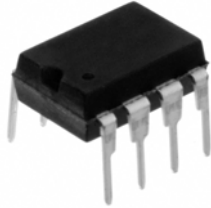


JP Serial Dogm128 Module



PDIP



SOIC

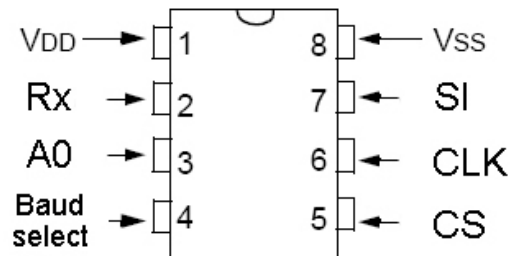
JP serial Dogm128 module is a simple and cost effective interface controller module. It integrates Dogm128-6 display commands into a pic12F1822 and includes a 5x8 font library. It also works with any microcontroller capable of accepting asynchronous serial data.

SPECS:

Power: 3.3V - 5V VDC
Package: PDIP (300 mil) and SOIC (3.9mm)
Speed: 9600 or 19200 Baud.

PIN FUNCTIONS:

Pin1: Vdd
Pin2: Rx
Pin3: A0
Pin4: Baud Select (connected Vss for 9600/ Connected Vdd for 19200)
Pin5: CS
Pin6: CLK
Pin7: SI
Pin8: Vss

