XC4392 LoRa™ Shield

LoRa™:

LoRa™ is a powerful new technology enabling secure wireless data communications over long distances even several kilometres without the need of a mobile GSM network. LoRa™ can be used in many outdoor or indoor applications, such as building automation, weather monitoring, irrigation systems control, smart metering, smart cities, and much more. For more information about LoRa™ visit https://www.lora-alliance.org/.

The XC4388 LoRa™ Shield is based on the Semtech SX1276 IC. More information can be found on the datasheet at http://www.semtech.com/images/datasheet/sx1276_77_78_79.pdf, but is not necessary for basic usage. This version operates at 915MHz.

Software:

The library at https://github.com/sandeepmistry/arduino-LoRa (or simply search for 'lora' in the Library Manager) provides most basic functionality. Also see the examples for applications. Detailed information about this library can be found in the API description at https://github.com/sandeepmistry/arduino-LoRa/blob/master/API.md

The LoRa™ Remote Relay project at https://www.jaycar.com.au/lora-remote also has some example code.

Hardware:

The antenna is provided loose and should be attached before operation.

It's also recommended to disconnect the three jumpers labelled J_DIO5, J_DIO2 and J_DIO1, as they connect pins on the shield to the Arduino board underneath, and are usually not necessary.
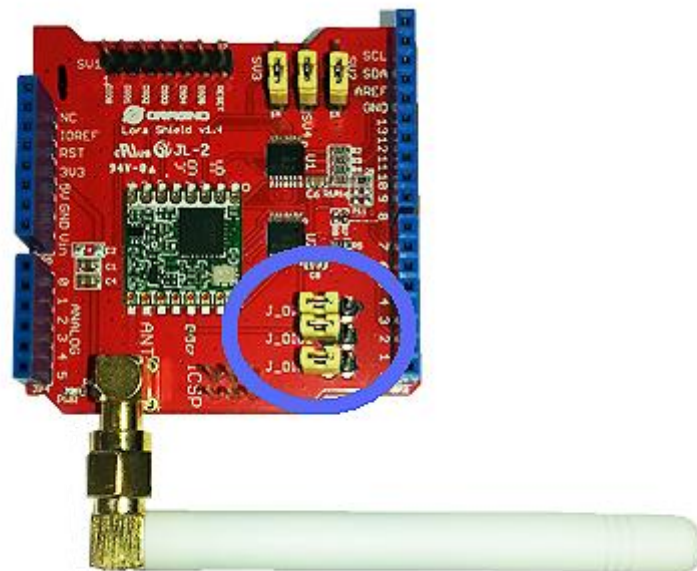
The LoRa™ Shield uses SPI for communication, and these pins are routed to the ICSP header. As such, any R3 board (including duinotech Uno, Leonardo or Mega) should work using hardware SPI directly.