Curso avanzado sobre Arduino: Matrices LEDs

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Arduino avanzado: Presente
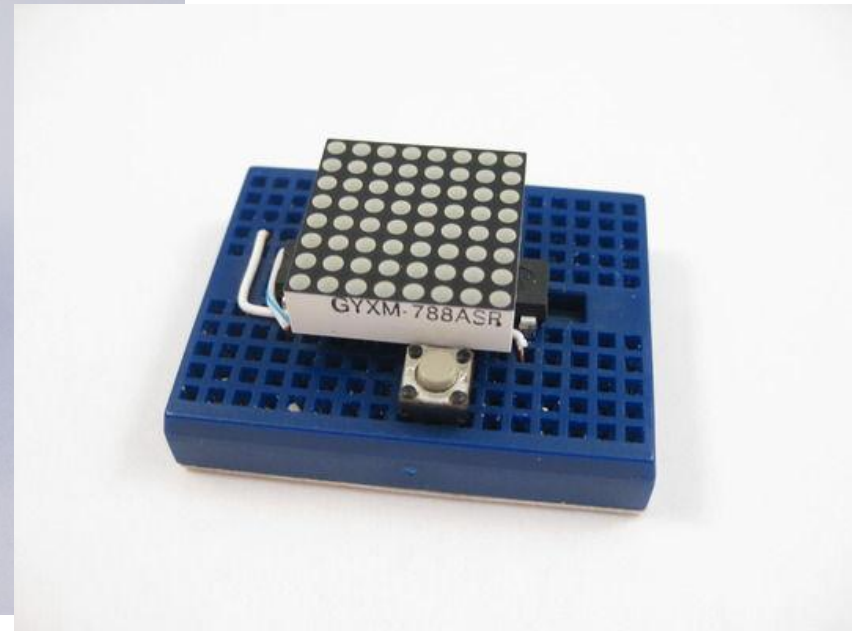
Arduino avanzado: Presente

