033         | 16 kB                | 25             | 4352           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1020D  |
| Si1037         | 16 kB                | 25             | 4352           | 53          | I <sup>2</sup> C, 2 x SPI,<br>UART | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 16-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor                      | LGA85   | Si1024D  |
| Si1010         | 16 kB                | 25             | 768            | 15          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 11-ch.,<br>75 ksps  | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1010D  |
| Si1012         | 16 kB                | 25             | 768            | 15          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 11-ch.,<br>75 ksps  | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1010D  |
| Si1014         | 16 kB                | 25             | 768            | 15          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 11-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>RTC, CRC, DC-DC  | QFN42   | Si1010D  |
| Si1011         | 8 kB                 | 25             | 768            | 15          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | +1 to +20   | -121/-110                      |     |                        | 85          | 4                  | 6 | ±2%        | 12-bit, 11-ch.,<br>75 ksps  | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1010D  |
| Si1013         | 8 kB                 | 25             | 768            | 15          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 11-ch.,<br>75 ksps  | 2     | Temp Sensor,<br>RTC, CRC, VREF         | QFN42   | Si1010D  |
| Si1015         | 8 kB                 | 25             | 768            | 15          | I <sup>2</sup> C, SPI,<br>UART     | 256                    | 40            | -8 to +13   | -121/-110                      | 17  | 30                     |             | 4                  | 6 | ±2%        | 12-bit, 11-ch.,<br>75 ksps  | 2     | VREF, Temp Sensor,<br>RTC, CRC, DC-DC  | QFN42   | Si1010D  |

<sup>\*</sup>See Wireless MCU KIt Table for full part number and frequency options  $\,$ 

#### Ember® ZigBee™ Wireless Mesh Networking: www.silabs.com/zigbee

High performance 2.4 GHz low-power wireless solutions, supported by best-in-class development tools

| PART<br>NUMBER | FLASH<br>(kB) |    | DATA<br>RATE | FREQ.<br>RANGE<br>(MHz) | SENSITIVITY<br>(boost) | ADJ<br>CHANNEL<br>REJECTION<br>(15.4) | ALT<br>CHANNEL<br>REJECTION<br>(15.4) | 802.11g<br>REJECTION<br>+12/-13<br>MHz | TX POWER<br>(boost) | TOTAL<br>LINK<br>BUDGET<br>(boost) | DEEP<br>SLEEP<br>CUR-<br>RENT | RX<br>CURRENT | TX<br>CURRENT<br>(at +3 dBm) | CRYSTAL<br>FREQ. | VOLTAGE<br>(V) | PACKAGE |
|----------------|---------------|----|--------------|-------------------------|------------------------|---------------------------------------|---------------------------------------|--|---------------------|------------------------------------|-------------------------------|---------------|------------------------------|------------------|----------------|---------|
| EM351          | 128           | 12 | 250<br>kbps  | 2400-<br>2500           | -102 dBm               | 35 dB                                 | 46 dB                                 | 36 dB                                  | -55 to +8<br>dBm    | 110 dB                             | 400 nA                        | 26.5 mA       | 31 mA                        | 24 MHz           | 2.1 to 3.6     | QFN48   |
| EM357          | 192           | 12 | 250<br>kbps  | 2400-<br>2500           | -102 dBm               | 35 dB                                 | 46 dB                                 | 36 dB                                  | -55 to +8<br>dBm    | 110 dB                             | 400 nA                        | 26.5 mA       | 31 mA                        | 24 MHz           | 2.1 to 3.6     | QFN48   |

## **Turnkey Support**

FIND THE EVALUATION TOOLS AND REFERENCE DESIGNS TO HELP YOU GET STARTED: www.silabs.com/wireless

#### Sub-GHz EZRadio Development Support

Silicon Labs offers complete tools to help designers throughout the entire project. The EZRadio®, EZRadioPRO® and wireless solutions offer hardware and software platforms to easily set up and configure, compile and debug a project. Full documentation and a broad range of third-party compilers and development tools are available. Software stacks provide networking support for multinode metering networks. Software simulation tools can estimate power consumption and determine expected battery life.

