



**Lucas Chavez** <golucasplus@gmail.com>

Fri, Jul 10, 2015 at 12:42 PM

To: Sparkfun Technical Support <techsupport@sparkfun.com>

On Fri, Jul 10, 2015 at 12:41 PM, Tech Support <techsupport@sparkfun.com> wrote:

Type your response ABOVE THIS LINE to reply

## Lucas Chavez

**Subject:** arduino and wireless serial communication

JUL 10, 2015 | 12:37PM MDT

**Bobby C** replied:

Ok, sounds good. Have a nice day and happy hacking! =)

Best Regards,

Ho Yun "Bobby" Chan

## Technical Support

SparkFun Electronics, Inc.

6333 Dry Creek Parkway

Niwot, CO 80503

E-mail: [techsupport@sparkfun.com](mailto:techsupport@sparkfun.com)

Phone: 1-303-284-0979

JUL 10, 2015 | 12:33PM MDT

**Lucas** replied:

Great. I will be ordering those things today. Thanks for all those links.

They look like they will be quite helpful.

Lucas

JUL 10, 2015 | 12:28PM MDT

**Bobby C** replied:

Yes, you would need a second XBee to receive/transmit data with a computer. Otherwise, the XBee that is on the Arduino will be wirelessly broadcasting data with nothing on the other end to pick the data up.

The easiest way is to get a the XBee Explorer Dongle [ <https://www.sparkfun.com/products/11697> ] or XBee

Explorer USB [ <https://www.sparkfun.com/products/11812> ] with mini-B cable [ <https://www.sparkfun.com/products/11301> ] . Make sure that you get an XBee series 1 like the one that you were planning on ordering.

### Tutorials and Additional Resources

We have some XBee tutorials on our education site => <https://learn.sparkfun.com/tutorials/tags/xbee> . Digi also some examples on their site => <http://examples.digi.com/> . One in particular is the basic chat [ <http://examples.digi.com/get-started/basic-xbee-802-15-4-chat/> ] . We have a few archived tutorials on XBees to that might be of use to you too => [https://www.sparkfun.com/search/archived\\_tutorials?term=xbee](https://www.sparkfun.com/search/archived_tutorials?term=xbee) . Additional tutorials/projects that people have used with XBees can be found on Instructables [ <http://www.instructables.com/tag/type-id/?sort=none&q=xbee> ] .

Other resources would be to check out these links. There are example codes that are listed on some of these sites and there might be someone that has already done something similar to what you are doing:

Arduino Reference Language [ <http://arduino.cc/en/Reference/HomePage> ]

Arduino Playground [ <http://playground.arduino.cc/> ]

Arduino Forums [ <http://forum.arduino.cc/> ]

SparkFun Tutorials [ <https://learn.sparkfun.com/tutorials> ]

SparkFun Forums [ <https://forum.sparkfun.com/> ]

Instructables: Arduino [ <http://www.instructables.com/howto/arduino/> ]

Hackster.io: [ <http://www.hackster.io/> ]

Make: Projects [ <http://makezine.com/projects/> ]

Dangerous Prototypes [ <http://dangerousprototypes.com/> ]

Best Regards,

Ho Yun "Bobby" Chan

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JUL 09, 2015 | 03:26PM MDT

**Lucas** replied:

Bobby,

We received all the parts and everything is coming together. I have a question. Do I need a 2nd XBee in order to do wireless serial communication with a computer?

Lucas

Ok. Thank you. You have been quite helpful. SparkFun is a good place.

**Bobby C** replied:

Yeah, those parts should work. For multiple shield you need to make sure that they pins defined for each part are not interfering with each other. As explained in the previous email you would just need to reroute the pins and redefine the I/O being used. Keep in mind that if you use the software serial pins on the Arduion Mega, only certain pins can be used [ <https://www.arduino.cc/en/Reference/SoftwareSerial> ]. It is recommended to use the software serial pins so that you do not brick your XBees when uploading code through the hardware UARTs on your Arduino.

