



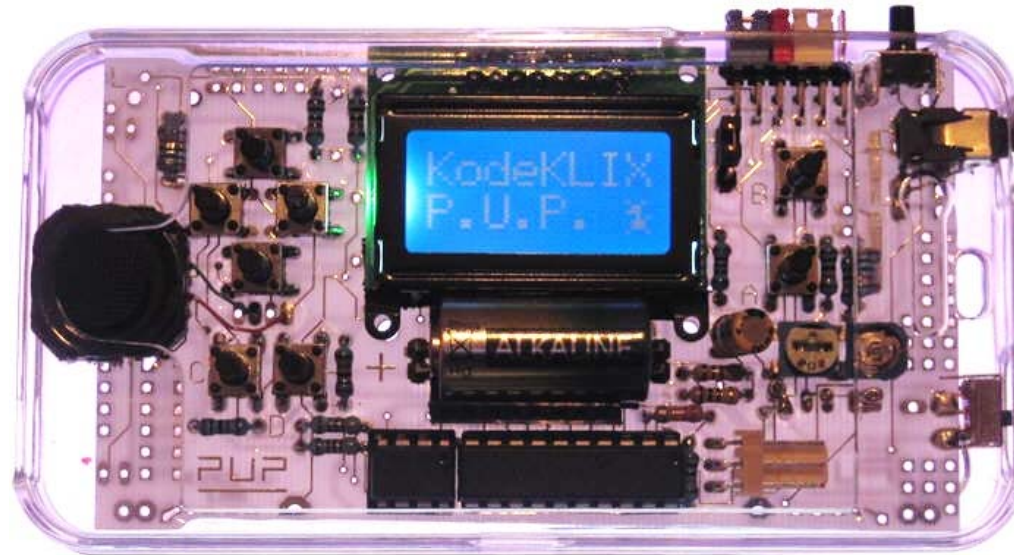
KodeKLIX for PUP

PUP Console Overview



Console Overview

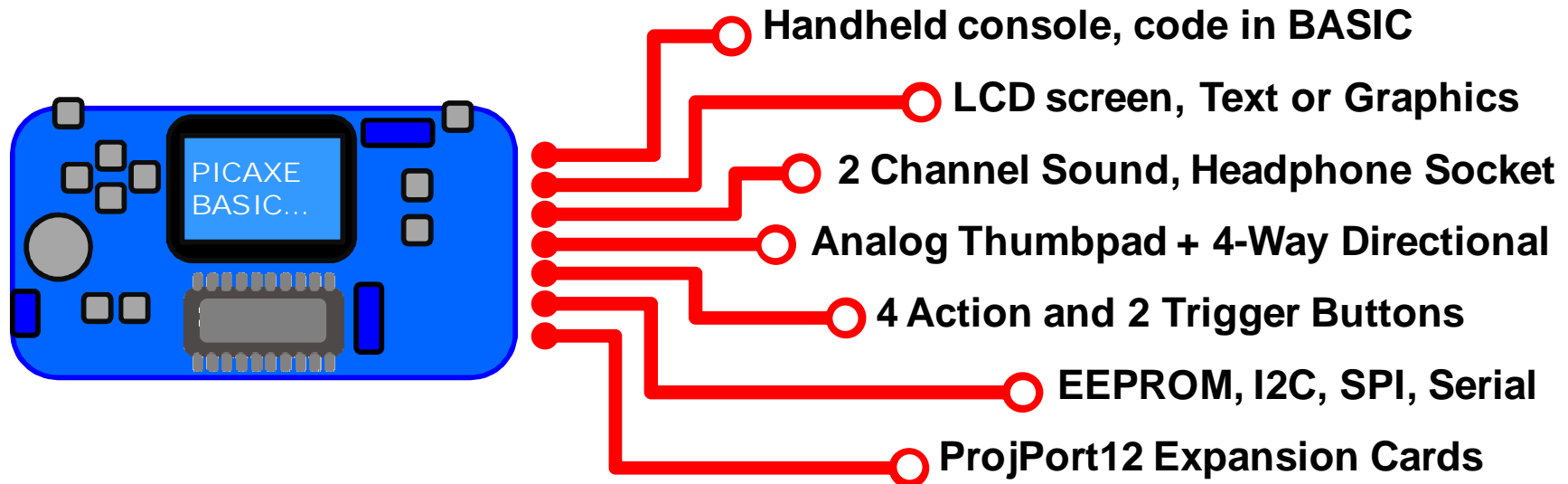
- The PUP™ hardware fits neatly into an cool transparent iPhone casing
 - Powered by 20pin PICAXE microcontroller
 - Features a variety of input and outputs
 - Apps can be programmed in simple BASIC





