DATASHEET

4D SYSTEMS

TURNING TECHNOLOGY INTO ART

Arduino Display Module Pack

Featuring a 7.0” Display Module

uLCD-70DT-AR

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Please refer to the 4D Systems website for the latest Revision of this document

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1. Description

The 4D Systems Arduino* Display Module Pack is made up of a uLCD-70DT Display Module and an Adaptor to easily connect an Arduino to the 4D Systems Display.

The Pack comprises of:

- uLCD-70DT Display Module
- 4D Arduino Adaptor Shield
- 5 way Female-Female Cable

The Arduino Display Module Pack enables an Arduino user to quickly connect the 4D Arduino Adaptor Shield to their Arduino, connect the 5 way cable between the Adaptor and the Display Module, and be connected in seconds to start programming their new 4D Systems Display.

The uLCD-70DT can be configured in a number of ways using the 4D Systems Workshop4 IDE, which enable a comprehensive range of serial commands ready to be received from the Arduino, to draw primitives such as lines, rectangles, circles and text, to displaying images, playing sound and logging data to uSD card.

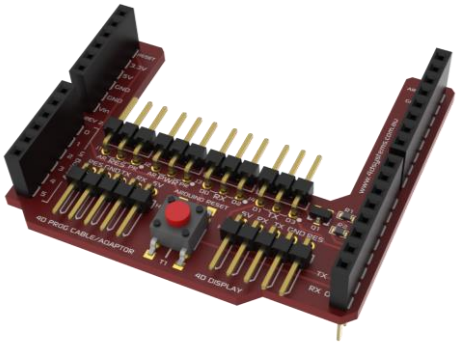
Communication to the Display Module is performed via the Arduino's hardware serial port.

A single digital on the Arduino is utilised for an external reset for the display.

Power for the display is supplied from the Arduino's 5V bus. In most cases, no external power is required for the Display Module as all power is supplied from the Arduino, via the Adaptor Shield. The Arduino DC Jack may be required to supply the Arduino with power if the USB supply of the PC is insufficient.

In some cases, the display may be required to be powered separately to the Arduino, which the Arduino Adaptor Shield allows. Please refer to the Datasheet for the 4D Arduino Adaptor Shield for more information.

For a detailed listing of the capabilities of the display module in this Arduino Pack, please refer to the datasheet for the display itself, available from the 4D Systems website, www.4dsystems.com.au.



4D Arduino Adaptor Shield

The uLCD-70DT Display Module

NOTE (*): Arduino remains the property of the Arduino Team. All references to the word Arduino and Arduino Hardware are licensed under the Creative Commons Attribution Share-Alike license.

2. Advanced Hardware Options

The display module uLCD-70DT is a very capable and powerful piece of hardware, which can be reconfigured beyond the boundaries of the Arduino. It features a powerful Diablo16 Processor, and can be configured to run as a standalone system if required. For detailed information on the uLCD-70DT display module, please refer to its Product Page on the 4D Systems website, where additional documentation can be downloaded.

With the use of the 4D Systems Workshop4 IDE Software, the display module can be configured and programmed independently of the Arduino environment if required.

If a user wishes to investigate the capabilities of the uLCD-70DT and reconfigure the display module, please refer to the Datasheet for the uLCD-70DT, available from the 4D systems website, www.4dsystems.com.au.
The user can freely change back to the configuration the module was shipped in if desired, all via the Workshop4 IDE Software.

To take advantage of the 4D Systems Workshop4 Software, a 4D Programming Cable is required, which can be purchased from the 4D Systems website, or from a 4D Systems distributor.

The Workshop4 IDE enables the uLCD-70DT display module to be configured using 4 different environments.

- The **Designer** environment enables the user to write 4DGL code in its natural form to program the display module.
- A visual programming experience, suitably called **ViSi**, enables click-and-place type placement of objects to assist with 4DGL code generation and allows the user to visualise how the display will look while being developed.
- An advanced environment called **ViSi-Genie** doesn't require any 4DGL coding at all, it is all done automatically for you. Simply lay the display out with the objects you want, set the events to drive them and the code is written for you automatically. ViSi-Genie provides the latest rapid development experience from 4D Systems.
- A **Serial** environment is also provided to transform the display module into a slave serial module, allowing the user to control the display from any host microcontroller or device with a serial port.

Designer and **ViSi** allow the user to program and write their own protocol to communicate between the Arduino and the Display Module.

ViSi-Genie has a set protocol as outlined in the documentation associated with it (Available from the Workshop4 Product page of the website), and 4D Systems has developed an Arduino Library specifically for the ViSi-Genie environment, to enable a rapid development platform for users. The library is available for download from the uLCD-70DT-AR product page on the 4D Systems Website, www.4dsystems.com.au.

The **Serial** environment loads an application (SPE) onto the display module which enables commands from the Arduino to communicate directly with the display module and get it to perform specific actions. 4D Systems has developed a library specifically for this environment also, which is available for download from the uLCD-70DT-AR product page on the 4D Systems Website, www.4dsystems.com.au.

3. Specifications and Ratings

RECOMMENDED OPERATING CONDITIONS					
Parameter	**Conditions**	**Min**	**Typ**	**Max**	**Units**
Supply Voltage (VCC)		4.5	--	5.5	V
Operating Temperature		-10	--	+70	°C

ORDERING INFORMATION
Order Code: uLCD-70DT-AR **Packaging:** Modules sealed in antistatic foam padded 4D Systems Box's

4. Legal Notice

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5. Contact Information

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Website: www.4dsystems.com.au

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- Техническая поддержка проекта;
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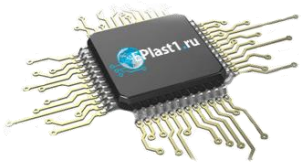

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