

Pins and Signals

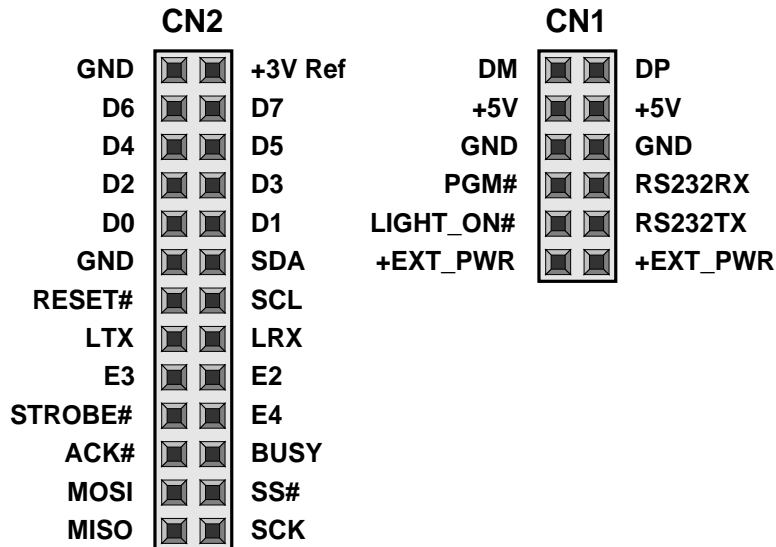


Figure 5. LCD-001 Pin Configuration

The table below describes the pins and signals of the ezLCD-001.

Since the ezLCD-001 uses the ATmega128 microcontroller by Atmel, the table also shows the corresponding ATmega128 names for applicable pins.

Pin Name	ATmega128 Pin Names	Connector	Type	Description
+3V Ref	N/A	CN2	Output	I/O reference voltage. may be used as a pull-up source (I2C etc.). It SHOULD NOT be used as a power source.
+5V	N/A	CN1	Input Pwr.	USB VBUS Signal. When connected to +EXT_POWER, it may be used to power on ezLCD-001.
+EXT_PWR	N/A	CN1	Input Pwr.	External power voltage. Min = +3.0V Max = +6.6V
ACK#	PE7	CN2	Output	Acknowledge signal of the Parallel Interface. Active low. Min = 0V Max = +3V
BUSY	PE6	CN2	Output	Busy signal of the Parallel Interface. Active high. Min = 0V Max = +3V
D0 - D7	PF0 - PF7	CN2	Input	Data inputs of the Parallel Interface. Min = 0V Max = +3V or Open
DM	N/A	CN1	I/O	USB Data Minus
DP	N/A	CN1	I/O	USB Data Plus
E2 - E4	PE2 - PE4	CN2	Input	Spare
GND	GND	CN1, CN2	Gnd	Ground

This table is continued on the next page

Pin Name	ATmega128 Pin Names	Connector	Type	Description
LIGHT_ON#	N/A	CN1	Input	Light On signal. Active Lo. When connected to GND turns on the LCD front light. The function of this signal is identical to LIGHT_ON and LIGHT_OFF commands. Min = Gnd Max = Open Caution: This signal should only be used with a switch or the circuitry capable of sinking 25mA when connected to Gnd and withstanding +8V when opened.
LRX	PE0	CN2	Input	RS232 TTL Input Min = 0V Max = 3V
LTX	PE1	CN2	Output	RS232 TTL Output Min = 0V Max = 3V
MISO	PB3	CN2	I/O	SPI Master Input Slave Output signal Min = 0V Max = 3V
MOSI	PB2	CN2	I/O	SPI Master Output Slave Input signal Min = 0V Max = 3V
PGM#	PB0	CN1	Input	Program Enable. Forces ezLCD-001 to enter it's programming mode. Used for the firmware updates. This signal is used only during power-up and reset. Active low. Min = 0V Max = +3V or Open Note: After reset and power-up this signal is used as SS#.
RESET#	RESET	CN2	Input	Hardware reset. Active low. Min = 0V Max = +3V or Open
RS232RX	N/A	CN1	Input	RS232 Receive. Min = -12V Max = +12V
RS232TX	N/A	CN1	Output	RS232 Transmit Min = -12V Max = +12V
SCK	PB1	CN2	I/O	SPI Serial Clock. Min = 0V Max = +3V

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Pin Name	ATmega128 Pin Names	Connector	Type	Description
SCL	PD0	CN2	I/O	I2C Serial Clock Min = 0V Max = +3V
SDA	PD1	CN2	I/O	I2C Serial Data Min = 0V Max = +3V
SS#	PB0	CN2	I	SPI Slave Select. This signal is used only when the ezLCD-001 is configured as SPI Slave. Active low. Min = 0V Max = +3V Note: During reset and power-up this signal is used as PGM#.
STROBE#	PE5	CN2	Input	Strobe signal of the Parallel Interface. Active low. Min = 0V Max = +3V or Open