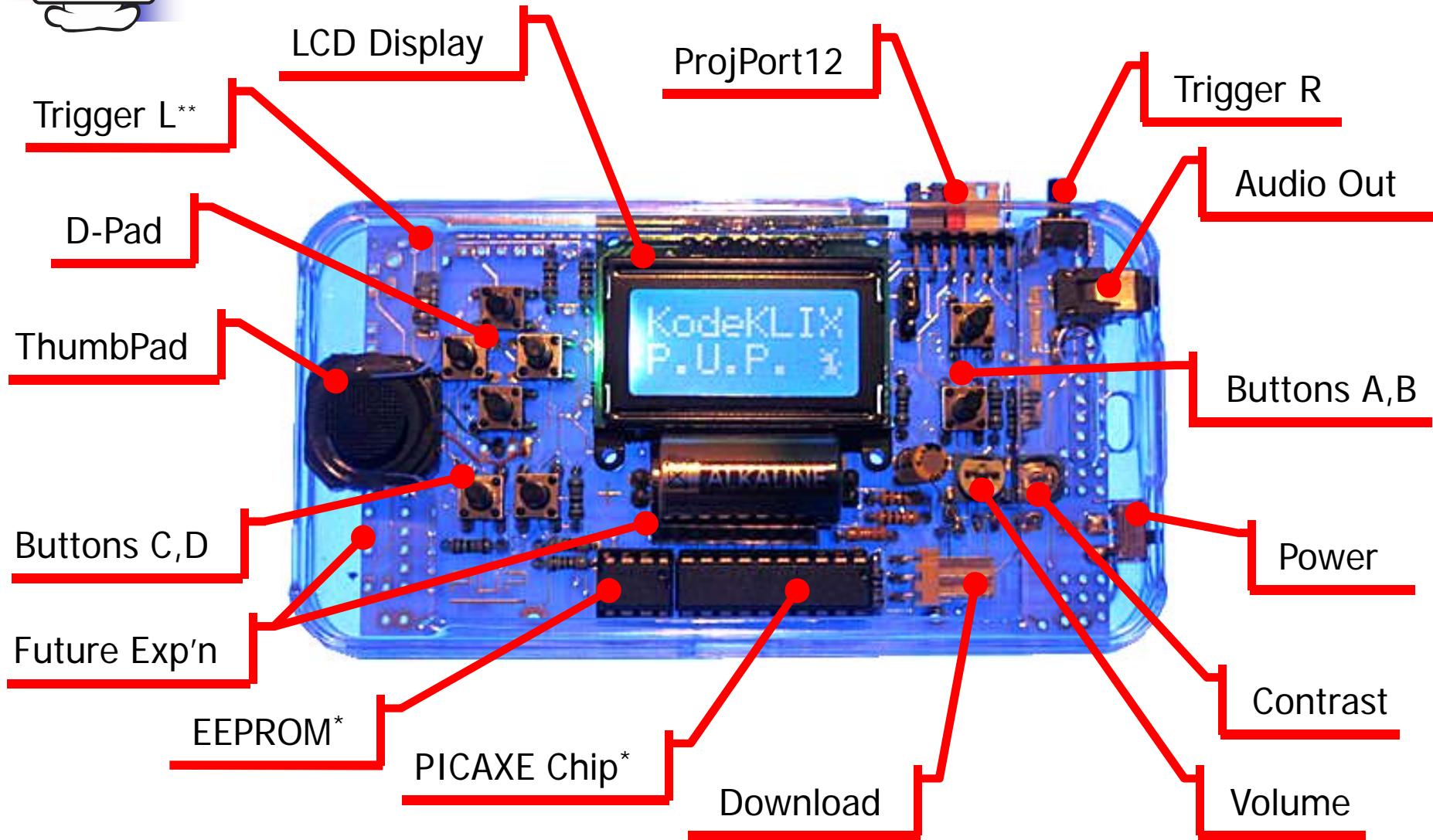
Console Overview

- The PUP™ handheld design is pre-loaded with heaps of features other systems don't include...



