

User Interface Board

User interfaces for training and development



development tools

Overview

UIB-PC104 is a User Interface Board that enables the interaction between humans and control modules connected to its main socket, through input and output sources (widely known as human interfaces).

The design of a user interface affects the amount of effort the user must expend to provide input for the system and to interpret the output of the system, and how much effort it takes to learn how to do this. The design of UIB-PC104 has been performed taken especial care of its usability to provide users with an efficient and effective training tool.

The board has the following interfaces:

- Six LEDs
- 16x2 alphanumeric STN LCD with backlight
- 122x32 graphic STN LCD with backlight
- Two potentiometers
- Twelve push buttons
- One buzzer

It also includes a set of connectors dedicated to multiple purposes and switches to select its operation mode.

Training capabilities

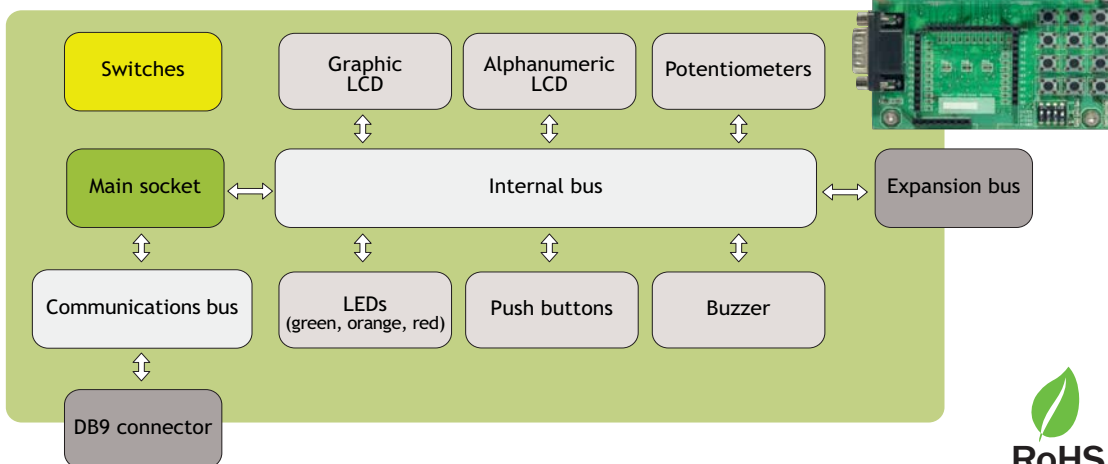
UIB-PC104 is a perfect complement for control modules (such as iCM4011) when facing to initial training and new designs based on them.

In the case of iCM4011, users just need to plug the module onto the UIB-PC104 socket and start the training (UIB-PC104 CD includes iCM4011 developing examples). Other modules may need some extra signal conditioning stage.



Furthermore, UIB-PC104 has been designed following a stackable architecture and complying with the dimensions and drills of the PC/104 standard.

Block diagram



Technical specifications

UIB-PC104

Electrical data

Operating range	5 -12 VDC*
Max. supply voltage	16 VDC*
Max. supply current	250mA*
Temperature range	0°C to 70°C

* Working with iCM4011 control module

Visual interfaces

LED indicators	2 red, 2 orange, 2 green
Alphanumeric LCD with backlight	16 characters x 2 rows negative STN
Graphic LCD with backlight	122 x 32 pixels positive STN

Acoustic interfaces

Buzzer	4KHz frequency resonant SPL 80dB at 30cm
--------	--

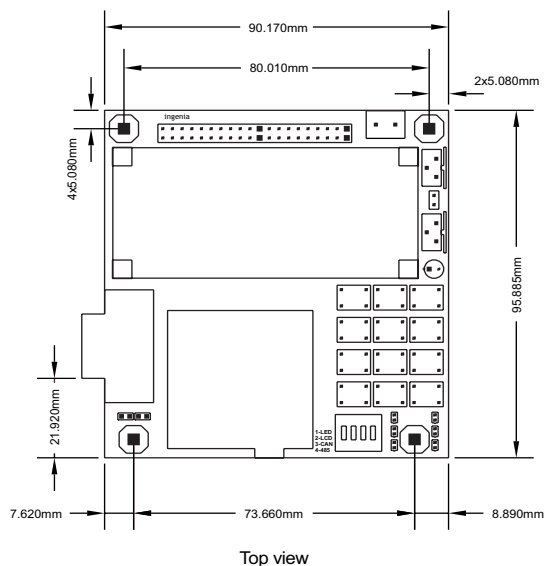
Touch interfaces

Analog potentiometers	2
Push buttons	12

Mechanical specifications

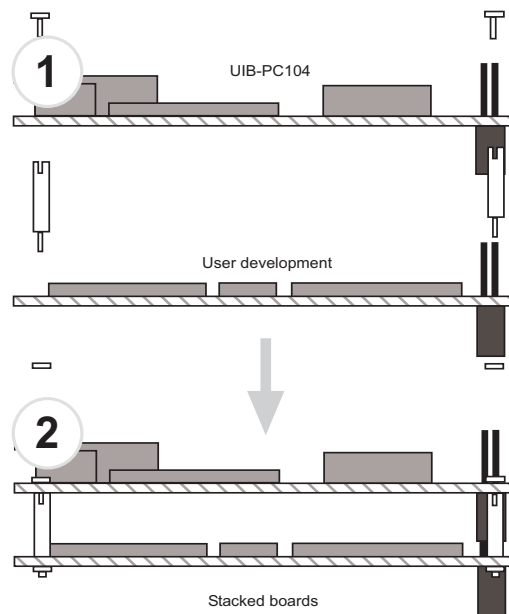
Size	90.17 x 95.88mm (PC/104)
Weight	68g
Plug P1 (main power)	Terminal screw
Plug P2 (communication)	DB9 male connector
Main socket M1	iCM4011 pinout
Connector J1 (expansion bus)	PC/104 socket 40 way upside down
Connector J2 (configuration)	Switches
Connector J3 (auxiliar connector)	2 pin, 2.54mm pitch
Connector LCD1 (alphanumeric)	16 pin, 2.54mm pitch
Connector LCD2 (graphic)	16 pin, 1.27mm pitch

All specifications and designs are subject to change without notice or obligation



Stackable architecture

UIB-PC104 has been designed following a stackable architecture and complying with the dimensions and drills of the PC/104 standard.



UIB-PC104

package contents

- UIB-PC104 board
- Alphanumeric LCD
- Graphic LCD
- CD including:
 - Complete product documentation
 - Examples for iCM4011 (manual and source code)



Contact information



10 Clever Lane
Tewksbury, MA 01876 USA

Phone: 978.455.3383
Toll Free: 866.455.3383
Fax: 978.926.3091

web site: www.ultsol.com
email: info@ultsol.com