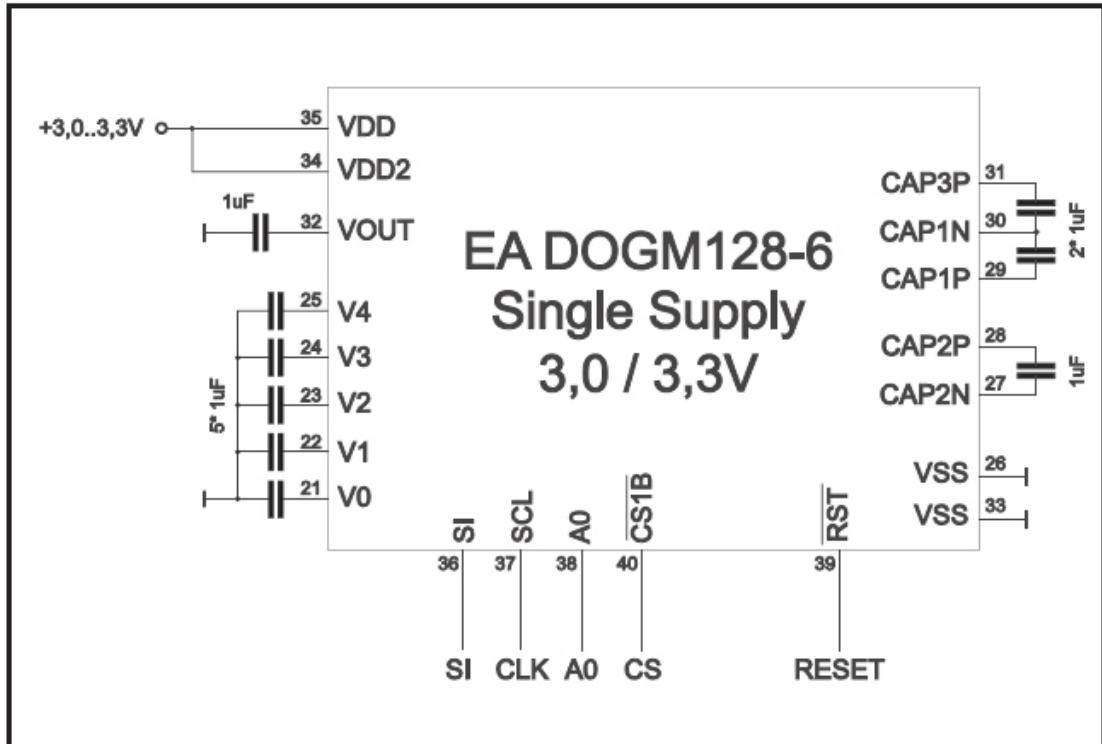


JP SerDogm128 Module

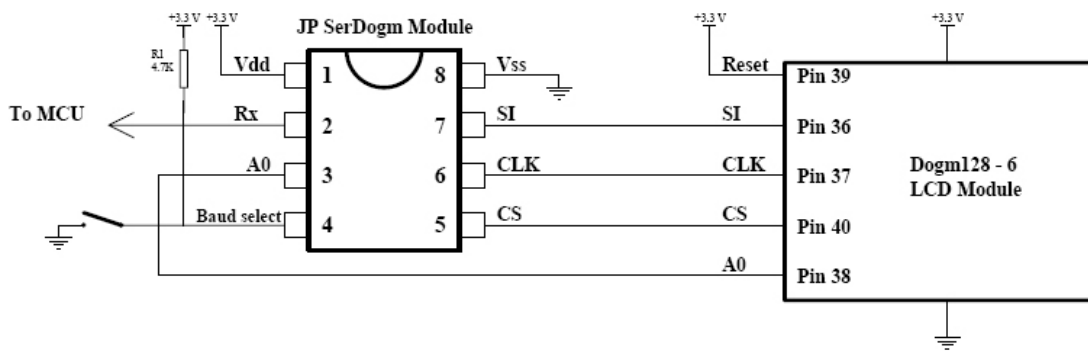
JP SerDogm128 Module Operate Commands:

Command(hex)	Command (Dec)	Description	Parameter
\$61	97 (a)	Prints character at current position	None
\$62	98 (b)	Prints character at current position (N)	None
\$63	99 (c)	Prints text string at current position	None
\$64	100 (d)	Prints text string at current position (N)	None
\$65	101 (e)	Clear the screen	None
\$66	102 (f)	Fill the screen	None
\$67	103 (g)	Fills The Screen the byte pattern	Byte
\$68	104 (h)	Prints text from specified position	Page# + Col# + String + 10
\$69	105 (i)	Prints text from specified position (N)	Page# + Col# + String + 10
\$6A	106 (j)	Prints character at specified position	Page# + Col# + character
\$6B	107 (k)	Prints character at specified position (N)	Page# + Col# + character
\$6C	108 (l)	Load full size image	1024 bytes
\$6D	109 (m)	Load full size image(N)	1024 bytes
\$6E	110 (n)	Load small size image	Page# + col# + H + W + image bytes
\$6F	111 (o)	Load small size image (N)	Page# + col# + H + W + image bytes
\$70	112 (p)	Set LCD 6 o'clock viewing	None
\$71	113 (q)	Set LCD 12 o'clock viewing	None
\$73	115 (s)	Set home position	None
\$2B	43 (+)	Increase contrast	None
\$2D	45 (-)	Decrease contrast	None

(N) = Negative



3.0 – 3.3 V (single supply) operation require external capacitors



JP SerDogm Module

Not for commercial use. Hobbyist and Educational use only.

Note:

JP SerDogm Module integrates Dogm128-6 display commands into a PIC12F1822. It is very user friendly. Please read Dogm128-6 datasheet and Pic12F1822 Datasheet first before purchasing. (www.lcd-module.de, www.microchip.com)

LIABILITY WARNING

This device should be used only for experimental purposes. It has NOT gone through extensive testing and it could erase or corrupt some or all data on media cards that are inside the device. You assume to take your own risk when you purchase this device, and release the responsibility and liability from the manufacturer with no harm.

REGULATORY WARNING

This device is intended solely for experimental purposes, it is not in finished product form and is NOT FCC approved. If you wish to install these modules into non-experimental final finished products, you will be responsible to have the modules approved by the FCC at your own cost.