Complete development/prototyping system includes the following:

- Prototyping/demonstration board
- USB adapter for in-system programming and debugging
- Silicon Laboratories IDE
- MCU configuration wizard





#### EZMac® Embedded Media Access Control Software Demo Code

EZMac® media access control software is developed in C code for use with our ISM transceiver products and Wireless MCUs to help create simple point-to-point and star netwroks. Transceiver application designers can use the EZMac software as a demonstration of a simplified interface to the physical radio layer that manages the delivery of signals and their associated packets from the transmitter to the receiver, between nodes. www.silabs.com/EZMac

#### Wireless Development Suite

The Wireless Development Suite (WDS) provides developers a comprehensive toolset to quickly and easily create and deploy efficient, robust and low-cost wireless applications. WDS can be used for demonstrating part capabilities, testing performance, and prototyping application examples, with little or no RF design and measurement experience.

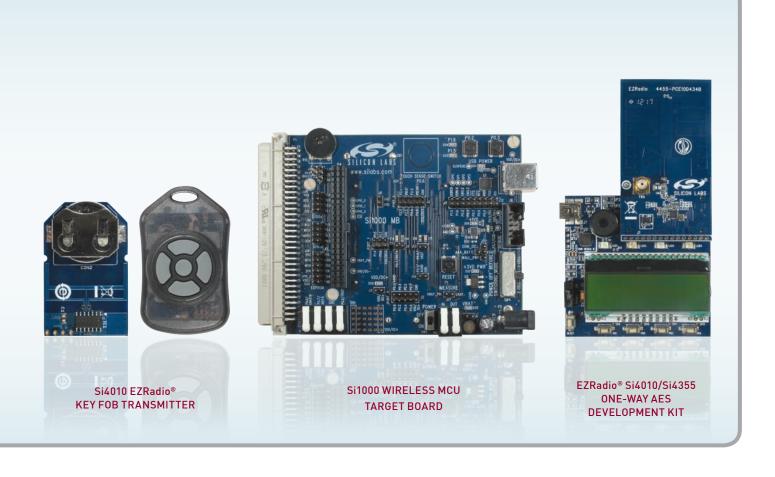
www.silabs.com/WDS

#### Requirement :: Development Support

- Supports ISM band transceivers
- Internal baud rate generator
- 16 byte payload per packet
- Dedicated crystal oscillator for exact timing
- DQD (data quality detector) for FSK fast frequency hopping
- Configurable packet filtering
- Multiple error detection

#### Requirement :: Prototyping and Test

- Supports a family of TX, RX and TRX test cards
- Device config, save, and restore
- Custom scripting API
- Online device documentation
- Terminal window
- PC interface to evaluation boards



## **Development Kits**

FIND THE EVALUATION TOOLS AND REFERENCE DESIGNS TO HELP YOU GET STARTED: www.silabs.com/wireless-devkits

#### Wireless MCU Development Kits

| PART NUMBER      | DESCRIPTION                             | PRICE    |
|------------------|---|----------|
| Si1000DK         | Si1000 Wireless MCU Development Kit     | \$49.99  |
| Si1010DK         | Si1010 Wireless MCU Development Kit     | \$150.00 |
| Si1020-915-A-SDK | Si1020 915 MHz Software Development Kit | \$299.00 |
| Si1020-915-A-DK  | Si1020 915 MHz Wireless Development Kit | \$829.00 |
| Si1024-868-A-SDK | Si1024 868 MHz Software Development Kit | \$299.00 |
| Si1024-868-A-DK  | Si1024 868 MHz Wireless Development Kit | \$829.00 |

