



DATASHEET

4D SYSTEMS
TURNING TECHNOLOGY INTO ART

Arduino Display Module Pack **Featuring a 7.0" Display Module** **uLCD-70DT-AR**

Document Date: 20th May 2014
Document Revision: 1.1

Contents

- 1. Description..... 3
- 2. Advanced Hardware Options 4
- 3. Specifications and Ratings..... 5
- 4. Legal Notice..... 6
- 5. Contact Information 6

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.

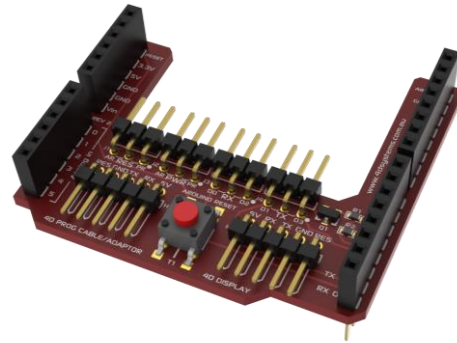
Communication to the Display Module is performed via the Arduino's hardware serial port.

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

Proprietary Information

The information contained in this document is the property of 4D Systems Pty. Ltd. and may be the subject of patents pending or granted, and must not be copied or disclosed without prior written permission.

4D Systems endeavours to ensure that the information in this document is correct and fairly stated but does not accept liability for any error or omission. The development of 4D Systems products and services is continuous and published information may not be up to date. It is important to check the current position with 4D Systems. 4D Systems reserves the right to modify, update or make changes to Specifications or written material without prior notice at any time.

All trademarks belong to their respective owners and are recognised and acknowledged.

Disclaimer of Warranties & Limitation of Liability

4D Systems makes no warranty, either expressed or implied with respect to any product, and specifically disclaims all other warranties, including, without limitation, warranties for merchantability, non-infringement and fitness for any particular purpose.

Information contained in this publication regarding device applications and the like is provided only for your convenience and may be superseded by updates. It is your responsibility to ensure that your application meets with your specifications.

In no event shall 4D Systems be liable to the buyer or to any third party for any indirect, incidental, special, consequential, punitive or exemplary damages (including without limitation lost profits, lost savings, or loss of business opportunity) arising out of or relating to any product or service provided or to be provided by 4D Systems, or the use or inability to use the same, even if 4D Systems has been advised of the possibility of such damages.

4D Systems products are not fault tolerant nor designed, manufactured or intended for use or resale as on line control equipment in hazardous environments requiring fail – safe performance, such as in the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines or weapons systems in which the failure of the product could lead directly to death, personal injury or severe physical or environmental damage ('High Risk Activities'). 4D Systems and its suppliers specifically disclaim any expressed or implied warranty of fitness for High Risk Activities.

Use of 4D Systems' products and devices in 'High Risk Activities' and in any other application is entirely at the buyer's risk, and the buyer agrees to defend, indemnify and hold harmless 4D Systems from any and all damages, claims, suits, or expenses resulting from such use. No licenses are conveyed, implicitly or otherwise, under any 4D Systems intellectual property rights.

5. Contact Information

For Technical Support: support@4dsystems.com.au

For Sales Support: sales@4dsystems.com.au

Website: www.4dsystems.com.au

Copyright 4D Systems Pty. Ltd. 2000-2014.



**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,
Промышленная ул, дом № 19, литера Н,
помещение 100-Н Офис 331