

ELETTRONICA Open-source: Arduino

FERMI



ARDUINO

```
graph TD; ARDUINO((ARDUINO)) --> OPEN_SOURCE[OPEN - SOURCE]; ARDUINO --> SCHEDINA[SCHEDINA ELETTRONICA]; ARDUINO --> SHIELD[SHIELD]; ARDUINO --> MICROCONTROLLORI[MICROCONTROLLORI ATMEL]; ARDUINO --> PSEUDO_C_PLUS_PLUS[PSEUDO C++]; ARDUINO --> BOOTLOADER[BOOTLOADER]; ARDUINO --> UNO[UNO, MEGA, NANO, PRO, ecc...]; ARDUINO --> SOFTWARE_IDE[SOFTWARE IDE];
```

SCHEDINA
ELETTRONICA

SHIELD

MICROCONTROLLORI
ATMEL

PSEUDO C++

BOOTLOADER

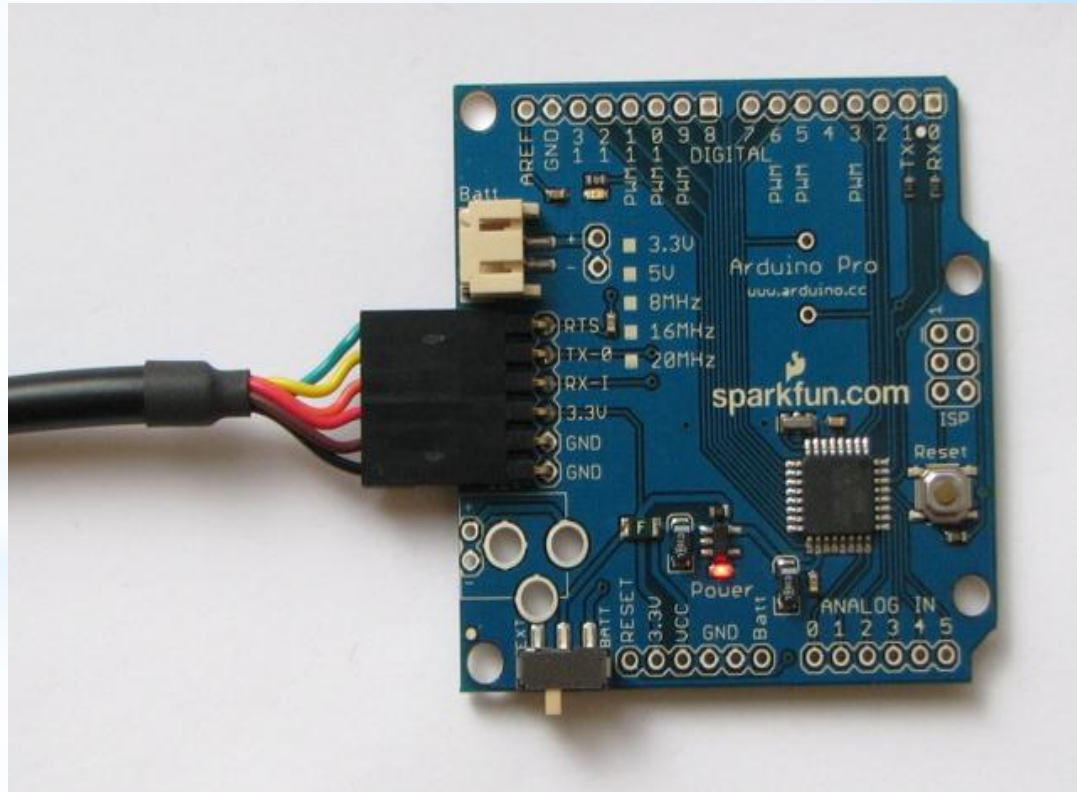
UNO, MEGA, NANO,
PRO, ecc...