#### Wireless MCU Development Kit Test Cards

| PART NUMBER     | ТҮРЕ                | FREQUENCY | ANTENNA CONFIGURATION                        | PRICE   |
|-----------------|---------------------|-----------|--|---------|
| 1000-TCB1 C 915 | Si1000 TRX Testcard | 915 MHz   | Single Switch Antenna Rev c/B1; +20 dBm      | \$70.00 |
| 1000-TCB1 C 470 | Si1000 TRX Testcard | 470 MHz   | Single Switch Antenna Rev c/B1; +20 dBm      | \$70.00 |
| 1002-TCB1 D 868 | Si1002 TRX Testcard | 868 MHz   | Single Tied Antenna Rev c/B1; +13 dBm        | \$70.00 |
| 1002-TCB1 D 434 | Si1002 TRX Testcard | 470 MHz   | Single Tied Antenna Rev c/B1; +13 dBm        | \$70.00 |
| 1004-TCB1 D 868 | Si1004 TRX Testcard | 868 MHz   | Single Tied Antenna Rev d/B1; +13 dBm, dc-dc | \$70.00 |
| 1004-TCB1 D 434 | Si1004 TRX Testcard | 434 MHz   | Single Tied Antenna Rev d/B1; +13 dBm, dc-dc | \$70.00 |
| 1010-TAB1 C 915 | Si1010 TRX Testcard | 915 MHz   | Single Switch Antenna Rev c/B1; +20 dBm      | \$70.00 |
| 1010-TCB1 C 470 | Si1010 TRX Testcard | 470 MHz   | Single Switch Antenna Rev c/B1; +20 dBm      | \$70.00 |
| 1012-TAB1 D 868 | Si1012 TRX Testcard | 868 MHz   | Single Tied Antenna Rev d/B1; +13 dBm        | \$70.00 |
| 1012-TAB1 D 434 | Si1012 TRX Testcard | 434 MHz   | Single Tied Antenna Rev d/B1; +13 dBm        | \$70.00 |
| 1014-TAB1 D 868 | Si1014 TRX Testcard | 868 MHz   | Single Tied Antenna Rev d/B1; +13 dBm, dc-dc | \$70.00 |
| 1014-TAB1 D 434 | Si1014 TRX Testcard | 434 MHz   | Single Tied Antenna Rev d/B1; +13 dBm, dc-dc | \$70.00 |

#### Wireless MCU Development Kit Pico Cards

| PART NUMBER        | FREQUENCY | DESCRIPTION                                 | PRICE   |
|--------------------|-----------|---|---------|
| UPPI1020GM-A-915EK | 915 MHz   | Si1020-GM 915 +20 dBm T/R switch pico board | \$49.00 |
| UPPI1024GM-A-868EK | 868 MHz   | Si1024-GM 868 +13 dBm direct tie pico board | \$42.00 |
| UPPI1024GM-A-434EK | 434 MHz   | Si1024-GM 434 +13 dBm direct tie pico board | \$42.00 |

#### Ember ZigBee Development Kits

| PART NUMBER        | DESCRIPTION  | PRICE      |
|--------------------|--|------------|
| EM35x-DEV          | EM351 and EM357 Development Kit with 30-day trial license for IAR Embedded Workbench for ARM                   | \$2,500.00 |
| EM35x-DEV-IAR      | EM351 and EM357 Development Kit with a full standalone Cortex-M3 licence for IAR<br>Embedded Workbench for ARM | \$5,200.00 |
| EM35x-NCP-ADD-ON-S | Network co-processor development with an existing EM35x Development kit  | \$405.00   |

