



HAIDAR TECHNOLOGY, LLC.
The Next Generation Of Intelligent Embedded GUI Systems

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MAX-CV57-LHT
MAX-CQ57-LHT
5.7" VGA /QVGA TFT with Touch Screen
Powered By SegeMax embedded GUI Board
Hardware Manual

REV 1.00

Revision 1.00

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1. Overview:

The SegeMax and the attached touch color display provide a complete Graphical User interface for embedded systems. It is based on our intelligent and easy to use graphic engine SEGE (Serial Enabled Graphic Engine). SEGE uses the same techniques used in objective oriented programming (OOP) to create the embedded GUI without any additional code for the LCD or the touch panel. A powerful set of objects and a window based software “LCDMaster” are used to make this task extremely easy, fast and simple. LCDMaster is a true WYSIWYG visual GUI builder for color displays. It allows you to design the GUI application visually from your PC screen using simple Drag-and-Drop tools with absolutely no coding for the GUI design.

The predefined object set which includes Screen, Bargraph, Button, Textbox, Picturebox, Numberbox, Image, Slider, Needle and Shape are the GUI building blocks. Similar to OOP, each object has properties, methods and events. Each object has also a touch zone which can be enabled or disabled at design time. When the user touches one of those zones, a touch event will be generated to notify the host controller and to execute user defined macro without the host supervision.

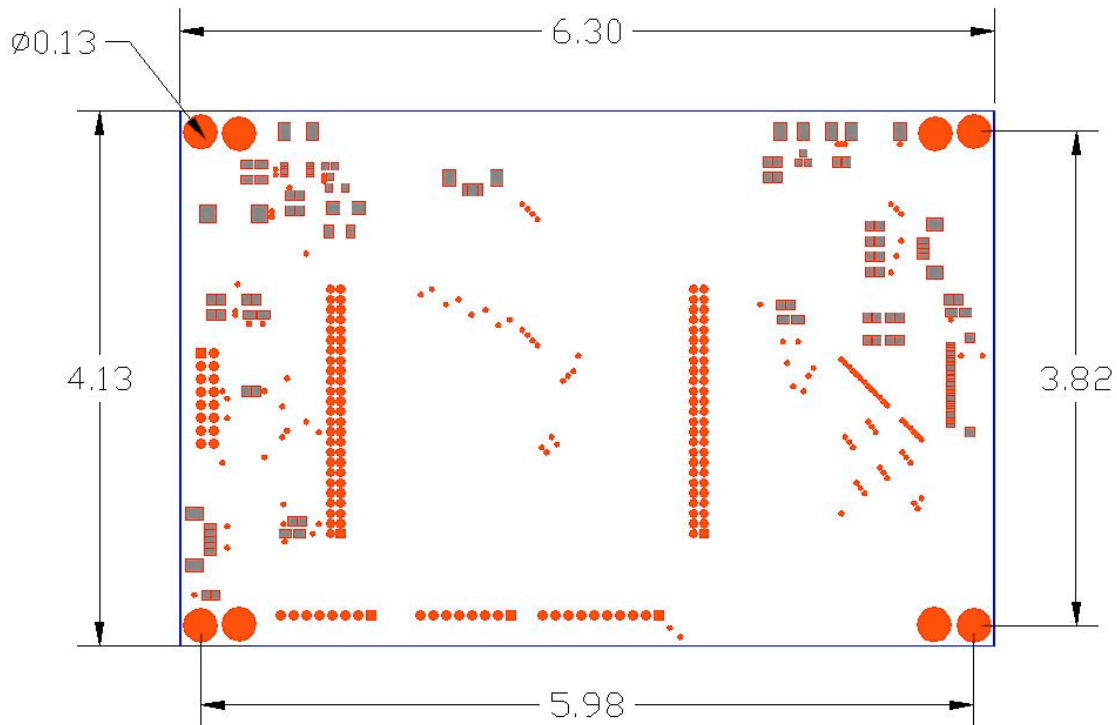
Please, see SegeMax Hardware and Software manuals for more information.

2. Features:

- 5.7” VGA (640X480) TFT Color display (MAX-CV57-LHT)
- 5.7” QVGA (320X240) TFT Color display (MAX-CQ57-LHT)
- Powered by SegeMax embedded GUI Board
- 4-wires resistive touch screen (Pen/Finger touch screen)
- Efficient LED backlight
- High brightness (380 cd/m²)
- Wide viewing angle (-65° to +65°)
- Wide operating temperature (-20°C to +70°C)



3. Board dimensional drawing:



All dimensions are in inches

4. Dimensions:

Width	4.13" / 104.9mm
Length	5.98" / 151.8mm
Depth	1" / 25.4mm
LCD Area	104.6mm(H) X 144mm(W)

5. Electrical Characteristics:

MAX-Cx57-LHT requires 3.3V DC. Exceeding the supply voltage over the typical value (3.3V) will cause a permanent damage to the board and to the attached LCD and void your warranty.