SOFTWARE IDE

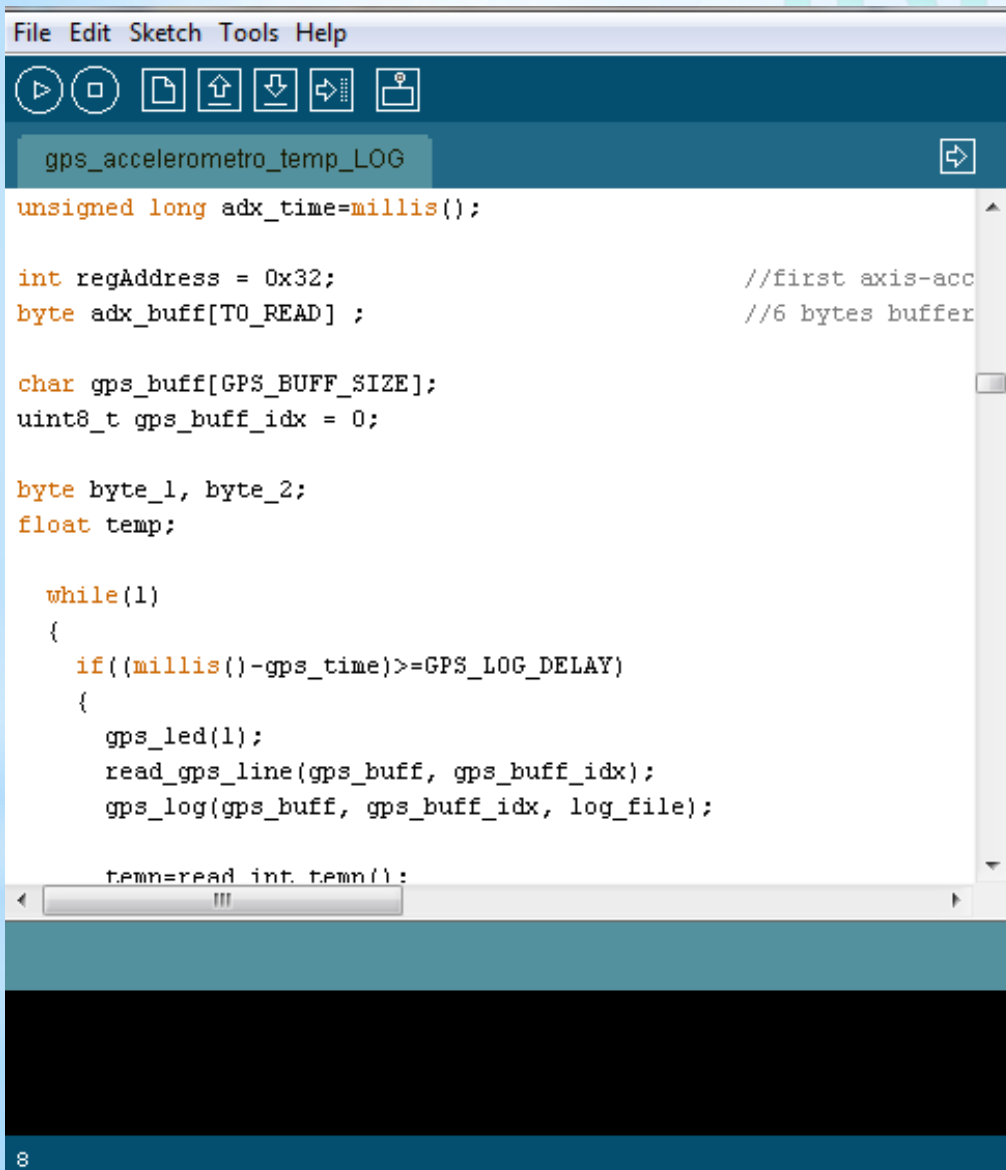
OPEN - SOURCE

BOOTLOADER

“PROGRAMMATORE
DI SE
STESSO”



IDE



The image shows a screenshot of an IDE window with a menu bar (File, Edit, Sketch, Tools, Help) and a toolbar with icons for play, stop, save, upload, download, and serial monitor. The main editor area displays the following C++ code:

```
gps_accelerometro_temp_LOG

unsigned long adx_time=millis();

int regAddress = 0x32;           //first axis-acc
byte adx_buff[TO_READ] ;       //6 bytes buffer

char gps_buff[GPS_BUFF_SIZE];
uint8_t gps_buff_idx = 0;

byte byte_1, byte_2;
float temp;

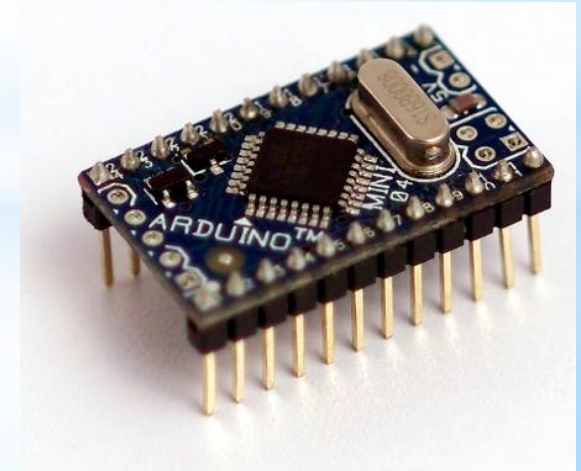
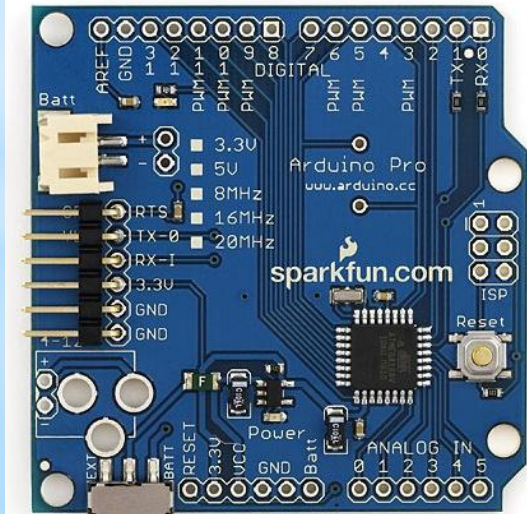
while(1)
{
  if((millis()-gps_time)>=GPS_LOG_DELAY)
  {
    gps_led(1);
    read_gps_line(gps_buff, gps_buff_idx);
    gps_log(gps_buff, gps_buff_idx, log_file);

    temp=read_int.temp();
  }
}
```

The code is color-coded: keywords in orange, comments in grey, and identifiers in black. A scrollbar is visible on the right side of the code editor.