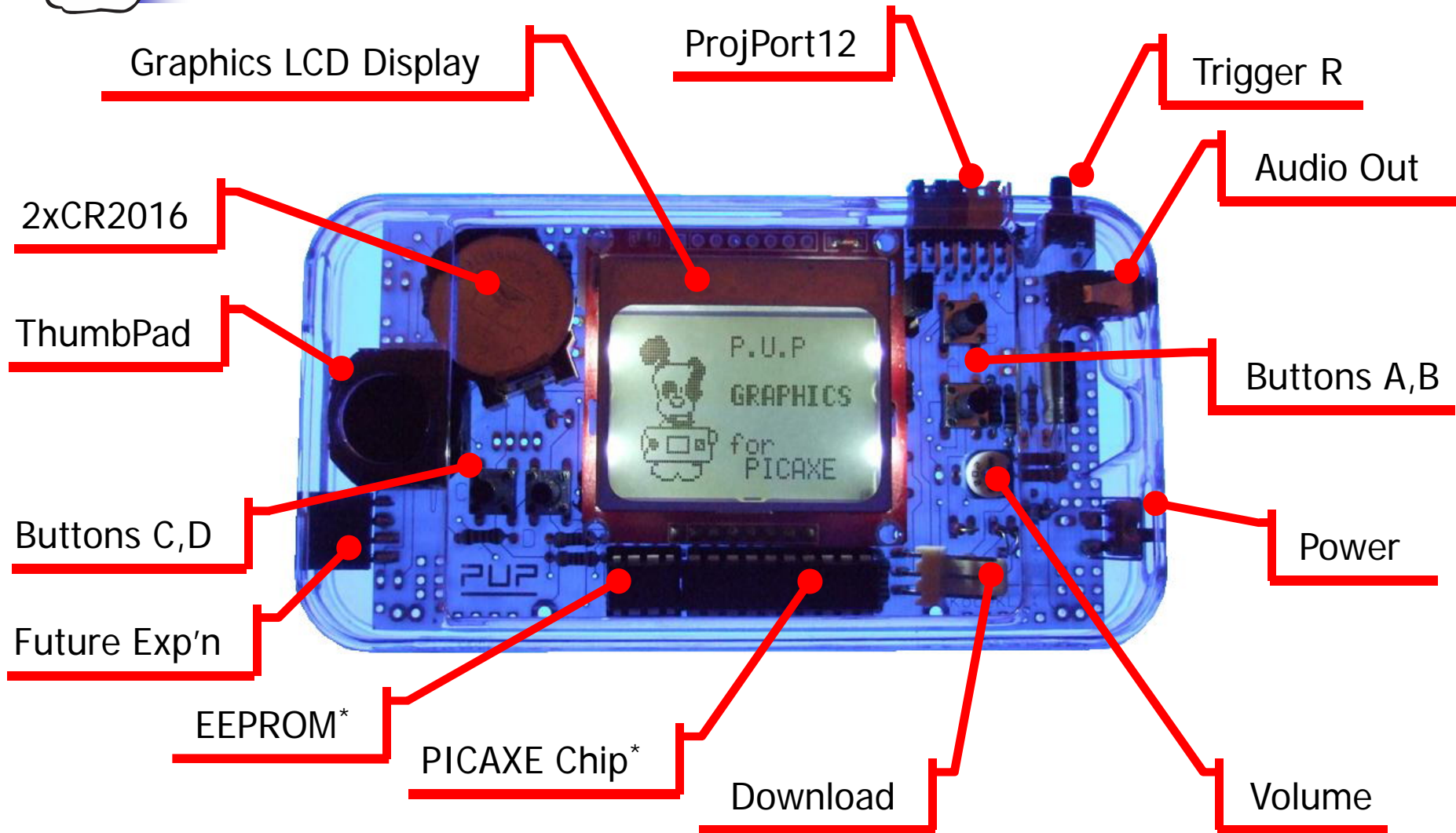


Console Overview - PUP™





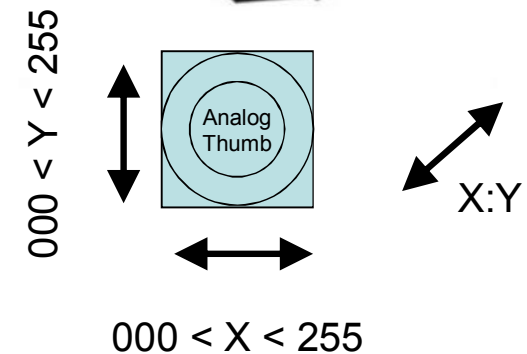
Console Overview – PUP™-gfx





Inputs

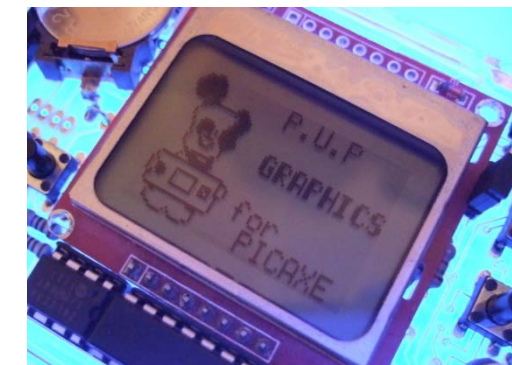
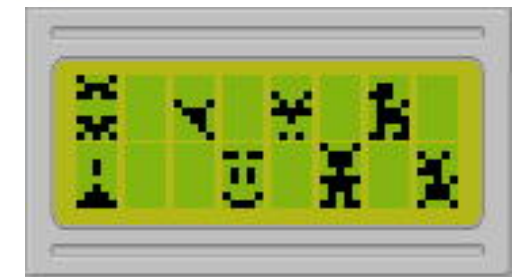
- Basic Inputs
 - 4-way directional buttons (D-Pad)
 - Digital action button (a)
- Advanced Inputs
 - Analog ThumbPad
