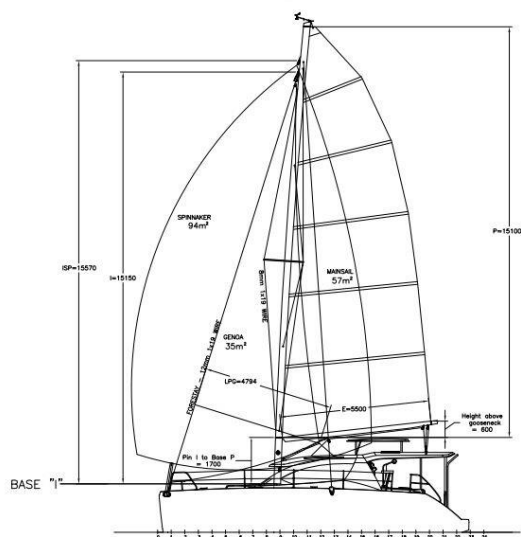


## Catamaran Electronics



## Programming Guide

### Boat IO

### (Rev A)



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# 1 Programming

Programming the Boat IO in Python is very simple. Refer to the small program below to see examples of reading the Analog and Digital IO.

```
import smbus
import time
from os import system
bus=smbus.SMBus(1)
***** Analog Input
MAX11600_ADDRESS = 0x64    #shifted left
MAX11600_CHANNEL0 = 0x00
MAX11600_CHANNEL1 = 0x02
MAX11600_CHANNEL2 = 0x04
MAX11600_CHANNEL3 = 0x06
MAX11600_SINGLE = 0x01
MAX11600_SCAN_SINGLE =0x60
MAX11600_SETUP = 0x80
MAX11600_REF = 0x50
MAX11600_RST = 0x02

def MAX11600_init():
    out = MAX11600_SETUP+MAX11600_REF+MAX11600_RST
    print "MAX11600 Setup:",hex(out)
    bus.write_byte(MAX11600_ADDRESS,out)

def MAX11600_read(channel):
    out = MAX11600_SCAN_SINGLE+channel+MAX11600_SINGLE
#    print "MAX11600-Conf:",hex(out)
    bus.write_byte(MAX11600_ADDRESS,out)
```

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```
        return bus.read_byte(MAX11600_ADDRESS)

***** Initialize the devices
MAX11600_init()

while True:
    print ("Analog1:" MAX11600_read(MAX11600_CHANNEL0)
    time.sleep(1)
    print "Analog2",MAX11600_read(MAX11600_CHANNEL1)
    time.sleep(1)
    print "Analog3",MAX11600_read(MAX11600_CHANNEL2)
    time.sleep(1)
    print "Analog4",MAX11600_read(MAX11600_CHANNEL3)
    #_ = system('clear')
    time.sleep(1)
```