Pin Nomenclature

Serial Data Input

MOSI, SIMO, SDO, DI, DIN, SI, MTSR, SDA, DN

Serial Data Output

MISO, SOMI, SDI, DO, DOUT, SO, MRST

Serial Data Bidirectional Input/Output

SDIO, SIO

Chip/Slave Select

SS, SSEL, CS, CE, nSS, /SS, SS#, SCE

Reset

RST, REST

Register Select Data/Command

RS, A0, D/C, CS

Serial Clock

SCLK, CLK, SCK

Read/Write

R/W

Enable Device

E, EN

Positive Power Supply

Vcc, Vdd, V+, Vs+

Negative Power Supply

Vee, Vss, V-, Vs-, (sometimes Ground/GND)

Synchronous Serial

1.) Vcc
2.) GND
3.) Serial Data Input
4.) Register Select Data/Command
5.) Reset
6.) Serial Clock
#7. Chip/Slave Select**
(custom configurations possible per device datasheet)

SPI 4 Wire

1.) Vcc
2.) GND
3.) Serial Data Input
4.) Serial Data Output
5.) Serial Clock
6.) Chip/Slave Select

SPI 3 Wire

1.) Vcc
2.) GND
3.) Serial Data Input
4.) Serial Data Output
5.) Serial Clock

I2C

1.) Vcc
2.) GND
3.) Serial Data Input
4.) Serial Clock

Parallel 8 Bit Data

1.) Vcc
2.) GND
3.) Enable Device
4.) Register Select Data/Command
5.) Read/Write**
6.) DB1 – (Data Bit)
7.) DB2 – (Data Bit)
8.) DB3 – (Data Bit)
9.) DB4 – (Data Bit)
10.) DB5 – (Data Bit)
11.) DB6 – (Data Bit)
12.) DB7 – (Data Bit)
13.) DB8 – (Data Bit)

Parallel 4 Bit Data

1.) Vcc
2.) GND
3.) Enable Device
4.) Register Select Data/Command
5.) Read/Write**
6.) DB1 – (Data Bit)
7.) DB2 – (Data Bit)
8.) DB3 – (Data Bit)
9.) DB4 – (Data Bit)

HD44780

HD44780 Character 16x2 4b Parallel
HD44780 Character 16x2 I2C-PCF8574

1.) ST7565 Graphic Monochrome 128x64 SPI
2.) ST7565 Graphic Monochrome 128x64 SPI(alternate)
3.) ST7565 Graphic Monochrome 128x64 STRIP_GRID

ST7565

1.) ST7920 Graphic Monochrome 128x64 4b Parallel
2.) ST7920 Graphic Monochrome 128x64 Serial
3.) ST7920 Graphic Monochrome 128x64 Serial

ST7920

Makefile:
"WITH_LCD ST7565 = 7920"
Serial:
"CFLAGS += -DLCD_INTERFACE_MODE=5"
Screen Orientation Adjustment:
"LCD ST7565 H FLIP" and "LCD ST7565 V FLIP"

SSD1306 Monochrome Micro OLED 128x64 SPI 3-Wire
SSD1306 Monochrome Micro OLED 128x64 I2C

SSD1306

PCF8814 Monochrome Nokia 1100 96x65 SPI 4 Wire
PCF8814 Monochrome Nokia 1100 96x65 3-Line
PCF8814 Monochrome Nokia 1100 96x65 I2C

"Currently (2/17) only the 3-line interface is tested with the PCF8814 controller." -KH

PCF8814

NT7108 Monochrome 128x64 8b Parallel *74HCT595
NT7108 Monochrome 128x64 8b Parallel *74HCT164

NT7108

ST7735 Color TFT 1.8" 160x128 SPI

ST7735

ILI9163 Color TFT 1.44" 128x128 SPI

ILI9163

ILI9341 Color TFT 2.3-3.2" 240x320 SPI

ILI9341/ ILI9342

1.) HD44780

Parallel 4-Bit

2.) HD44780

I2C (PCF8574)

1.) ST7565

SPI 4-Wire

2.) ST7565

SPI 4-Wire (Alt)

3.) ST7565

SPI STRIPGRID

1.) ST7920

Parallel 4-Bit

2.) ST7920

Serial (see datasheet)

3.) ST7920

Serial (see datasheet)

1.) SSD1306

SPI 3-Wire

2.) SSD1306

I2C

1.) PCF8814

SPI 4-Wire

2.) PCF8814?

3 Line???

3.) PCF8814

I2C

Note "open collector" outputs
Makefile:
"LCD SPI OPEN COL"

1.) NT7108

Parallel 8-Bit

2.) NT7108

Parallel 8-Bit (Alt)

ST7735

SPI 4-Wire

9v Battery
7-12V DC Input
D1 1N4001
R10 33k
T3 BC557C
R7 3k3
SW1 Test
T2 BC547
LED1
R13 10k
R15 27k
C3 100nF
C1 1nF
C11 22pF
C12 22pF
8MHz
C4 100nF
IC1 ATmega 8/88/168/328
PC6(reset)
AVCC
AREF
AGND
PB6(XTAL1/TOSC1)
PB7(XTAL2/TOSC2)
PD0(RXD)
PD1(TXD)
PD2(INT0)
PD3(INT1)
PD4(XCK/T0)
PD5(T1)
PD6(AIN0)
PD7(AIN1)
PC0(ADC0)
PC1(ADC1)
PC2(ADC2)
PC3(ADC3)
PC4(ADC4/SDA)
PC5(ADC5/SCL)
LT1004 2.5v
Vref1
R12 3k3
R1 680R 0.1%
R2 470k 0.1%
R3 680R 0.1%
R4 470k 0.1%
R5 680R 0.1%
R6 470k 0.1%
TP1
TP2
TP3
R11 10k
R16 2k2
MCP1702-5002
C9 10uF
C5 100nF
C6 100nF
C10 10uF
HC2
T1 BC547
C2 100nF
R8 33k
R9 100k
ISP
MISO 1 2 Vcc
SCK 3 4 MOSI
Reset 5 6 Ground
Programming Header
LCD Connection
LCD-1602
VR7 10k
VR1 10k
4.7k
PCF8574
16x2
3SR-2708
ST7920a Pin Names
ST7565a Pin Names
ST7565b Pin Names
ST7565c Pin Names
CD4050
LD03.3
PCF8814
LCD8814a
Jumper
74HC164
74HC595
LCD7
Buff7735
220R
TFT-LCD-1.8-ST7735