PICAXE ® Example Programs

```
=====
' File.....JP Serial ogm128 Module Test Code
' Purpose.....This test code for JP SerDogm Module
' MCU.....PICAXE 20X2
' Auther.....Jianping Sun
' Website.....www.JianpingUSA.com
' Email.....JP@JianpingUSA.com
' Started.....Feb 08, 2011
' Updated.....
=====
```

```
main:
  pause 1000

  serout B.1,T9600,(101)
  serout B.1,T9600,("I")
  gosub ImageData
  gosub Delay
  gosub CleanScreen
  gosub ShowFont
  gosub Delay
  gosub CleanScreen
  gosub SingleChar
  gosub Delay
  gosub CleanScreen
  gosub Strings
  gosub Delay
  gosub CleanScreen
  gosub SingleChar_SP
  gosub Delay
  gosub CleanScreen
  gosub TextSingle_SP
  gosub Delay
  gosub CleanScreen
  gosub FillScreen_Test
  gosub Delay
  gosub CleanScreen
  gosub LoadImage
  gosub Delay

  gosub Contrast
  gosub Delay
  gosub Clock_Test
  gosub Delay
  gosub CleanScreen
  for b0 = 0 to 3
  gosub LoadSmallImage
  next b0
```

end

'===== Show 5x7 font Library ====='

```
ShowFont:
serout B.1,T9600("h", 0, 0)
serout B.1,T9600("JP SerDogm Font Test ")
serout B.1,T9600,(10)
serout B.1,T9600("h", 2, 0)
serout B.1,T9600("abcdefghijklmnopqrstu")
serout B.1,T9600,(10)
serout B.1,T9600("h", 3, 0)
serout B.1,T9600("vwxyz")
serout B.1,T9600,(10)
serout B.1,T9600("h", 4, 0)
serout B.1,T9600("ABCDEFGHIJKLMNOPQRSTU")
serout B.1,T9600,(10)
serout B.1,T9600("h", 5, 0)
serout B.1,T9600("VWXYZ")
serout B.1,T9600,(10)
serout B.1,T9600("h", 6, 0)
serout B.1,T9600("1234567890 <>?./'")
serout B.1,T9600,(10)
serout B.1,T9600("h", 7, 0)
serout B.1,T9600("!@#$%^&*()_+=-`{|[]'")
serout B.1,T9600,(10)
return
```

'===== Test single charactor at current position ====='

```
SingleChar:
serout B.1,T9600("h", 3, 0)
serout B.1,T9600(" A single char at ")
serout B.1,T9600,(10)
serout B.1,T9600("h", 4, 0)
serout B.1,T9600("current position test")
serout B.1,T9600,(10)
pause 100
serout B.1,T9600("0")
for B1 = 0 to 20
B2 = B1 + 97
serout B.1,T9600("a")
serout B.1,T9600,(B2)
next B1
pause 2000
serout B.1,T9600("1")
pause 100
for B1 = 0 to 20
B2 = B1 + 97
serout B.1,T9600("b")
serout B.1,T9600,(B2)
next B1
Return
```

'===== Test string at current position ====='

```
Strings:
serout B.1,T9600("h", 3, 0)
serout B.1,T9600(" A text string at ")
serout B.1,T9600,(10)
serout B.1,T9600("h", 4, 0)
serout B.1,T9600("current position test")
serout B.1,T9600,(10)

serout B.1,T9600("0")
serout B.1,T9600("c")
serout B.1,T9600("abcdefghijklmnopqistu")
serout B.1,T9600,(10)
pause 2000

serout B.1,T9600("1")
serout B.1,T9600("d")
```

```
serout B.1,T9600,("agcdefghijklmnopqistu")
serout B.1,T9600,(10)
pause 2000
return
```

'=====Print a char at specified position ====='

```
SingleChar_SP:
serout B.1,T9600,("h", 0, 0)
serout B.1,T9600,(" Print a char at ")
serout B.1,T9600,(10)
serout B.1,T9600,("h", 1, 0)
serout B.1,T9600,(" specified position ")
serout B.1,T9600,(10)
```

```
for B1 = 0 to 15
B2 = B1 + 97
B3 = B1 * 8
serout B.1,T9600,("j", 4, B3)
serout B.1,T9600,(B2)
pause 100
next B1
```

```
for B1 = 0 to 15
B2 = B1 + 97
B3 = B1 * 8
serout B.1,T9600,("k", 6, B3)
serout B.1,T9600,(B2)
pause 100
next B1
Return
```