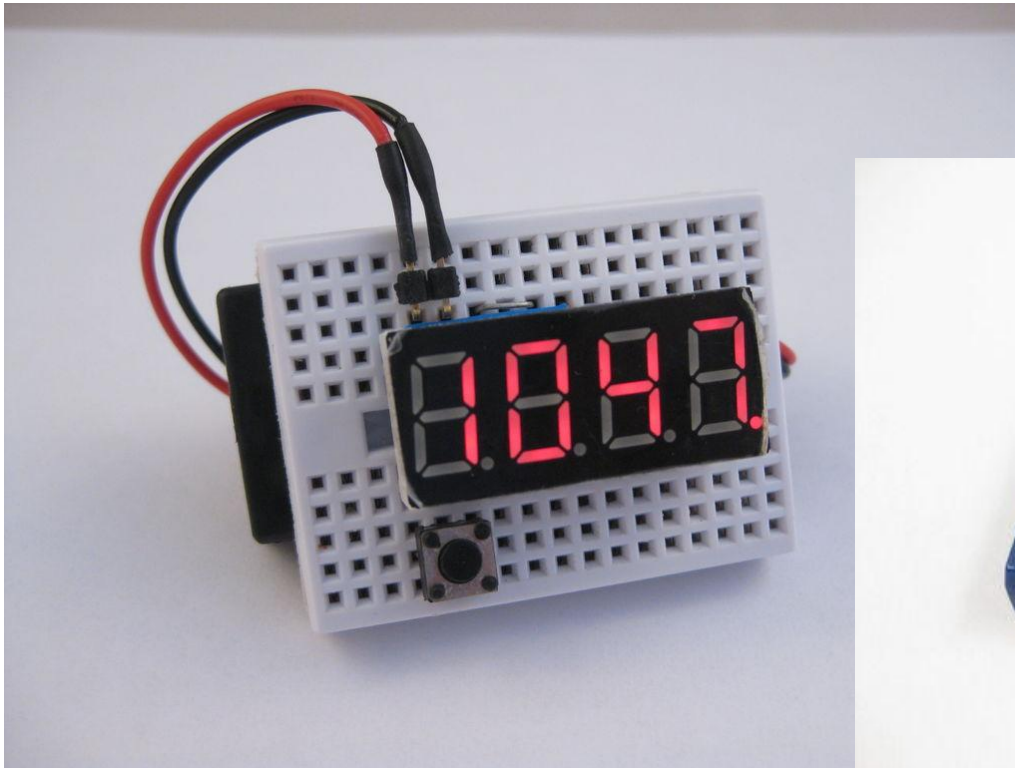José Antonio Vacas Martínez
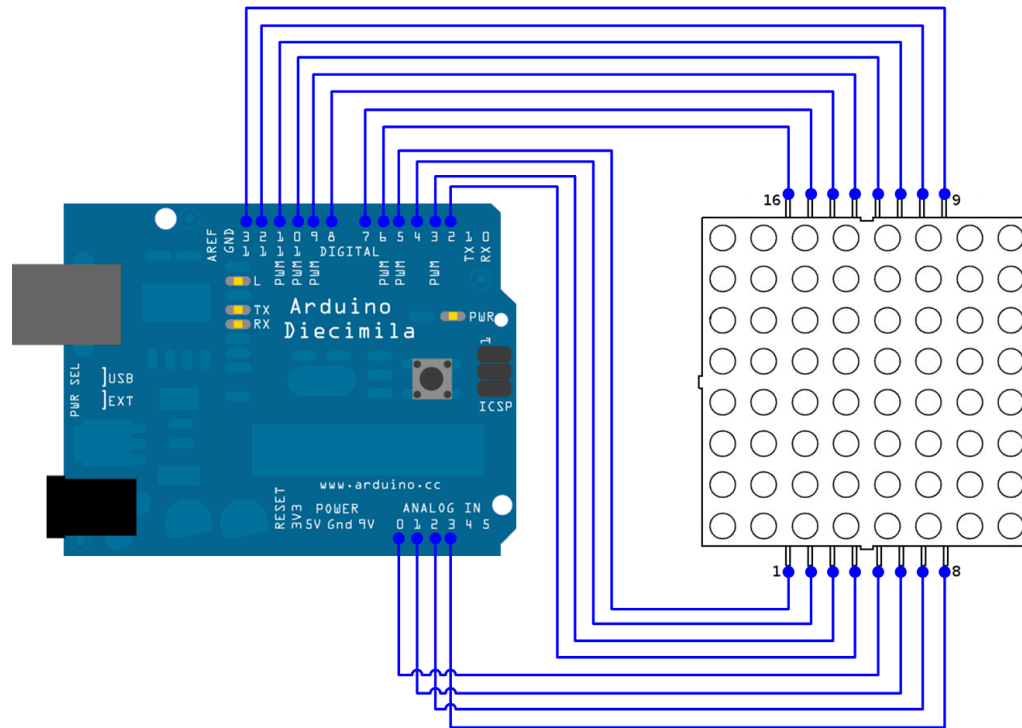
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Led matrix: control directo

http://www.instructables.com/id/ATTiny2313-Multi-mode-LED-Matrix-Clock/?ALLSTEPS

Led matrix: control directo

http://playground.arduino.cc/Main/DirectDriveLEDMatrix
http://blog.duklabs.com/?p=133

Led matrix: control directo

http://arduino.cc/forum/index.php/topic,116477.0.html
attiny 2313
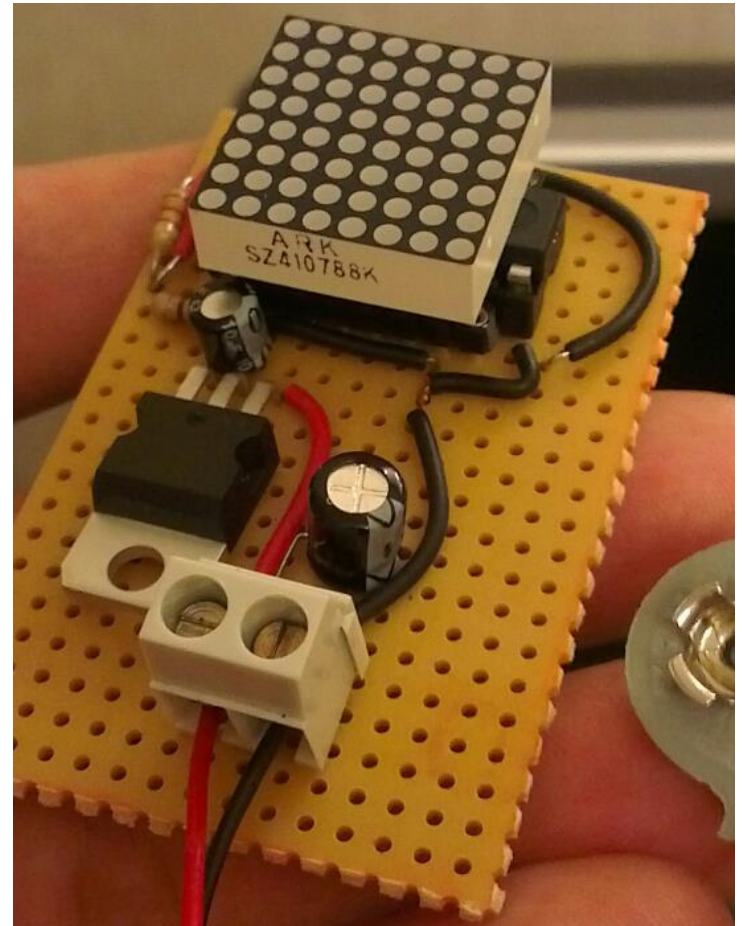
Led Matrix drivers: MAX6960

