LCD Serial Interface Board: Quick Start Guide

**rev 1.0**

LCD Serial Interface Board concatenates a 16x2 LCD Display screen controlled easily by AT (Attention) commands. It is operated through simple SERIAL communication in ASCII format and can easily be interfaced with a microcontroller imparted with UART pins. The module is already incorporated with a microcontroller ,which could memorize the data written previously, even after a power shut down.
For more info, check out our website

- https://www.elementzonline.com/lcd-serial-interface-board-204
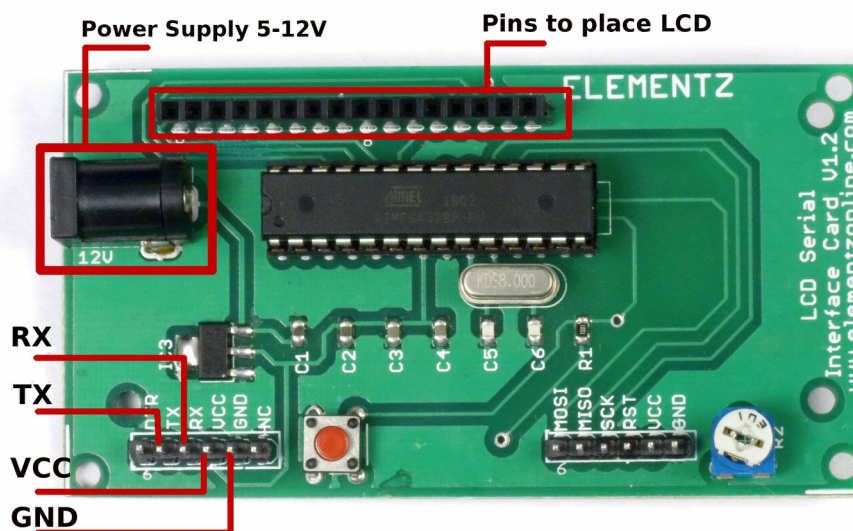
Pin Description:

TABLE 1: Pin Layout & description

Pin Name	Pin Description
VCC	Power Supply (5V only) through pin headers
TX	**Transmitter pin :** *can be connected to receiver pin of microcontroller/CP2102 to allow data to be transmitted*
RX	**Receiver pin :** *can be connected to receiver pin of microcontroller/CP2102 to allow data to be received in*
GND	Ground

TABLE 2: LCD Serial Interface Board: AT commands & description

Sl No:	AT command	Description	Usage
1	**AT+DATA=<*Line Index*>,<*Address*>,<*Data to be printed*>**	Writes data into LCD. ➔ ***Line Index***: line to which data is written. **values taken:**either **1 or 2.** **1**- Row 1 **2**- Row 2 Invalid values return an "*INDEX ERROR*" message ➔ ***Address***: position from which data display starts.	**AT+DATA=1,02,Hello how are you** *Here data "Hello how are you" is written to line 1 or*

		values taken: 00 to 15.
		   00 - *starting position of data display from zeroth colum*n.
		   15 - *starting position of data display from column 15/last column.*
		All invalid values return an "ADDRESS ERROR" message.
		➔ **Data to be printed:** *A total of 40 characters can be displayed in either row.*
			first row starting from column position 2

2	**AT+CLEAR=<*Input*>**	To clear data.
		➔ **Input:** line to be cleared
		values taken:0,1 or 2.
		  0- to clear both rows.
		  1- to clear the first row,
		  2- to clear the second row,
		Invalid input returns an "*INPUT ERROR*" message.
			AT+CLEAR=*1*
			
			Clears all data in first row

3	**AT+SCROLL=<*Input*>**	Sets for left scroll,right scroll or no scroll.
		➔ **Input**: Determines direction of scroll.
		values taken: 0,1 or 2
		  0 -for no scroll.
		  1 -for left scrolling,
		  2 -for right scrolling
		Invalid input returns an "*INPUT ERROR*" message.
			AT+SCROLL=1
			
			Scrolls all data to the left completely.

4	**AT+DIR=<*Input*>**	To change the direction of error message.
		➔ **Input**: Determines direction of displaying error message.
		values taken:0,1 or 2
		   0 - displaying in the serial monitor only,
		   1 - displaying in the LCD display only
		   2- displaying in both serial and LCD displays.
		Invalid input returns an "*INPUT ERROR*" message.
			AT+DIR=0
			
			Here, error messages are displayed in serial monitor only

5	**AT+ECHO=<*Input*>**	To enable or disable echo(act of printing typed out text into serial monitor)
		➔ **Input:**determines whether to enable or disable echo
		values taken: 0 or 1
		   0- disables echo
		   1-enables echo
		Invalid input returns an "*INPUT ERROR*" message.
			AT+ECHO=0
			
			Here,typed out text will stop getting displayed in serial monitor

6	**AT+WEL=<*Input*>**	To enable or disable welcome note
		Input: Used to enable or disable welcome note.
		values taken: 0 or 1
		   0- disables welcome note
		   1-enables welcome note
		 Invalid input returns an "*INPUT ERROR*" message
			AT+WEL=0
			
			Here, welcome note at the beginning will be disabled from displaying

LCD serialinterface board can be connected to CP2102 or microcontroller.
Step by Step **instructions to connect CP2102/microcontroller:**
1. Connect dc jack of LCD serial interface board to 12V power adapter or provide its VCC pin with 5v power supply.
2. Connect TX of LCD serial board with RX(receiver pin) of microcontroller/CP2102 and vice-versa.
3. Connect GND of LCD serial board with ground of microcontroller/CP2102.
4. Open serial terminal console to type in AT commands or send data serially to LCD serial interface board using microcontroller programs.

Please feel free to contact us for all your queries and doubts:
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