SocketModem® Shield

Quick Start

www.multitech.com

SocketModem® Shield
82100801L, Rev A

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Knowledge Base
Visit http://www.multitech.com/kb.go

Support Portal
https://support.multitech.com

Overview

The SocketModem Shield brings Multi-Tech's industry leading portfolio of fully approved embedded cellular products to your favorite rapid prototyping platform. Multi-Tech's SocketModems are not just great for development, but when used as part of product design, are often the quickest and most cost-effective way of bringing a cellular solution to market. When you want to design and deploy a cellular solution, contact Multi-Tech Sales to learn about our full line of products and services.

Programming Information

Command Set

Program SocketModems with AT Commands over USB or Serial. AT Commands allow for easy integration with all major development environments, such as Arduino, netmf, Linux, and Windows. AT Command Reference Guides are available at:
www.multitech.com/support.go

mbed Library

We support an ARM mbed compatible library for easier development in this environment. For more information and programming examples, visit our developer page at:
http://mbed.org/components/Multi-Tech-SocketModem-Arduino-Shield-

Or go to http://mbed.org and select **Components > Communications > Multi-Tech SocketModem Arduino Shield**.

Required Accessories

SocketModem

The SocketModem Shield works with the following MultiTech SocketModems. Refer to www.multitech.com or your distributor for additional information about your SocketModem options.

SocketModem	Technology	Region/Carrier
MTSMC-H5-xxx	3G-GSM	Global
MTSMC-G3-xxx	2G-GSM	
MTSMC-EV3-N3-xxx	3G-CDMA	US/Verizon
MTSMC-C2-N3-xxx	2G-CDMA	
MTSMC-EV3-N16-xxx	3G-CDMA	US/Aeris
MTSMC-C2-N16-xxx	2G-CDMA	