Permite manejar 2 8x8 matrix

Librería: http://expat.dyndns.org/arduino/library-for-max6960/

Proyecto: http://expat.dyndns.org/arduino/max6960-led-display/

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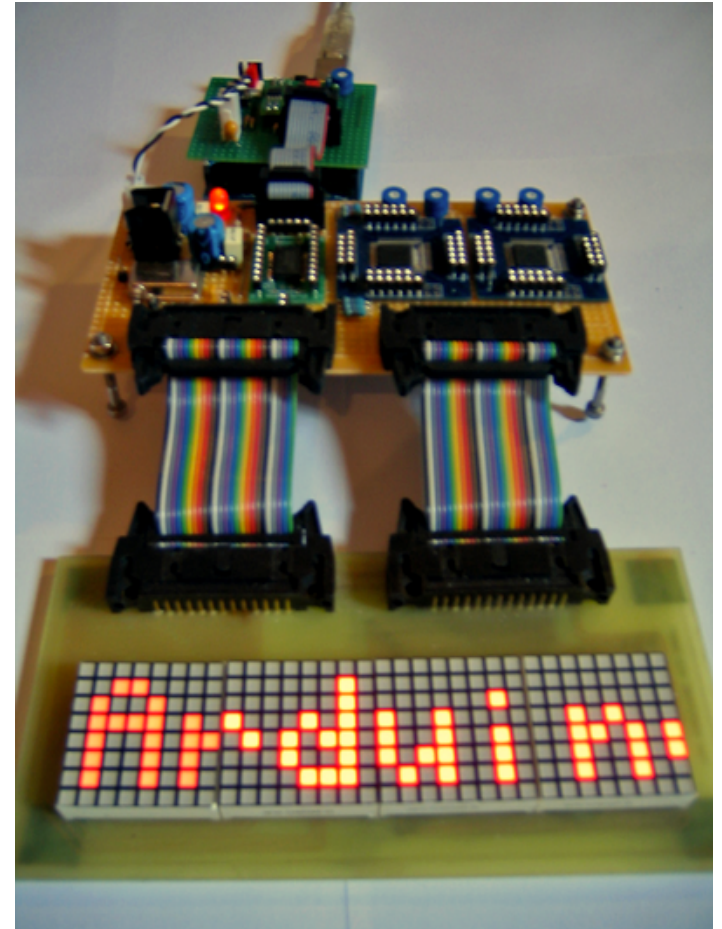
Led Matrix drivers: MAX7219

