

## ARD 2 **Arduino Compatibles**

Controllers, Shields, Modules & Sensors

### **LED Dot Matrix Display Module** ARD2-2085

- Based on MAX7219 controller
- Perfect for an Arduino project requiring a LED display
- 64 LEDs total

#### Description

An 8 X 8 LED dot matrix display module based on the MAX7219 controller. Includes 5 wire fem-fem ribbon cable. These displays can be linked together to form a single larger display without taking up extra pins on an Arduino.

#### Specifications

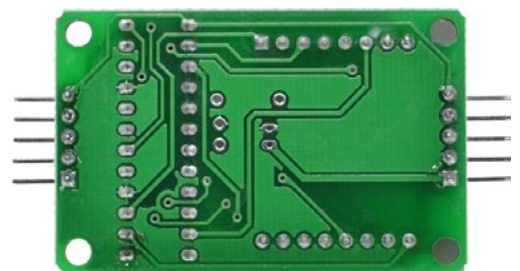
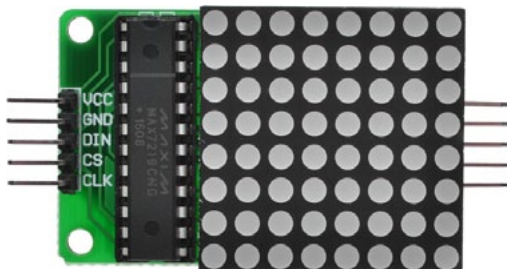
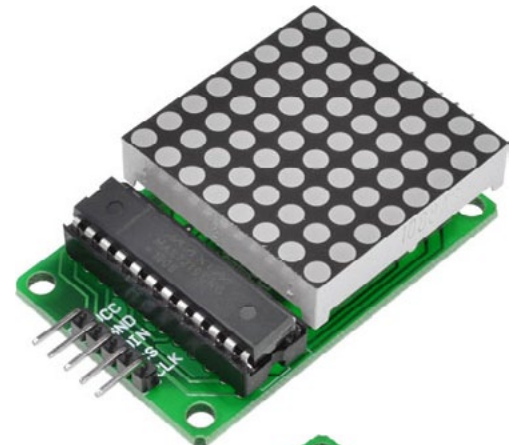
<b>Controller</b>	MAX7219
<b>Operating Voltage</b>	5V
<b>Operating Frequency</b>	13.56MHz
<b>Idle Current</b>	10–13mA/DC 3.3V
<b>Sleep current</b>	<80uA
<b>Peak current</b>	<30mA
<b>LEDs</b>	64 (8 X 8)
<b>Modules cascade</b>	13–26mA / DC 3.3V
<b>Relative Humidity</b>	5%–95%
<b>Mounting Holes</b>	4

#### Dimensions

<b>Length</b>	50mm
<b>Length (inc. pins)</b>	62mm
<b>Width</b>	32mm
<b>Height</b>	14mm
<b>Mounting Hole Diameter</b>	3mm
<b>Ribbon Cable Length</b>	200mm

#### Pinout

Module	Arduino Uno R3	Function
GND	GND	Ground Connection
VCC	5V	5V Power Input
CS	D10	Chip Select
CLK	D11	Clock
DIN	D12	Digital Input



**ARD 2** **Arduino Compatibles**  
**Controllers, Shields, Modules & Sensors****Test Code**

```
#include "LedControl.h"

LedControl lc=LedControl(12,11,10,1); // Pins:
DIN,CLK,CS, # of Display connected

unsigned long delayTime=200; // Delay between Frames

// Put values in arrays
byte invader1a[] =
{
  B00011000, // First frame of invader #1
  B00111100,
  B01111110,
  B11011011,
  B11111111,
  B00100100,
  B01011010,
  B10100101
};

byte invader1b[] =
{
  B00011000, // Second frame of invader #1
  B00111100,
  B01111110,
  B11011011,
  B11111111,
  B00100100,
  B01011010,
  B01000010
};

void setup()
{
  lc.shutdown(0,false); // Wake up display
  lc.setIntensity(0,5); // Set intensity level
  lc.clearDisplay(0); // Clear Display
}

// Take values in Arrays and Display them
void sinvader1a()
{
  for (int i = 0; i < 8; i++)
  {
    lc.setRow(0,i,invader1a[i]);
  }
}
```

**Test Code**

```
void sinvader1b()
{
  for (int i = 0; i < 8; i++)
  {
    lc.setRow(0,i,invader1b[i]);
  }
}

void loop()
{
  // Put #1 frame on Display
  sinvader1a();
  delay(delayTime);

  // Put #2 frame on Display
  sinvader1b();
  delay(delayTime);

}
```

Source: <https://brainy-bits.com/blogs/tutorials/how-to-control-max7219-led-matrix>

Note: Requires LedControl Library (<https://github.com/wayoda/LedControl/releases>)