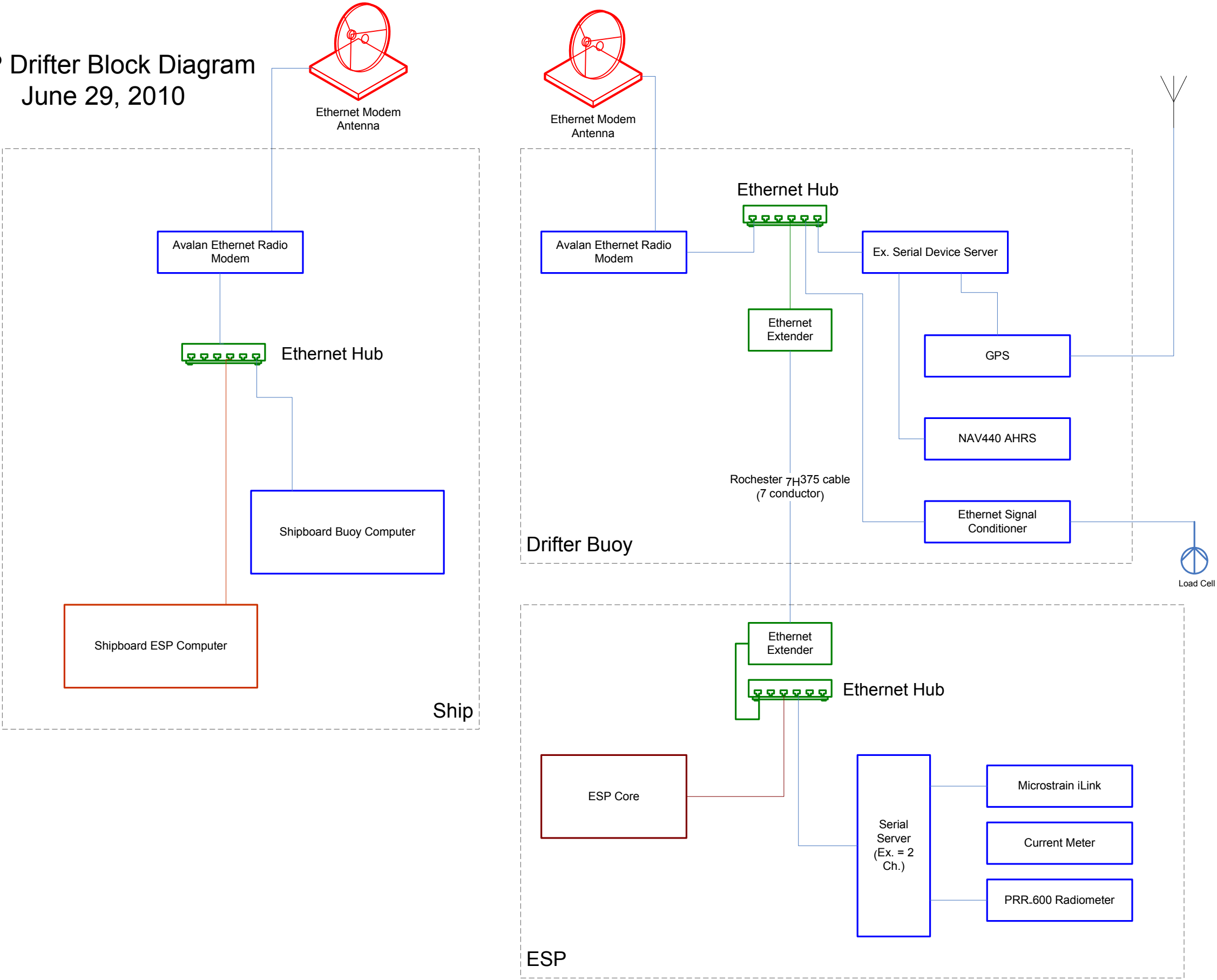
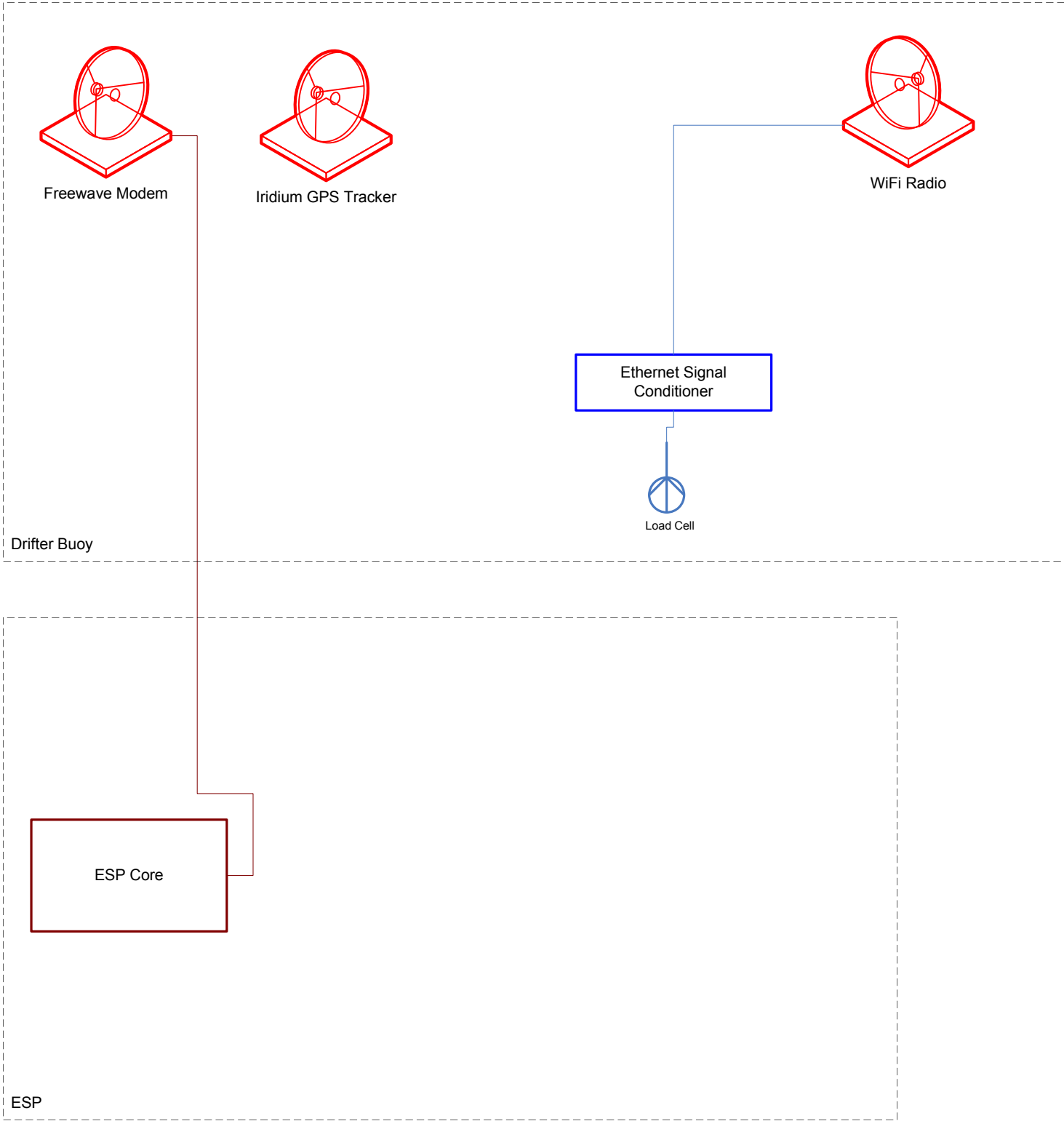
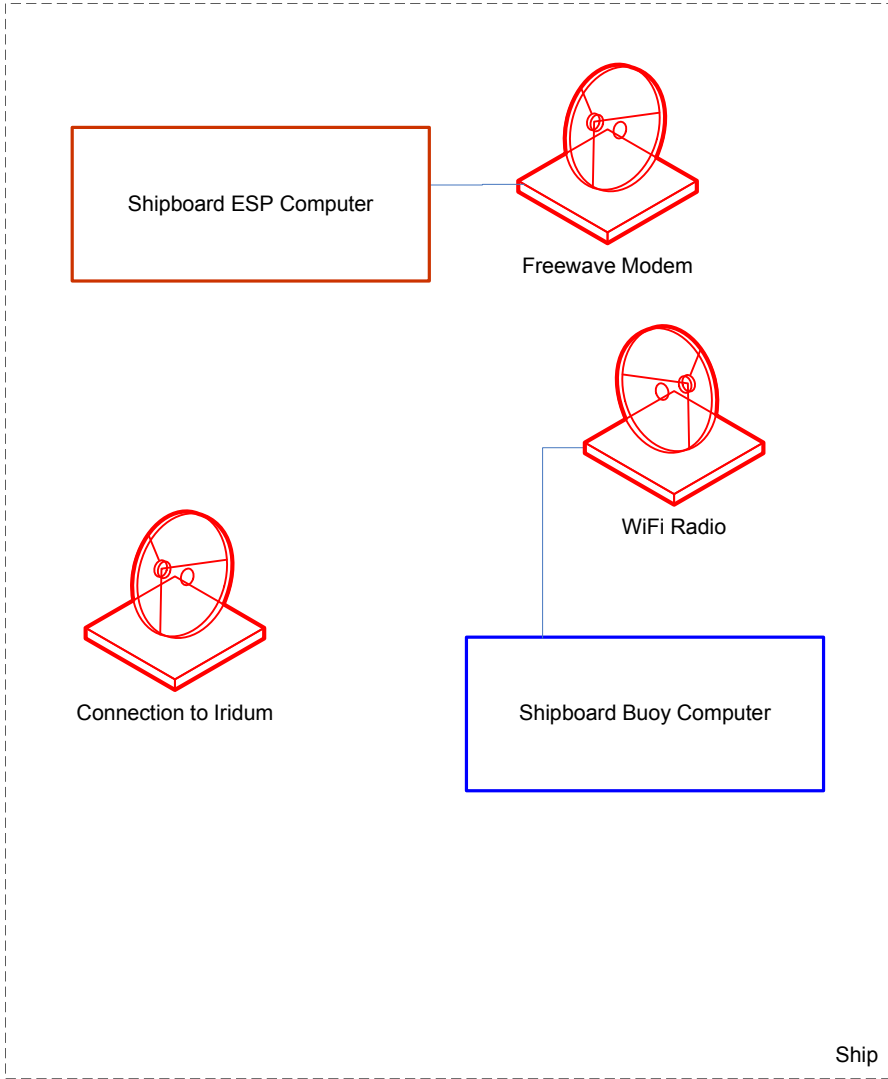


ESP Drifter Block Diagram  
June 29, 2010



ESP Drifter Block Diagram  
Mar 19, 2010



| Instrument    | Sample size<br>(Bytes/S) | Sample Rate<br>(S/sec) | Bit Rate<br>(b/sec 10b/B) |
|---------------|--------------------------|------------------------|---------------------------|
| Accelerometer | 100                      | 10                     | 10000                     |
| Depth         | 2                        | 10                     | 200                       |
|               |                          |                        |                           |
| ESP Image     | 93750                    | 6.94E-05               | 65                        |
| CTD           |                          |                        |                           |
|               |                          |                        |                           |
| TOTAL         |                          |                        | 10265                     |

| Module                      | Voltage (VDC) | Current (A)       |
|-----------------------------|---------------|-------------------|
| Winch Motor Controller      | 75            | 5 (7.5 desirable) |
| Level Wind Motor Controller | 75            | 2                 |
| Proximity Switches          | 10-30         | 0.20              |
| Winch Controller            | 5-7.5         | 2.00              |
| Depth Sensor                | 6-30          | 0.03              |
| Accelerometer               | 5.2-9.0       | 0.09              |
| Load cells                  | 11.0-28       | 0.04              |
| Winch motor brake           | 24.00         |                   |
| Device Server               | 3.30          | 0.25              |
| Ethernet Extender           |               |                   |
| Ethernet Hub                |               |                   |