#### **EZRadio Development Kits**

| PART NUMBER      | DESCRIPTION  | PRICE    |
|------------------|--|----------|
| 4010-KF0BDEV-434 | Si4010/Si4355 Key Fob Development Kit; 434 MHz Frequency                       | \$150.00 |
| 4010-KF0BDEV-868 | Si4010/Si4355 Key Fob Development Kit; 868 MHz Frequency                       | \$150.00 |
| 4010-KF0BDEV-915 | Si4010/Si4355 Key Fob Development Kit; 915 MHz Frequency                       | \$150.00 |
| 4010-AESK1W-315  | Si4010/Si4355 One-Way AES Development Kit; 315 MHz Frequency                   | \$50.00  |
| 4010-AESK1W-434  | Si4010/Si4355 One-Way AES Development Kit; 434 MHz Frequency                   | \$50.00  |
| 4010-AESK1W-868  | Si4010/Si4355 One-Way AES Development Kit; 868 MHz Frequency                   | \$50.00  |
| 4010-AESK1W-915  | Si4010/Si4355 One-Way AES Development Kit; 915 MHz Frequency                   | \$50.00  |
| 4012-LCDK1W-434  | Si4355 One-Way LCD Development Kit; 434 MHz Frequency                          | \$50.00  |
| 4012-LCDK1W-915  | Si4355 One-Way LCD Development Kit; 915 MHz Frequency                          | \$50.00  |
| EZR-LEDK1W-434   | Si4010/Si4355 One-Way Sub-GHz Key Fob to LED Receiver Stick; 434 MHz Frequency | \$20.00  |
| EZR-LEDK1W-868   | Si4010/Si4355 One-Way Sub-GHz Key Fob to LED Receiver Stick; 868 MHz Frequency | \$20.00  |
| EZR-LEDK1W-915   | Si4010/Si4355 One-Way Sub-GHz Key Fob to LED Receiver Stick; 915 MHz Frequency | \$20.00  |
| EZR-LEDK2W-434   | Si4455 Two-Way Sub-GHz Key Fob to LED Receiver Stick; 434 MHz Frequency        | \$40.00  |
| EZR-LEDK2W-868   | Si4455 Two-Way Sub-GHz Key Fob to LED Receiver Stick; 868 MHz Frequency        | \$40.00  |
| EZR-LEDK2W-915   | Si4455 Two-Way Sub-GHz Key Fob to LED Receiver Stick; 915 MHz Frequency        | \$40.00  |
| EZR-LCDK2W-434   | Si4455 Two-Way LCD Development Kit; 434 MHz Frequency                          | \$100.00 |
| EZR-LCDK2W-868   | Si4455 Two-Way LCD Development Kit; 868 MHz Frequency                          | \$100.00 |
| EZR-LCDK2W-915   | Si4455 Two-Way LCD Development Kit; 915 MHz Frequency                          | \$100.00 |
| RF-to-USB-RD     | Two board RF to USB Reference Design   | \$49.99  |
| Si4463-915-DK    | Si4463 Wireless Kit - 915 MHz Development Kit                                  | \$799.00 |
| Si4461-868-DK    | Si4461 Wireless Kit - 868 MHz Development Kit                                  | \$799.00 |