 - Multiplexed buttons
 - 4 action buttons (A,B,C,D)
 - Left / Right triggers (L,R)
 - Tilt sensors (optional)





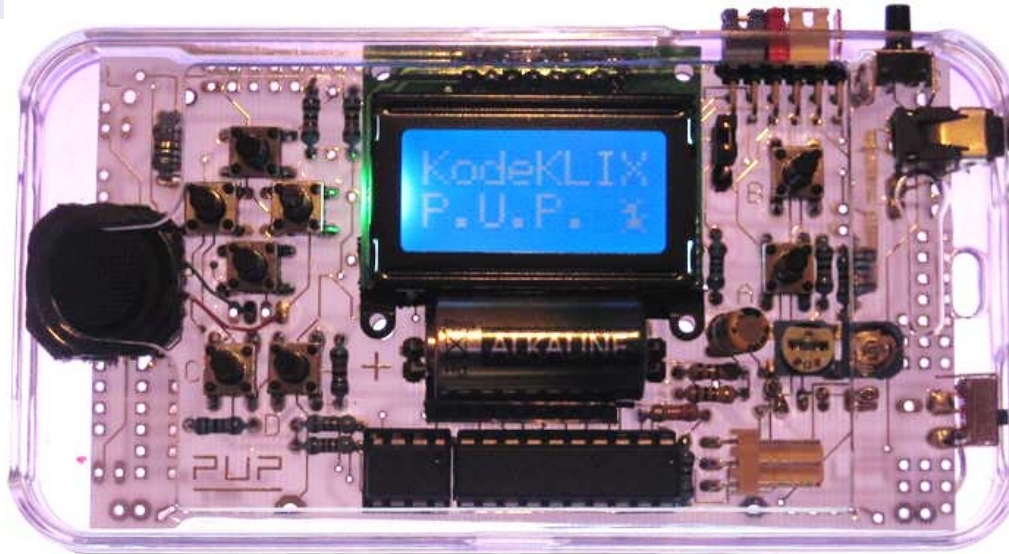
Outputs

- Outputs
 - 8x2 Text LCD Screen
 - LED Back Lighting
 - Sound
 - Notes, tunes and noises
- Outputs
 - LCD – 8x Custom “sprites”
 - GLCD – 84x48 bitmap
 - PWM Background Sound
 - Expansion ports / cards

