Features of the Mayfly Data Logger

A. MicroUSB port – connect a standard MicroUSB cable to a computer for programming the Mayfly using the Arduino software

B. Power switch – turns the Mayfly board on and off

C. microSD/SPI connector – socket for vertical microSD memory card adapter board or other SPI devices

D. Pushbutton – connected to pin D21 for user-defined input

E. microSD card socket – socket for storing data on a standard microSD memory card

F. Analog pin header – access to the Mayfly’s power, ground, & analog pins, and also the four Auxiliary 16-bit Analog-to-Digital converter pins

G. Auxiliary ADC Grove connectors – pairs of Auxiliary Analog pins along with ground and power (3.3v or 5v)

H. Digital pin Grove connectors – pairs of digital pins along with ground and power (3.3v or 5v), for connecting sensors and Grove accessories

I. I²C port Grove connector – connection for any devices that use the I²C protocol

J. 5-volt boost converter – generates 5v for powering external sensors

K. Digital pin header – access to the Mayfly’s power, ground, & digital pins

L. Clock battery – socket for CR1220 lithium battery to keep clock chip (R) running when no other power is connected to Mayfly

M. LiPo battery connectors – JST socket for connecting LithiumPolymer (LiPo) rechargeable battery. Additional socket is for providing power to high-current peripheral devices

N. Solar panel connector – JST socket for connecting 6v solar panel for charging the LiPo battery

O. FTDI programing header – alternative port for programming board using an external FTDI adapter instead of using the Mayfly microUSB port

P. Bee module socket – connection port for various telemetry modules that use the Bee footprint (mesh radio, WiFi, cellular)

Q. Red & Green LEDs – LEDs for providing visual feedback, connected to pins D8 (green) and D9 (red)

R. Real-Time clock – DS3231 clock module with on-board temperature sensor, retains the date and time after initial programming, requires battery (L)

S. Processor – ATmega1284p microprocessor