'=====Print Text String at specified position ====='

```
TextSingle_SP:
serout B.1,T9600,("h", 0, 0)
serout B.1,T9600,("Print text string at")
serout B.1,T9600,(10)
serout B.1,T9600,("h", 1, 0)
serout B.1,T9600,(" specified position ")
serout B.1,T9600,(10)
```

```
serout B.1,T9600,("h", 4, 0)
serout B.1,T9600,("1234567890ABCDEFGHJK")
serout B.1,T9600,(10)
pause 500
serout B.1,T9600,("i", 6, 0)
serout B.1,T9600,("1234567890ABCDEFGHJK")
serout B.1,T9600,(10)
Return
```

'===== Fill screen with \$00, \$FF and any byte ====='

```
FillScreen_Test:
for B1 = 0 to 5
B0 = 100 + B1
serout B.1,T9600,(102)
pause 1000
serout B.1,T9600,(101)
pause 1000
serout B.1,T9600,(103, B0)
pause 1000
next B1
return
```

'===== Load full screen image Test ====='

```
LoadImage:
for B0 = 0 to 3
serout B.1,T9600,("l")
gosub ImageData:
pause 1000
serout B.1,T9600,("e")
pause 100
```


'===== 6 or 12 o'clock test =====

```
Clock_Test:
for B1 = 0 to 3
    serout B.1,T9600,(112)
    pause 1000
    serout B.1,T9600,(113)
    pause 1000
next B1
return
```

'===== Small Image Test =====

```
LoadSmallImage:
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData0:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData0:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData1:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData1:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData2:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData2:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData3:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData3:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData4:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData4:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData5:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData5:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData6:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData6:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData7:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData7:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData8:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData8:
    pause 500
    serout B.1,T9600,("o", 2, 30, 32,18)
    gosub SmallImageData9:
    serout B.1,T9600,("n", 2, 70, 32,18)
    gosub SmallImageData9:
    pause 500
```

return

SmallImageData9:

```
serout B.1,T9600,(0x00,0x00,0x00,0x80,0xE0,0xE0,0x30,0x10,0x10,0x30,0x30,0xE0,0xC0,0x80,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x7E,0xFF,0xFF,0x80,0x00,0x00,0x00,0x00,0x80,0xFF,0xFF,0xFC,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x81,0x83,0x87,0x06,0x04,0x04,0x04,0x02,0x01,0xF0,0xFF,0x7F,0x0F,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x03,0x07,0x0F,0x0C,0x08,0x08,0x0C,0x0C,0x07,0x03,0x01,0x00,0x00,0x00)
```


Return

SmallImageData8:

serout B.1,T9600,(0x00,0x00,0x00,0x80,0xC0,0xE0,0x60,0x30,0x10,0x10,0x10,0x30,0x60,0xE0,0xC0,0x80,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x0F,0x3F,0x7F,0xF8,0xF0,0xE0,0xC0,0xC0,0x60,0x3F,0x1F,0x0F,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0xF8,0xFC,0xFE,0x07,0x01,0x00,0x00,0x01,0x03,0x07,0x0F,0xFF,0xFE,0xF8,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x03,0x07,0x06,0x0C,0x08,0x08,0x08,0x08,0x0C,0x06,0x07,0x03,0x00,0x00,0x00)
Return

SmallImageData7:

serout B.1,T9600,(0x00,0x00,0x80,0xF0,0x70,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0xF0,0x70,0x30,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x03,0x00,0x00,0x00,0x00,0x00,0x00,0xC0,0x70,0x1C,0x07,0x01,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x00,0x00,0xC0,0xFC,0xFF,0x03,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x00,0x00,0x0F,0x0F,0x0F,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00)
Return