#### EZRadioPRO Development Kit Test Cards

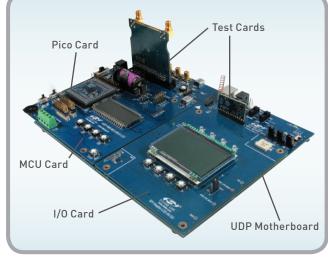
| PART NUMBER        | ТҮРЕ                | FREQUENCY | ANTENNA CONFIGURATION  | PRICE   |
|--------------------|---------------------|-----------|--|---------|
| 4432-T-B1 A 915    | Si4432 TRX Testcard | 915 MHz   | Two antennas mounted at 90°; used to evaluate the embedded antenna diversity algorithm | \$75.00 |
| 4432-T-B1 B 915    | Si4432 TRX Testcard | 915 MHz   | Separate TX and RX designed for lab testing<br>(not reccomended for range testing)     | \$70.00 |
| 4432-T-B1 C 915    | Si4432 TRX Testcard | 915 MHz   | Single tied antenna implemented with RF switch   | \$65.00 |
| 4432-T-B1 C 868    | Si4432 TRX Testcard | 868 MHz   | Single tied antenna implemented with RF switch   | \$65.00 |
| 4432-T-B1 B 470    | Si4432 TRX Testcard | 470 MHz   | Separate TX and RX designed for lab testing<br>(not reccomended for range testing)     | \$70.00 |
| 4432-T-B1 C 470    | Si4432 TRX Testcard | 470 MHz   | Single tied antenna implemented with RF switch   | \$65.00 |
| 4432-T-B1 D 470    | Si4432 TRX Testcard | 470 MHz   | Single tied antenna implemented with RF switch   | \$50.00 |
| 4431-T-B1 B 868    | Si4431 TRX Testcard | 868 MHz   | Separate TX and RX designed for lab testing (not reccomended for range testing)        | \$65.00 |
| 4431-T-B1 D 868    | Si4431 TRX Testcard | 868 MHz   | Single tied antenna implemented without RF switch                                      | \$60.00 |
| 4431-T-B1 B 434    | Si4431 TRX Testcard | 434 MHz   | Separate TX and RX designed for lab testing<br>(not reccomended for range testing)     | \$65.00 |
| 4431-T-B1 D 434    | Si4431 TRX Testcard | 434 MHz   | Single tied antenna implemented without RF switch                                      | \$60.00 |
| 4430-T-B1 B 950    | Si4430 TRX Testcard | 950 MHz   | Separate TX and RX designed for lab testing<br>(not reccomended for range testing)     | \$50.00 |
| 4430-T-B1 D 950    | Si4430 TRX Testcard | 950 MHz   | Single Antenna implemented without RF switch   | \$50.00 |
| 4330-T-B1 B 434    | Si4430 RX Testcard  | 434 MHz   | Single tied antenna  | \$50.00 |
| 4330-T-B1 B 470    | Si4430 RX Testcard  | 470 MHz   | Single tied antenna  | \$50.00 |
| 4330-T-B1 B 868    | Si4430 RX Testcard  | 868 MHz   | Single tied antenna  | \$50.00 |
| 4330-T-B1 B 915    | Si4430 RX Testcard  | 915 MHz   | Single tied antenna  | \$50.00 |
| 4330-T-B1 B 950    | Si4430 RX Testcard  | 950 MHz   | Single tied antenna  | \$50.00 |
| 4032-T-B1 B 915    | Si4430 TX Testcard  | 915 MHz   | Single tied antenna  | \$50.00 |
| 4032-T-B1 B 470    | Si4430 TX Testcard  | 470 MHz   | Single tied antenna  | \$50.00 |
| 4031-T-B1 B 868    | Si4430 TX Testcard  | 868 MHz   | Single tied antenna  | \$50.00 |
| 4031-T-B1 B 434    | Si4430 TX Testcard  | 434 MHz   | Single tied antenna  | \$50.00 |
| 4461-TSC14D868-EK  | Si4461 TRX Testcard | 868 MHz   | Si4461 +14 dBm radio test card   | \$50.00 |
| 4460-TCE10D868-EK  | Si4460 TRX Testcard | 868 MHz   | Si4460 +10 dBm radio test card   | \$50.00 |
| 4463-TCE20C868-EK  | Si4463 TRX Testcard | 868 MHz   | Si4463 +20 dBm radio test card   | \$50.00 |
| 4463-TCE27F868-EK  | Si4463 TRX Testcard | 868 MHz   | Si4463 +27 dBm radio test card   | \$50.00 |
| 4463-TSQ20D169-EK  | Si4463 TRX Testcard | 169 MHz   | Si4463 +20 dBm radio test card   | \$50.00 |
| 4463-TSQ27F169-EK  | Si4463 TRX Testcard | 169 MHz   | Si4463 +27 dBm radio test card   | \$50.00 |
| 4460-TCE10D434-EK  | Si4460 TRX Testcard | 434 MHz   | Si4460 +10 dBm radio test card   | \$50.00 |
| 4463-TCE20B460-EK  | Si4463 TRX Testcard | 460 MHz   | Si4463 +20 dBm SPLIT radio test card   | \$50.00 |
| 4463-TCE20C460-EK  | Si4463 TRX Testcard | 460 MHz   | Si4463 +20 dBm RFSWITCH radio test card  | \$50.00 |
| 4463-TCE20C915-EK  | Si4463 TRX Testcard | 915 MHz   | Si4463 +20 dBm radio test card   | \$50.00 |
| 4463-TCE30E915R-EK | Si4463 TRX Testcard | 915 MHz   | Si4463 RFMD +30 dBm radio test card  | \$50.00 |
| 4460-TCE30E915S-EK | Si4463 TRX Testcard | 915 MHz   | Si4463 Skyworks +30 dBm radio test card  | \$50.00 |

#### Unified Development Platform

Silicon Labs offers an innovative approach in hardware support with the Unified Development Platform (UDP), featuring a unified mother board, modular boards, integrated LCD and ample real estate for prototyping, expansion and integration. The UDP provides a standalone demonstration and software development platform for the EZRadioPRO Wireless devices, Wireless MCU devices and MCU products. Kits include UDP base boards and RF test cards. Additional test cards may be ordered if the included 915 MHz or 868 MHz test cards don't satisfy the requirements for the end application. www.silabs.com/UDP

The UDP platform supports all of the following:

- MCU code and firmware development (IDE, configuration wizard, example codes, etc.)
- RF design and optimization (Wireless Development Suite support, automatic board detection and firmware download, sample RF code, run-time PHY interface, etc.)
- Networks and protocol stacks (such as the wireless M-Bus stack)



#### **ZigBee Development Tools**

The EM35x development environment dramatically shortens design cycles by joining sophisticated network development and debugging tools. It begins with the silicon-based packet trace port, a collection of minimally-intrusive hardware debugging features on the EM35x system-on-chip (SoC) and network co-processor (NCP). Debug adapters bridge the packet trace port to the developer's PCs via an Ethernet connection, where the Desktop Network Analyzer enables rapid development and debugging. The Ember AppBuilder is an easy-to-use graphical tool providing the fastest path to certifiable products using ZigBee standard public application profiles.