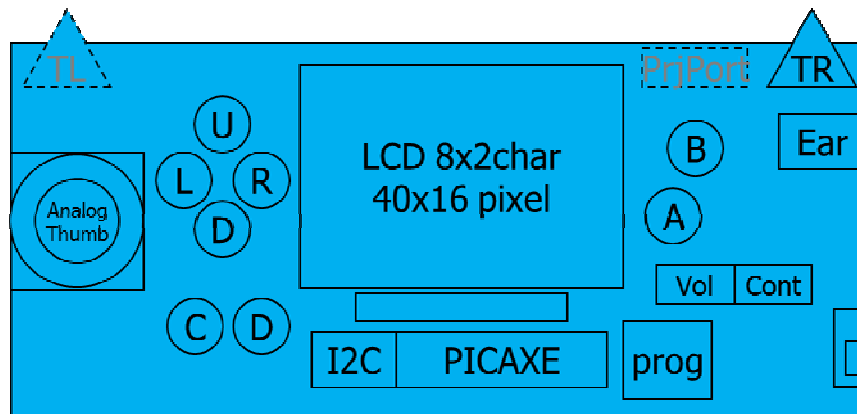




Input/Output Representation



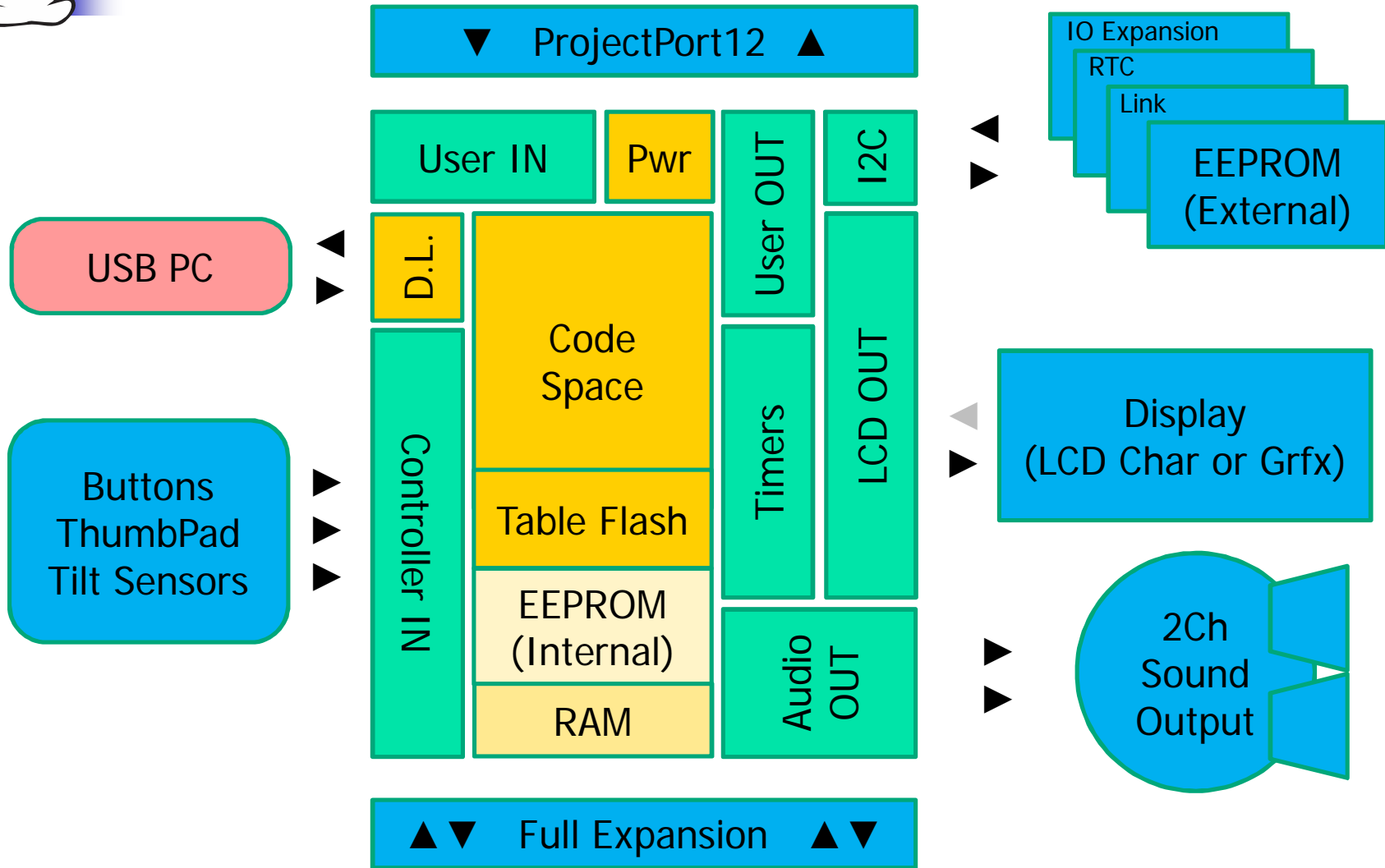
Actual



Symbolic



PUP – Block Diagram





PUP – Block Diagram Detailed

- Controller IN – user inputs connected
- LCD OUT – display device connected
- Audio OUT – sound device / connector
- Code Space – where program / app goes
- RAM – memory which is usable
- EEPROM – memory which is not forgotten
- Timers – clock and time keeping
- D.L. – download connection to PC
- I2C – expansion standard