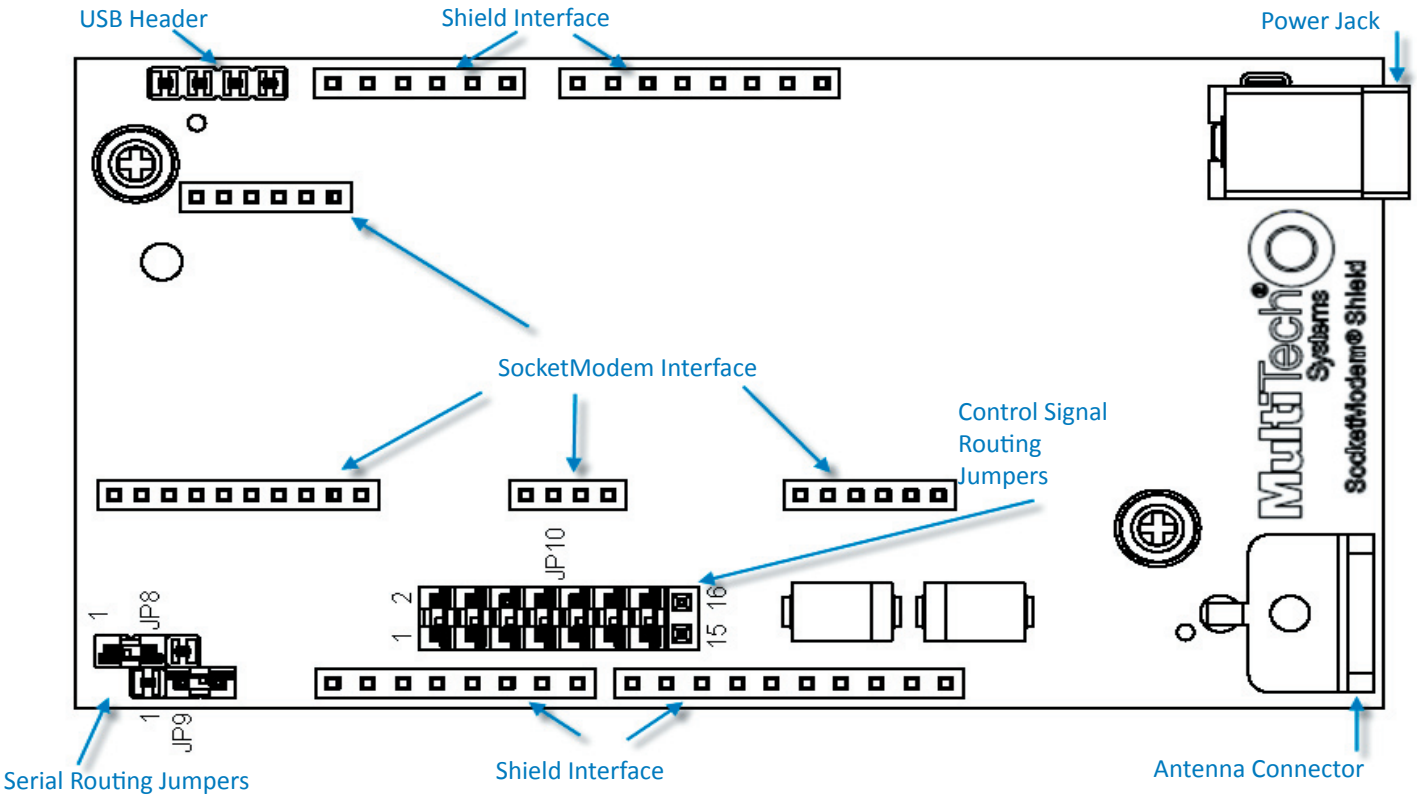
Cellular Service

To operate your SocketModem, you need a cellular plan that provides data and, depending on your application needs, SMS support.

Shield Compatible Development Board

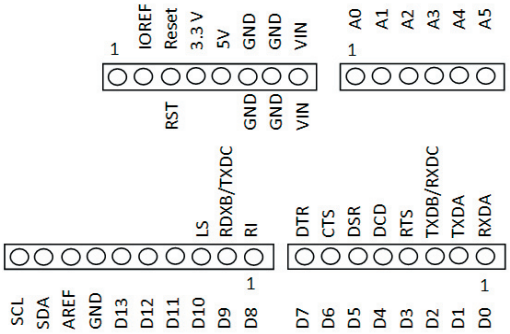
You need a Shield compatible development board. These boards have development environments such as C, C++, Linux OS, C#, and Windows.

Product Features



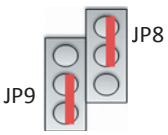
Signal Routing

The diagram below shows SocketModem signal routing to the Shield interface based on different jumper settings for JP8, JP9, and JP10. For more information on these jumpers, refer to *Serial Routing Jumper Configuration* and *Jumper Routing Information*. Additionally, use jumper wires to reroute SocketModem signals to other pins.

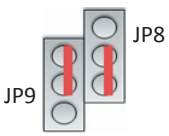


Serial Routing Jumper Configuration

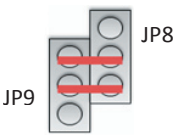
Use these jumper settings to connect modem RX and TX signals to common Shield interface positions. Refer to *Signal Routing* for the routing diagram for different configurations.



Configuration A (Standard Arduino)
- RX - D0
- TX - D1



Configuration B (FRDMKL46)
- RX - D9
- TX - D2



Configuration C (FRDMKL25)
- RX - D2
- TX - D9

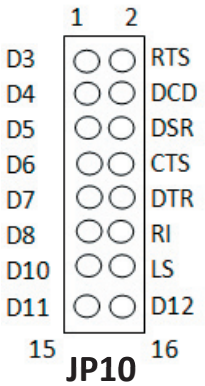
USB Header Information

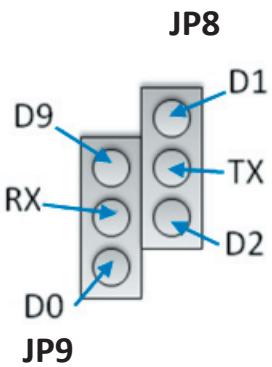
Pin 1 - VUSB
Pin 2 - USB DM
Pin 3 - USB DP
Pin 4 - Ground

Note: VUSB is voltage detection only, the device can't be powered through this pin.

Jumper Routing Information

Use these jumpers to optionally connect or disconnect modem signals to the Shield interface. Refer to *Signal Routing* for a routing diagram. If the default routing options do not work with your application, use wire jumpers to reroute these signals.





- Odd pins from 1-13 are Arduino side of jumper.
- Even pins 2-14 are SocketModem side of jumper.
- Pins 15 and 16 are Arduino pins.