Bundles of these tools and development boards are available for each of the Ember ZigBee chipsets. www.silabs.com/zigbee-devkits

#### EM35x Series Development Kit

(EM35X-DEV or EM35X-DEV-IAR)

Customers starting new ZigBee SoC projects should choose the EM35x Development Kit as their starting point. There are two variants:

- EM35X-DEV with a 30-day trial license of IAR Embedded Workbench for ARM
- EM35X-DEV-IAR includes a full standalone Cortex-M3 licence for IAR Embedded Workbench for ARM

An IAR EWARM license (P/N: EM35X-DEV-UPG-IAR) for use with the EM35x development kit may be purchased separately

#### EM35x Family as a Network Co-Processor (NCP)

(EM35X-NCP-ADD-ON-S)

Silicon Labs' Ember EM35x NCP add-on kit allows designers to take maximum advantage of the superior power consumption, radio performance and CPU performance of the Ember EM35x series chips in a network co-processor configuration.

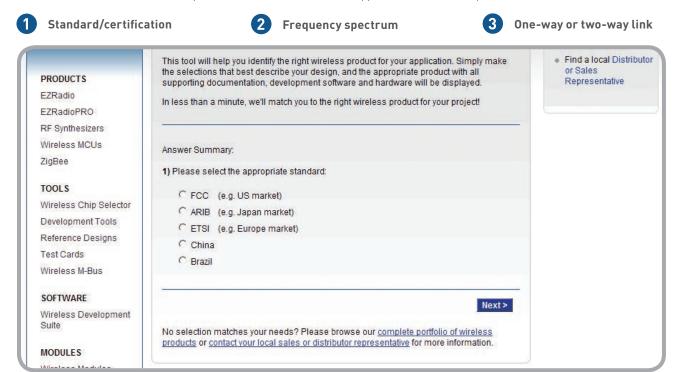
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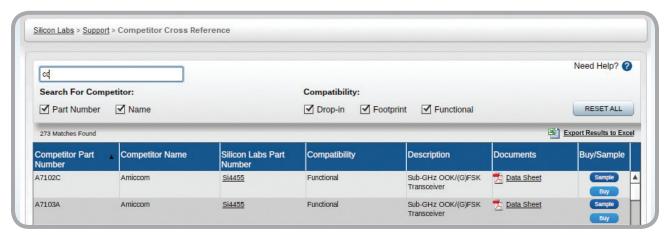


The Silicon Labs' wireless product selector online utility helps identify the right wireless product for the application. Simply make the selections that best describe the design, and the appropriate product with all supporting documentation, development software and hardware will be displayed. Enter the design specifications below and in less than a minute we'll match you to the right wireless product for the project. You will receive product match(es), data sheet(s), application notes, development hardware and software.



#### Cross-Reference Utility: www.silabs.com/cross-reference

Silicon Labs' cross reference utility allows you to type in a competitor's part number (full or partial) and if we have a cross-match, our part number pops up. Results are automatically filtered as you type and can be exported to excel so you can e-mail or save results.



## Silicon Labs' products are designed and manufactured to ISO 9001, ISO 14001 and ISO/TS 16949 standards.



#### ISO 9001

Quality Management System
Design and Manufacture of Integrated Circuits
Certificate Registration No: 951 08 4762



#### ISO 14001

Environmental Management System Design and Manufacture of Integrated Circuits Certificate Registration No: 951 09 4998



#### ISO/TS 16949

Quality Management System for Manufacture of Integrated Circuits and Related Products for Automotive Applications Certificate Registration No.: 12 111 33114 TMS IATF Certificate No.: 0080212



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