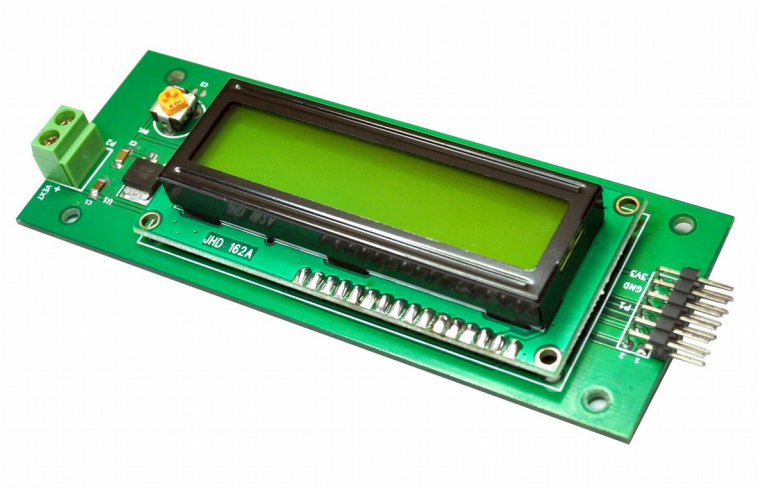

Alphanumeric LCD Display Expansion Module
User Guide

NUMATO LAB

www.numato.com

Rev 9

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* Mail orders, phone orders and direct pick up are not available at this time. Please visit our online store to place your order. Estimated shipping time to your address will be displayed in the shopping cart before checkout.

Introduction

This expansion module features a 16x2 Alphanumeric LCD Module which can be added to your custom project using a 2x6 pin connector. It is designed to be used with Numato Lab's FPGA/Micro-controller boards featuring 2x6 pin Expansion connectors. This module can be used with other boards as well by using manual wiring.

Applications

- Product Prototype Development
- Development and testing of custom Projects

Board features

- 16x2 Alphanumeric LCD Display
- Display back light
- Trim-pot for contrast adjustment
- 2x6 pin expansion connector
- Dimension: 118mm X 45mm

How to use the module

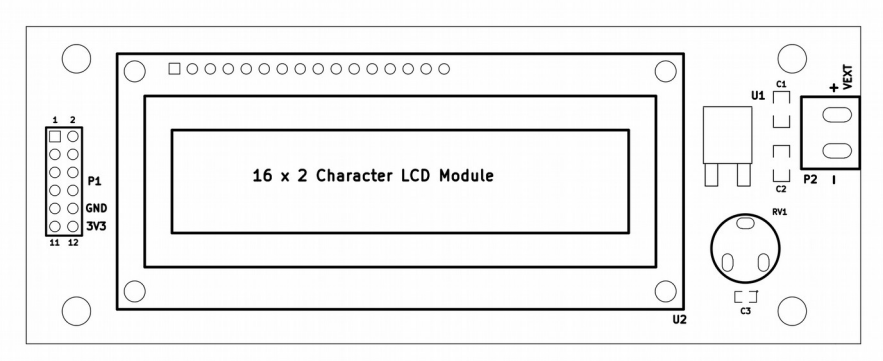
The following section describes how to use this module.

Components/Tools required

Along with the module, you may need the items in the list below for easy and fast installation.

1. Any FPGA board featuring a 2 × 6 pin Expansion connector (Manual wiring needed for boards that does not have 2x6 expansion connector)
2. DC Power supply

Connection Diagram



This diagram should be used as a reference only. For detailed information, see the schematics at the end of this document. Details of individual connectors are as below.

To use this module, directly attach the 2x6 expansion connector to the FPGA/Micro-controller development board where corresponding female header is available. If 2x6 female header is not available, manually make the connections as per the connection details below. External power is required for the operation of this module due to the higher current requirement of the back light. Connect a power supply to the VEXT connector. Make sure to connect positive and negative terminals appropriately. Use the trim-pot on the module to adjust the contrast of LCD.

