Hotspot Quick Reference Rev 1.0 (10/2015)

CDMA Modem IP address: 166.248.105.34
CDMA Modem hostname: hotspot3g.mbari.org

Connect to Hotspot Iridium from shore:

To connect to the console, you need an Iridium phone or modem attached to a PC's USB or serial port, running a serial communication program like minicom or hyperterm. Set the phone baud to 19200. Check the phone received signal strength by issuing the at+cgsn command. When signal strength is higher than 1 or 2, issue the following commands from the serial communication program:

at+cbst=6,0,1
atdt 00881693783737

If a connection is established, you will see:
CONNECT
19200

Connect to acoustic modem:

Once logged in as user hotspot, activate **appropriate power port based on cruise plan** and use minicom or picocom to communicate. For example, comms to a modem on power port 3 and uart 4 would look like this:

sudo SetPowerSwitch 3 1;sudo picocom -b9600 /dev/ttyLX4

once done turn off power, halt and power down payload

sudo SetPowerSwitch 3 0;sudo halt;exit
Payload X off via WGMS

Useful Modem Commands

Remote Bit Rate AT$An,m

02: 140 bits/sec MFSK repeated four times with rate 1/2 convolutional coding and 25-ms multipath guard period
03: 300 bits/sec MFSK repeated twice with rate 1/2 convolutional coding and 25-ms multipath guard period
04: 600 bits/sec MFSK with rate 1/2 convolutional coding and 25-ms multipath guard period
05: 800 bits/sec MFSK with rate 1/2 convolutional coding and 12.5-ms multipath guard period
06: 1066 bits/sec MFSK with rate 1/2 convolutional coding and 3.125-ms multipath guard period
07: 1200 bits/sec MFSK with rate 1/2 convolutional coding
08: 2400 bits/sec MFSK
09: 2560 bits/sec PSK, with rate 1/2 convolutional coding
10: 5120 bits/sec PSK, with rate 1/2 convolutional coding

Remote Power AT$Pn,m

01: -21 dB (minimum power level)
02: -18 dB
03: -15 dB
04: -12 dB
05: -09 dB
06: -06 dB
07: -03 dB
08: 00 dB (maximum power level)

Useful Local (topside) Sregisters

S3	Serial Baud Rate
S4	Acoustic Bit Rate
S6	Transmit Power Level
S7	Acoustic Response Timeout
S8	Forwarding Delay
S13	Verbose Level
S14	Remote Address
S18	Modem Address