SmallImageData6:

serout B.1,T9600,(0x00,0x00,0x00,0x80,0xC0,0xE0,0x20,0x30,0x10,0x10,0x10,0x30,0x20,0xE0,0xC0,0x80,0x00,0x00)
serout B.1,T9600,(0x00,0xF0,0xFE,0xFF,0x03,0xC0,0x40,0x20,0x20,0x20,0x60,0xC0,0xC0,0x81,0x01,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x3F,0xFF,0xFF,0x81,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x03,0x07,0x06,0x0C,0x08,0x08,0x08,0x08,0x0C,0x07,0x03,0x01,0x00,0x00,0x00)
Return

SmallImageData5:

serout B.1,T9600,(0x00,0x00,0xF0,0xF0,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0x30,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0xFF,0xFF,0x40,0x20,0x20,0x10,0x10,0x10,0x10,0x30,0xE0,0xC0,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0xC1,0xE0,0xE0,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0xFF,0xFF,0x7E,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x01,0x03,0x04,0x04,0x08,0x08,0x08,0x08,0x0C,0x0C,0x07,0x03,0x01,0x00,0x00,0x00)
Return

SmallImageData4:

serout B.1,T9600,(0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x80,0xC0,0xF0,0xF0,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x80,0xC0,0x30,0x08,0x06,0x01,0x00,0xFF,0xFF,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x10,0x1C,0x16,0x11,0x10,0x10,0x10,0x10,0x10,0x10,0xFF,0xFF,0x10,0x10,0x10,0x10,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x08,0x08,0x08,0x0F,0x0F,0x08,0x08,0x00,0x00,0x00,0x00)
return

SmallImageData3:

serout B.1,T9600,(0x00,0x00,0x80,0xC0,0xE0,0x60,0x10,0x10,0x10,0x10,0x30,0x60,0xE0,0xC0,0x80,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x07,0x07,0x07,0x00,0x00,0x80,0x80,0x80,0xC0,0x60,0x3F,0x3F,0x0F,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0xC0,0xE0,0xE0,0x00,0x00,0x00,0x00,0x01,0x01,0x07,0xFE,0xFC,0xF8,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x01,0x03,0x07,0x0E,0x0C,0x08,0x08,0x08,0x0C,0x0C,0x07,0x03,0x03,0x00,0x00,0x00)
Return

SmallImageData2:

serout B.1,T9600,(0x00,0x00,0x80,0xC0,0x60,0x20,0x10,0x10,0x10,0x10,0x30,0x60,0xE0,0xC0,0x80,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x0F,0x0F,0x0C,0x00,0x00,0x00,0x00,0x00,0x80,0xE0,0xFF,0x3F,0x0F,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x80,0xC0,0x60,0x30,0x18,0x0C,0x07,0x03,0x01,0x00,0x00,0xC0,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x0E,0x0F,0x0D,0x0C,0x0C,0x0C,0x0C,0x0C,0x0C,0x0C,0x0C,0x0C,0x0F,0x0F,0x00,0x00,0x00)
Return

Return

SmallImageData1:

serout B.1,T9600,(0x00,0x00,0x00,0x00,0x40,0x40,0x40,0x40,0xC0,0xE0,0xF0,0x00,0x00,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0xFF,0xFF,0xFF,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0xFF,0xFF,0xFF,0x00,0x00,0x00,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x08,0x08,0x08,0x0C,0x0F,0x0F,0x0F,0x0C,0x08,0x08,0x00,0x00,0x00,0x00)
Return

SmallImageData0:

serout B.1,T9600,(0x00,0x00,0x00,0x00,0xC0,0xE0,0x60,0x30,0x10,0x10,0x30,0x60,0xE0,0xC0,0x00,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0xF8,0xFF,0xFF,0x03,0x00,0x00,0x00,0x00,0x00,0x03,0xFF,0xFF,0xF8,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x1F,0xFF,0xFF,0xC0,0x00,0x00,0x00,0x00,0x00,0xC0,0xFF,0xFF,0x1F,0x00,0x00,0x00)
serout B.1,T9600,(0x00,0x00,0x00,0x00,0x01,0x07,0x06,0x0C,0x08,0x08,0x0C,0x06,0x07,0x03,0x00,0x00,0x00,0x00)
Return

CleanScreen:

serout B.1,T9600,(101)
serout B.1,T9600,("0")
return

Delay:
 pause 3000
return

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