I recommend adding a some electrical tape on the USB connector on the Arduino Mega so that it is not touching the Arduino Mega Shield and shorting the power. As far as the pinouts, it won't fit all of the Arduino Mega R3 footprint. You should be able to still stack it on the Arduino Mega. You would just need to add some additional jumper wires to connect to those pins. To connect to the female header pins on the side, you would just need to add some wire wrap to the header pins and solder them to the protoboard,.

Best Regards,  
Ho Yun "Bobby" Chan  
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6333 Dry Creek Parkway  
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Phone: 1-303-284-0979

Bobby,

Thank you for your reply. It was very helpful. Based on your reply I went with these parts.

<https://www.sparkfun.com/products/11061>  
<https://www.sparkfun.com/products/9346>  
<https://www.sparkfun.com/products/11215>  
<https://www.sparkfun.com/products/11417>  
<https://www.sparkfun.com/products/12847>

That should all work together. Right?

I have one more question. I was reading the comments on the SparkFun MegaShield Kit. Is there anything you can point me to in order to deal with the problems they encountered?

Lucas

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JUN 26, 2015 | 05:22PM MDT

**Bobby C** replied:

Hi,

There are many reasons why the Arduino XBee shield. It might have been too expensive to hold on our storefront, the manufacturer stopped producing that board, or not too many people bought the board. Regardless, the XBee Shield [ <https://www.sparkfun.com/products/12847> ] would still be able to connect to an XBee with the Arduino. You would just need to solder some female header pins [ <https://www.sparkfun.com/products/11417> ] to the shield and program your device to communicate with the appropriate pins. The shield was designed specifically for the Arduino Uno. You would need to redefine the pins if you are using software serial and reroute the pins to the appropriate pins for the Arduino Mega. Not all pins are compatible for the Arduino Mega [ <https://www.arduino.cc/en/Reference/SoftwareSerial> ] . Just look at my comment here for more information => <https://learn.sparkfun.com/tutorials/arduino-shields/discuss#comment-54cc220cce395ff2068b4568> . We have no plans on retiring this XBee Shield from our storefront.

The Arduino WiFi shield is another transceiver. You would need an wifi internet router to connect to this shield. I have heard issues with this shield and I do not recommend using this shield. This shield was also designed for the Arduino Uno so there might be compatibility issues when using it with an Arduino Mega.

Best Regards,  
Ho Yun "Bobby" Chan  
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JUN 26, 2015 | 12:44PM MDT

Original message

**Lucas** wrote:

Hello. My name is Lucas Chavez and I am working at a company named Fiore. I need help deciding which components to buy for an arduino project.

We are going to purchase an Arduino Mega 2560 R3

<<https://www.sparkfun.com/products/11061>>. We will be using this board with the Robotic Operation System (ROS). ROS makes use of the Arduino's Serial Library <<https://www.arduino.cc/en/Reference/Serial>> in order to communicate between the board and the computer.

For this project we require wireless communication between the board and the computer. I am looking for the simplest solution to do this.

I believe it is possible using an Arduino Wireless Proto Shield and an XBee. I noticed that your Arduino XBee Shield <<https://www.sparkfun.com/products/retired/8471>> is retired. However, I do see that your SparkFun XBee Shield <<https://www.sparkfun.com/products/12847>> is available.

My main concern is. Why is the Arduino's XBee Shield retired? Is there a better way to be doing what I want to do with the Arduino? I have been reading about the Arduino Wi-Fi Shield <<https://www.sparkfun.com/products/11287>>. Can I do wireless serial communication with that shield? Is that a better solution that will be supported for longer?

Feel free to call.

Thanks.

Lucas

[505-903-3780](tel:505-903-3780)

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This message was sent to [golucasplus@gmail.com](mailto:golucasplus@gmail.com) in reference to Case #: 47434.

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