Permite manejar 1 8x8 matrix
http://playground.arduino.cc//Main/LedControl
http://playground.arduino.cc//Main/LedControlDemos
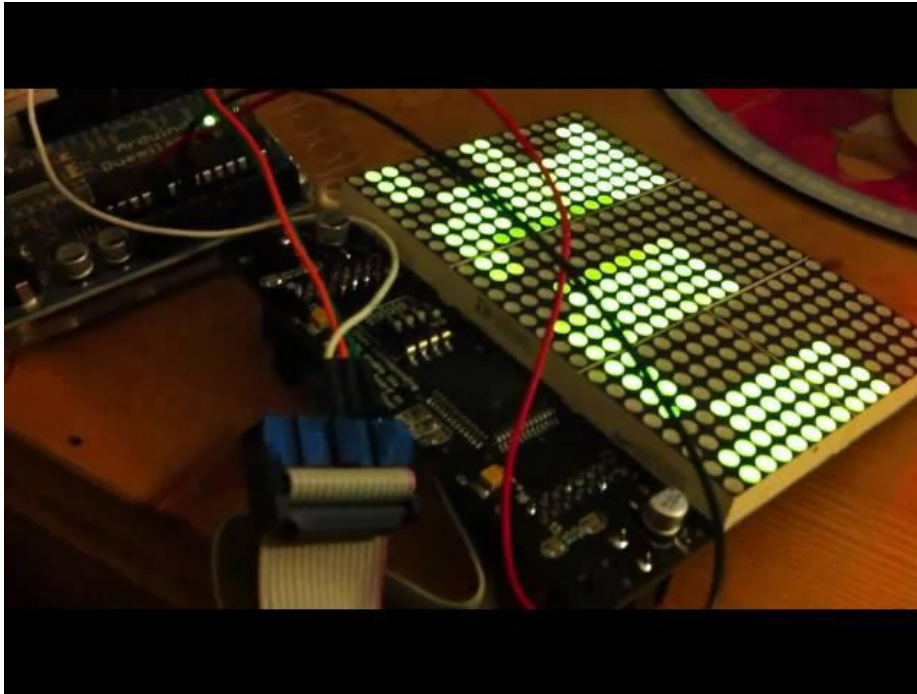http://www.wayoda.org/arduino/ledcontrol/index.html#SingleMatrix
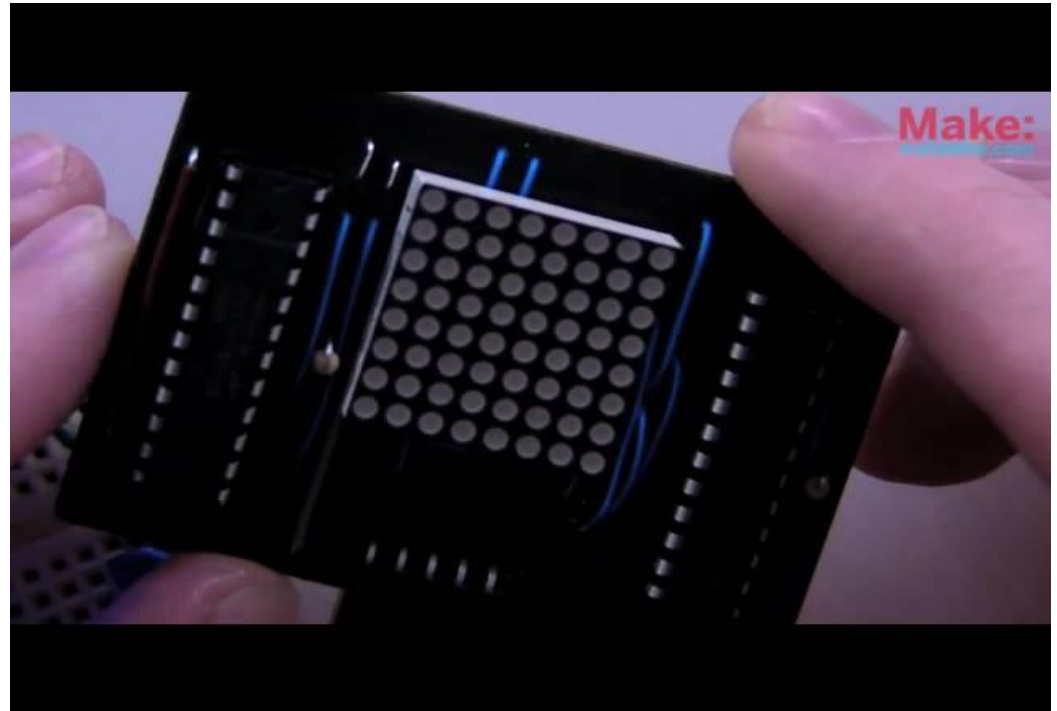
Led Matrix: 2416