Configuration	Typical Current (A) at 3.3V	Max Current (A) at 3.3V
Back light is OFF	0.14A	0.5A
Back light is ON	0.21A	0.5A

6. Environmental:

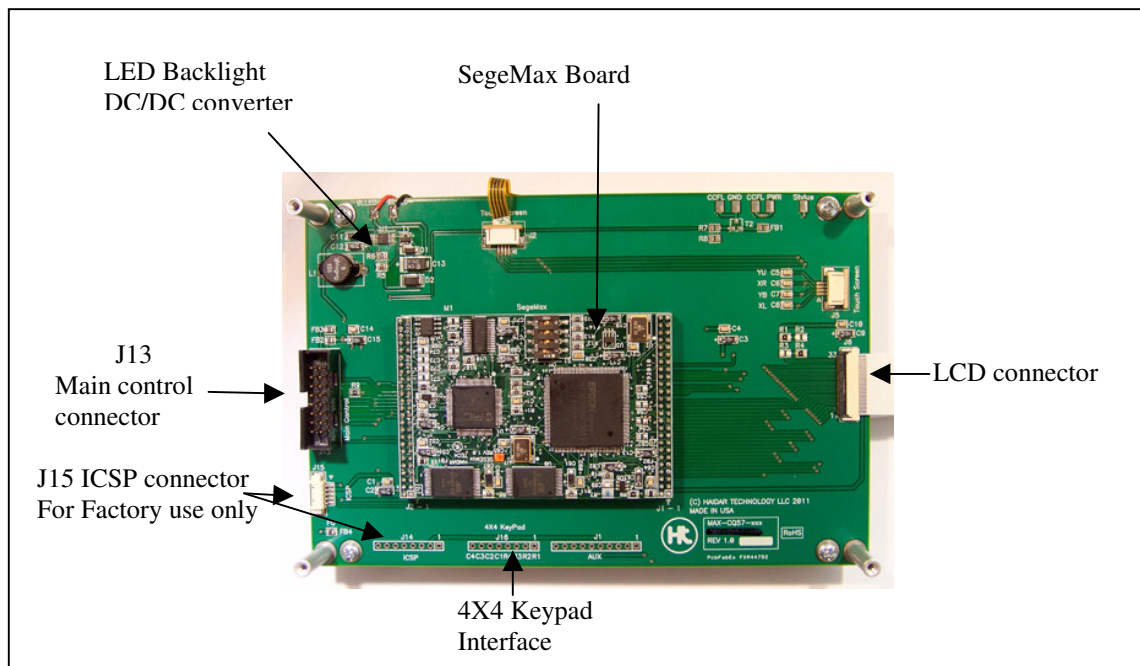
The standard SegeMax board is rated for commercial temperature operation of 0 to 70°C. The Industrial Temperature -40 to 85°C version is available as a special order.

7. Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units
Input Supply Voltage	VDD	-	3.3	3.7	V
High Level Input Voltage (VDD = 3.3V)	VIH	0.7VDD	-	VDD	V
Low Level Input Voltage (VDD = 3.3V)	VIL	0	-	0.3VDD	V
Digital sink/source current	Id	-	-	25	MA
Analog input voltage	Va	0	-	3.3V	V
RS232 TX/RX		0.7VDD	-	VDD	V

Warning: RX and TX use a CMOS level of 3.3V. Connecting them to standard (PC) RS232 with +/- 12V or other will damage the controller and void your warranty.

8. Board Picture:



9. Pin Description:

Main Interface

J13 (16Pos, 0.1", IDC connector)

J14 Pin Name	Pin #	Type	Tolerance	Description
VIN	1	PWR	3.3V	Power Supply Input
VIN	2	PWR	3.3V	Power Supply Input
GND	3	PWR	0V	Power Ground
GND	4	PWR	0V	Power Ground
LED_RX	5	DOUT	3.3V	SegeMax RX LED Signal
LED_TX	6	DOUT	3.3V	SegeMax TX LED Signal
RX	7	DIN	3.3V	SegeMax UART RX
TX	8	DOUT	3.3V	SegeMax UART TX
RS485_DE	9	DOUT	3.3V	RS485 Data Enable
READY/BUSY	10	DOUT	3.3V	SegeMax Ready/Busy signal
NOTIFYHOST	11	DOUT	3.3V	SegeMax NotifyHost signal
BUZZER	12	DOUT	3.3V	SegeMax Buzzer signal
LED_HB	13	DOUT	3.3V	SegeMax HB LED Signal
RESET	14	DIN	3.3V	SegeMax Reset Signal
NC	15			Do not connect
EARTH GND	16	PWR	0V	Earth Ground. Connect to your system ground

KeyPad Interface

J16 (8Pos, 0.1" Header)

ROW1	1	DIN	3.3V	KeyPad Row 1
ROW2	2	DIN	3.3V	KeyPad Row 2
ROW3	3	DIN	3.3V	KeyPad Row 3
ROW4	4	DIN	3.3V	KeyPad Row 4
COL1	5	DOUT	3.3V	KeyPad Column 1
COL2	6	DOUT	3.3V	KeyPad Column 2
COL3	7	DOUT	3.3V	KeyPad Column 3
COL4	8	DOUT	3.3V	KeyPad Column 4

10. Manual Change History:

Date	Revision	Change
03/01/2011	REV1.00	Initial version of this manual

Hardware Limited Warranty

Haidar Technology, LLC. Warrants its hardware products to be free from manufacturing defects in materials and workmanship under normal use for a period of one (1) year from the date of purchase from Haidar. This warranty extends to products purchased directly from Haidar or an authorized Haidar distributor. Purchasers should inquire of the distributor regarding the nature and extent of the distributor's warranty, if any. Haidar shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended, or if it has been subjected to misuse, accidental damage, modification, or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced, or removed. This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Haidar be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Haidar is not liable for any claim made by a third party or made by the purchaser for a third party. Haidar shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty. Except as expressly set forth in this warranty, Haidar makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supercedes all previous warranties, and covers only the Haidar hardware.

Returns and Repair Policy

No merchandise may be returned for credit, exchange, or service without prior authorization from. To obtain warranty service, contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number, and return address. Authorized returns must be shipped freight prepaid to Haidar Technology LLC with the RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Haidar reserves the right in its sole and absolute discretion to charge a 15% restocking fee, plus shipping costs, on any products returned with an RMA.

Return freight charges following repair of items under warranty shall be paid by Haidar, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.