Expansion Options

#1

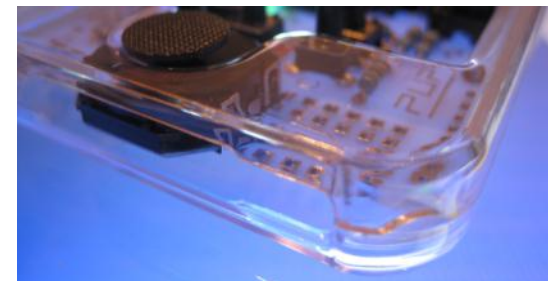
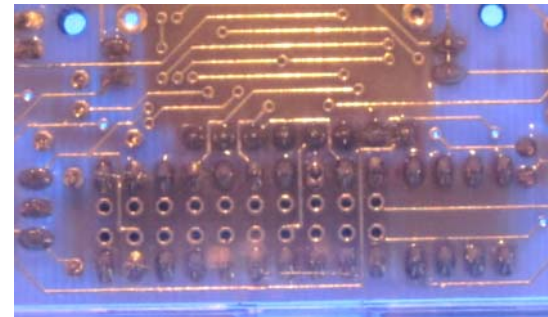
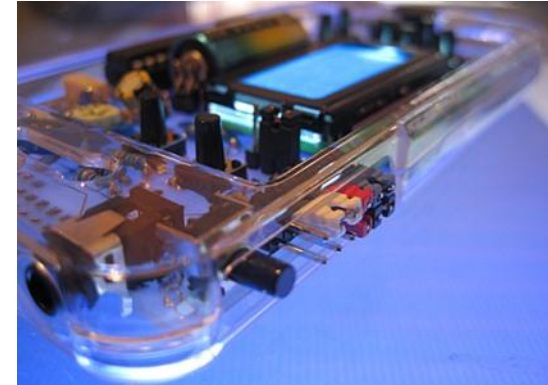
- 3.5mm connection
 - (Default) Audio Out
 - (Alt.) use as dataport for digital/analog IN
- Download port
 - Serial data communications, eg to PC
- Use LCD's RAM as expansion memory
- On-board EEPROM expansion memory
 - Retains contents even when powered off
 - Uses: high scores, saved state, etc



Expansion Options

#2

- ProjectPort12
 - “Personality Cards”
 - Expansion port for mini-projects, incl. I2C
- Full access expansion port
 - 20pin access port under PICAXE chip
- Spare solder points distributed around the PCB



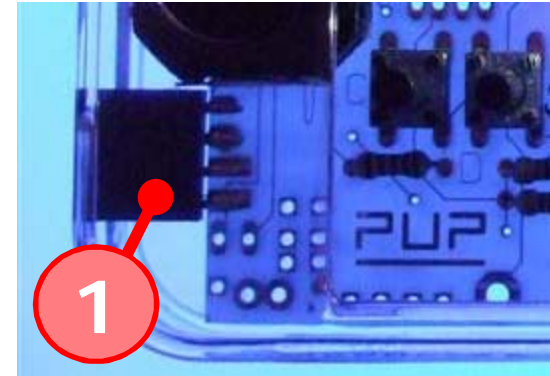


Expansion Options

#3

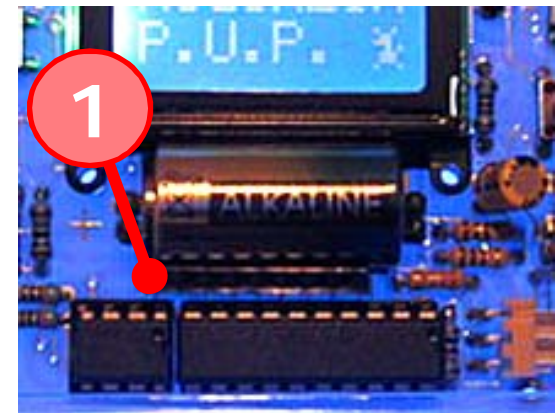
- I2C mini-port
 - 4pin*, v1.2+

SCL	SDA	Vcc	Gnd
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- Full access expansion port
 - 8pin# (used on PUP™gfx)

Vcc	Gnd	SCE	RES	D/C	SDIN	SCLK	LED
		B.6	B.4	B.2	C.1 hspi sdo	B.7 Hspi sck	A.0



* As viewed looking into PUP connector
 # hspi pins only available on PICAXE 20X2 chip