Teoría: http://milesburton.com/HT1632_Arduino_%22Matrix_Display%
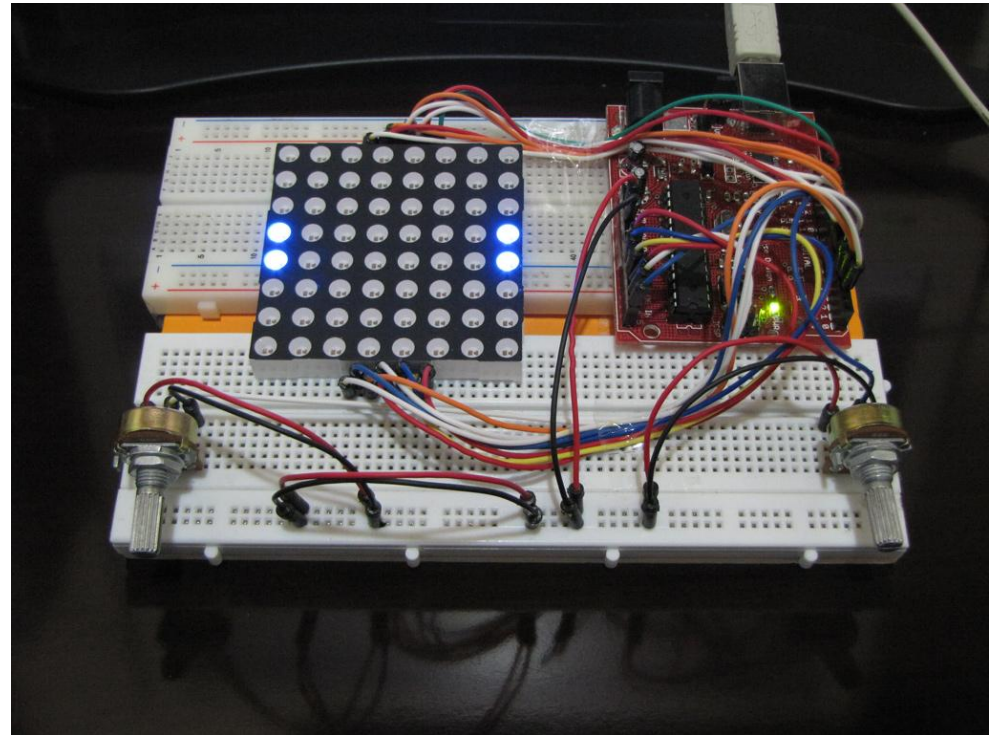22_Library_for_the_Sure_2416_and_0832
Código: https://github.com/milesburton/HT1632

Led matrix: creando fuentes

http://www.instructables.com/id/LED-Scolling-Dot-Matrix-Font-Graphics-Generator-/?ALLSTEPS

Aplicaciones: Pong

http://www.instructables.com/id/Arduino-Pong/
código https://github.com/FredrikL/Pong

http://www.instructables.com/id/Pong-with-8x8-Led-Matrix-on-Arduino/
http://vimeo.com/5469191#at=0
http://blog.bsoares.com.br/arduino/ping-pong-with-8x8-led-matrix-on-arduino

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32x16

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Enlaces

Varios proyectos reales con matrices leds
http://www.timewitharduino.blogspot.com.es/

4x7 segmentos

```
byte pins[16] =
{2,3,4,5,6,7,8,9,10,11,12,13};
byte rows[4] = {6,8,9,12};
byte cols[8] = {11,7,4,2,1,10,5,3};

byte screen[8] = {0, 0, 0, 0, 0, 0, 0, 0};
volatile byte screenRow = 0;
volatile byte screenCol = 0;

byte numbers[11][7] = {
  {1,1,1,1,1,1,0}, //zero
  {0,0,0,0,1,1,0}, //one
  {1,1,0,1,1,0,1}, //two
  {1,0,0,1,1,1,1}, //three
  {0,0,1,0,1,1,1}, //four
  {1,0,1,1,0,1,1}, //five
  {1,1,1,1,0,1,1}, //six
  {0,0,0,1,1,1,0}, //seven
  {1,1,1,1,1,1,1}, //eight
  {1,0,1,1,1,1,1}, //nine
  {0,0,0,0,0,0,0}  //off
};
```

```
void setup() {
  Timer1.initialize(100);
  for (int i = 0; i < 16; i++)
    pinMode(pins[i], OUTPUT);
  Timer1.attachInterrupt(doubleBuffer);}


void displayNumbers(byte time[4]) {
  for (int digit = 0; digit < 4; digit++) {
    for (int i = 0; i < 7; i++) {
      if (numbers[time[digit]][i] == 1)
        on(i+1,digit+1);
      else off(i+1,digit+1);
  } }}
```

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Conclusiones

Gracias por vuestra atención