Connection Details

Header P1

Header Pin No.	Pin Details
1	RS
2	R/W
3	D0
4	E
5	D2
6	D1
7	-
8	D3
9	GND
10	GND
11	VCC3V3
12	VCC3V3

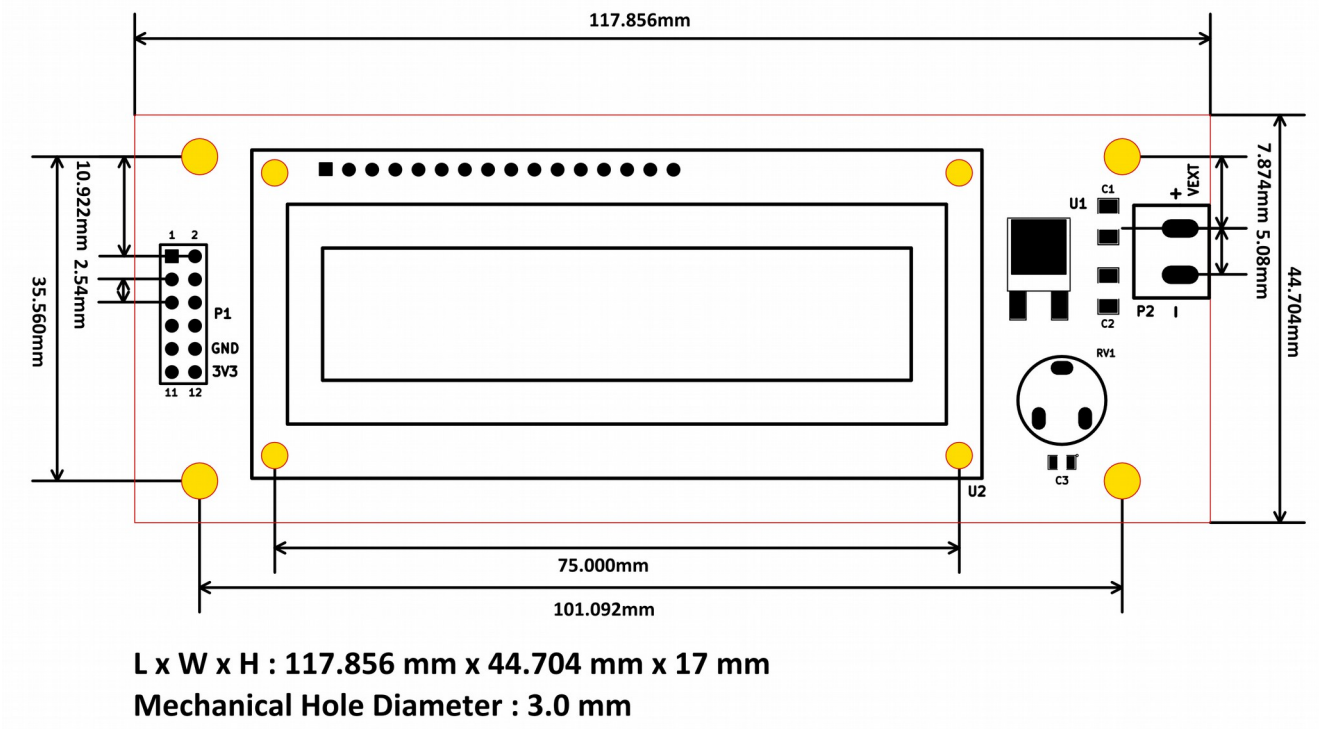
For more information, refer the schematics below.

Technical Specifications

Parameter *	Value	Unit
Basic Specifications		
Power supply voltage (External)	7 – 9	V
Max digital input voltage	3.3	V

* All parameters considered nominal. Numato Systems Pvt Ltd reserve the right to modify products without notice.

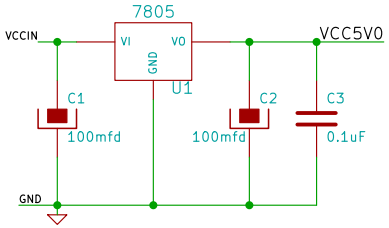
Physical Dimensions



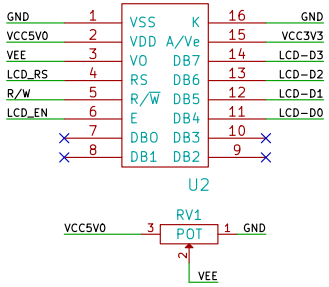
L x W x H : 117.856 mm x 44.704 mm x 17 mm
Mechanical Hole Diameter : 3.0 mm

Schematics

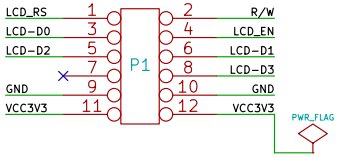
See next page



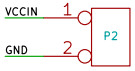
16 X 2 CHARACTER LCD



EXPANSION CONNECTOR



EXT VIN



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