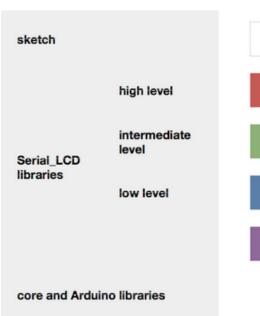
# μLCD-32PT(SGC) 3.2" Serial LCD Display Module

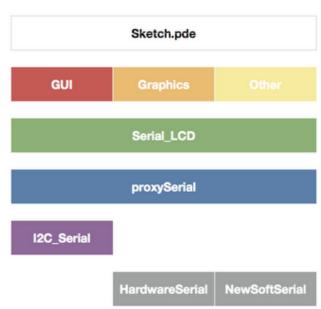
Arduino & chipKIT Library

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http://sites.google.com/site/vilorei/ http://github.com/rei-vilo/Serial LCD





## Serial\_LCD

May 10, 2011 release 1	initial release	
Jun 15, 2011 release 2	features added and bugs fixed	
Jun 29, 2011 release 3	setBackGroundColour added and SD card	
Jul 31, 2011 release 4	stdint.h types for chipKIT compatibility	
Aug 07, 2011 release 5	playing sounds: up to 250 mA!	
Oct 14, 2011 release 6	ellipse and detectTouchRegion from sebgiroux	
Oct 27, 2011 release 7	setSpeed fixed for 155200	
Nov 29, 2011 release 8	read pixel colour and new colour functions	
Dec 15, 2011 release 8.1	Arduino 1.0 implementation test no longer compatible with 0022	
Dec 17, 2011 release 9	max vertical and horizontal according to orientation	
Dec 18, 2011 release 10	(x0, y0, dx, fy) functions added to $(x1, x2, y1, y2) =$	
(x0, y0, x0+dx, y0+dy)		
Dec 29, 2011 release 11	readTextFile from sebgiroux	
Jan 05, 2012 release 12	RAW for screen copy to/read from SD	
Jan 11, 2012 release 13	VGA support and library release number check, updated examples	
Jan 14, 2012 release 14	Goldelox support with 8-bits coordinates	
Jan 16, 2012 release 15	RAW partition automatic detection	
Jan 20, 2012 release 16	self-generated screen parameters with example Info_main	

Jan 24, 2012 release 17 Jan 27, 2012 release 18 Jan 28, 2012 release 118 Jan 28, 2012 release 119 Feb 12, 2012 release 119a	uOLED 1.6"" and uLCD 4.3"" compatibility test successful stability enhancement new index colours constants e.g. redColourAVR_ATmega328P added
proxySerial Aug 04, 2011 release 1 Sep 23, 2011 release 2 Oct 10, 2011 release 3 Oct 24, 2011 release 4  Nov 02, 2011 release 5  Dec 15, 2011 release 5.1  Jan 28, 2012 release 105 Feb 01, 2012 release 106	chipKIT compatibility with external proxySerial.h ms monitoring to avoid RX TX collapse Stream.h class based i2cSerial library serial port managed in main only - setSpeed added - proxySerial still needed HardwareSerial derived from Stream on chipKIT platform by msproul Arduino 1.0 implementation test - no longer compatible with 0022 new index ttoa time to string added
Feb 12, 2012 release 106a	AVR_ATmega328P added
button / GUI Sep 18, 2011 release 1 Nov 25, 2011 release 2 copy to/read from SD Nov 27, 2011 release 3 Dec 15, 2011 release 3.1  Dec 27, 2011 release 4 Dec 28, 2011 release 5 Dec 29, 2011 release 6 Jan 05, 2012 release 7  Jan 25, 2012 release 8 Jan 28, 2012 release 108 Feb 12, 2012 release 108a	dialog window with up to 3 buttons faster dialog show/hide and optional area for screen bugs fixed Arduino 1.0 implementation test - no longer compatible with 0022 ready for GUI = button + dialog box + menu + label item-based refactoring for dialog box, menu and label button library deprecated, superseeded by GUI library (x0, y0, dx, fy) functions added to (x1, x2, y1, y2) = (x0, y0, x0+dx, y0+dy) button with instant option (no de-bouncing) new indexAVR_ATmega328P added
Graphics Jan 22, 2012 release 1 Jan 25, 2012 release 2  Jan 27, 2012 release 3 Jan 28, 2012 release 103 Jan 28, 2012 release 104 Jan 30, 2012 release 105 Feb 01, 2012 release 106 Feb 12, 2012 release 106a	new Graphics library with example Graphics_main (x0, y0, dx, fy) functions added to (x1, x2, y1, y2) = (x0, y0, x0+dx, y0+dy) histogram graphic with example Histgram_main new index default colours for each graphic improved consistency ttoa usedAVR_ATmega328P added

#### **Tutorial**

Full documentation

#### Required

- Arduino IDE 0023
- NewSoftSerial release 11 beta
- for Goldelox screens, hardware reset recommended with reset pin # (active low) be declared in myLCD.begin(#)
- I2C\_Serial release 103

## **Bugs & ToDos**

None

#### Roadmap

See roadmap

## **Serial Port Multiple Options**

Mode	Boards	Pins
hardware	Arduino	Serial (pins 0 & 1)
	chipKIT	Serial (pins 0 & 1) or Serial1 (pins 39 & 40)
software	Arduino	with library NewSoftSerial release 11beta
	chipKIT	not available
i2c	Arduino	(pins 4 & 5) with library I2C_Serial
	chipKIT	(pins 4 & 5) with library I2C_Serial

## SC16IS750 I2C slave bridge to serial

Arduino + chipKIT Library

Oct 06, 2011 release 1 initial release

Oct 10, 2011 release 2 Stream.h class based

Oct 25, 2011 release 3 I2C address selection through parameter default=0, 1, 2 or

12

Jan 28, 2012 release 103 new index

## Based on

4D Systems PICASO-SGC Command Set

Software Interface Specification Document Date: 1st March 2011

Document Revision: 6.0 www.4dsystems.com.au/