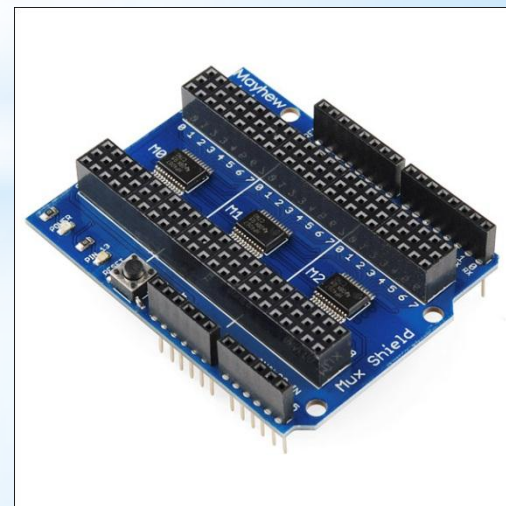
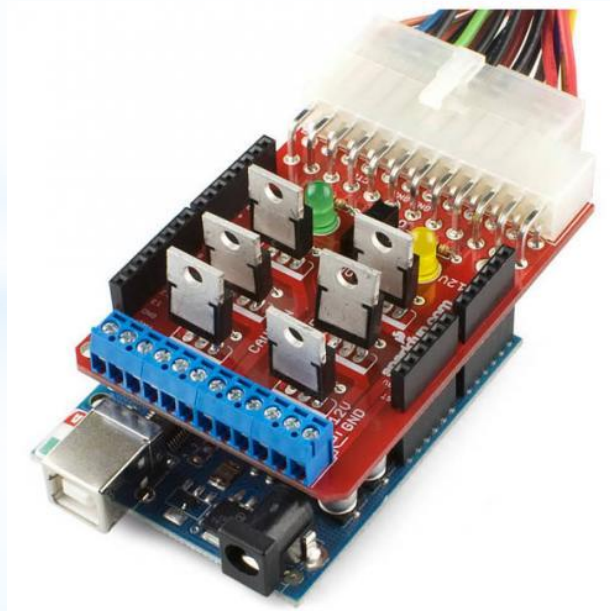
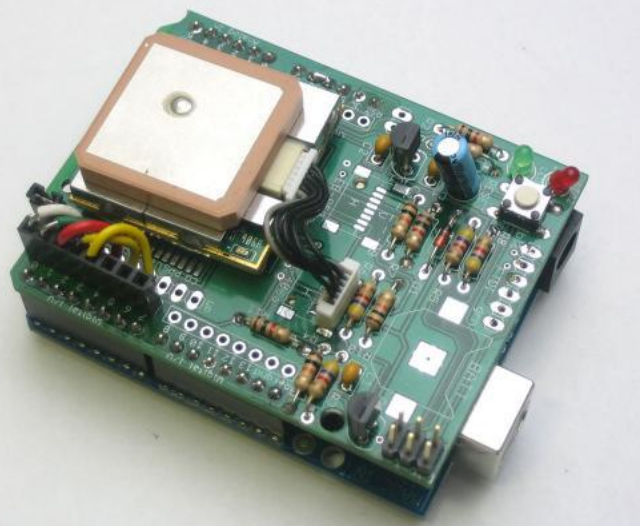
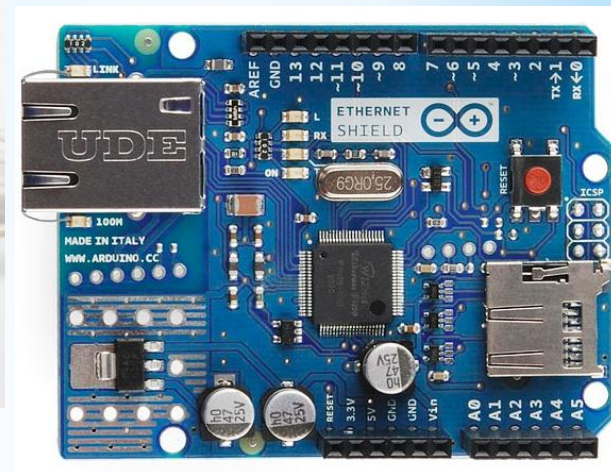
- ❖ SEMPLICE.
- ❖ INTUITIVO.
- ❖ LINGUAGGIO DI PROGRAMMAZIONE: PSEUDO C++.
- ❖ FUNZIONI OBBLIGATORIE: setup() e loop().

VARIETÀ SCHEDE



SHIELD

ESPANDIBILITA'



ESEMPIO DI CODICE

```
int pinLed=13;
```

```
void setup()
```

```
{
```

```
  pinMode(pinLed, OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  digitalWrite(pinLed, HIGH);
```

```
  delay(1000);
```

```
  digitalWrite(pinLed, LOW);
```

```
  delay(1000);
```

```
}
```