

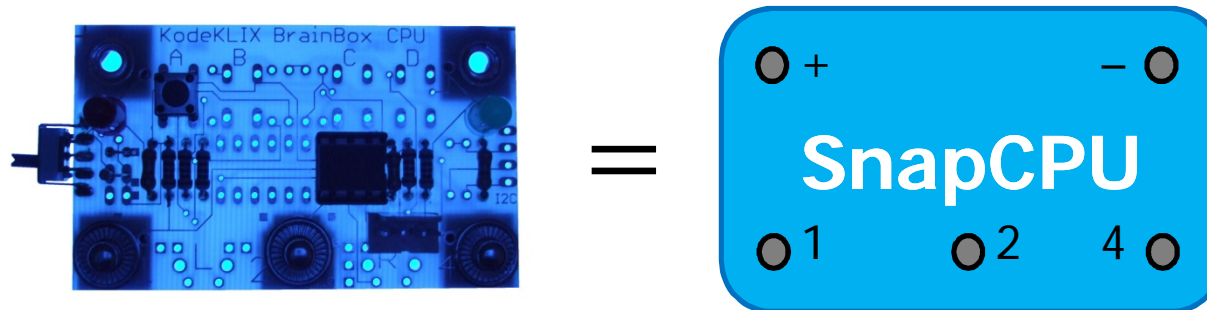
# KodeKLIX for SnapCPU

## SnapCPU Overview



# SnapCPU Overview

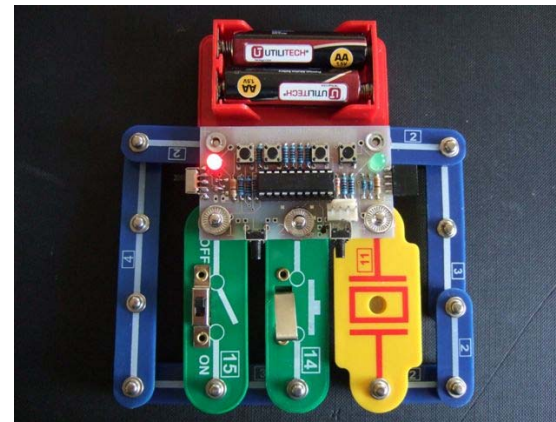
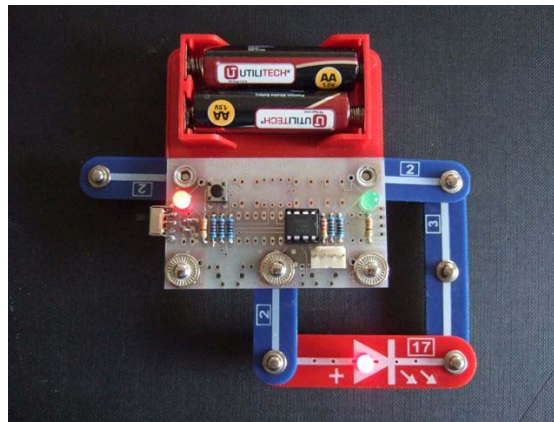
- The SnapCPU™ is sized to suit a 3x2 snap grid compatible with a number of popular “Snap Circuit” type systems
  - Powered by a choice of PICAXE microcontroller to suit your skill level
  - Snap pins can be set to input or output
  - Apps can be programmed in simple BASIC





# SnapCPU Circuits

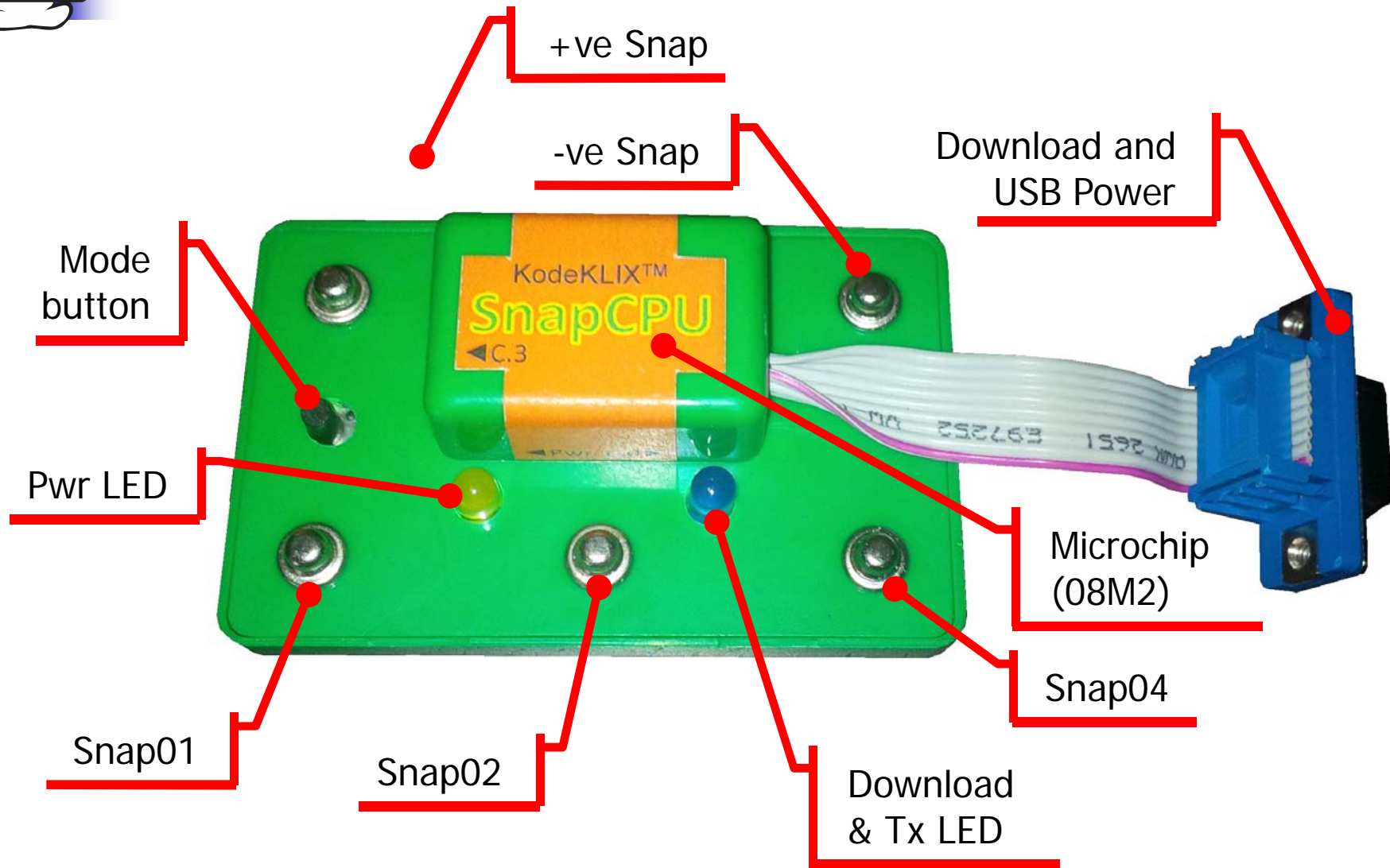
- SnapCPU™ circuits are built similar to regular Snap and Brainbox circuits
  - Use links to connect components
  - Ensure each component is part of a “circuit” loop to either + or –
  - Take care to not overload\* the microchip!!!



\* see reference notes regarding current draw limitations of microelectronics



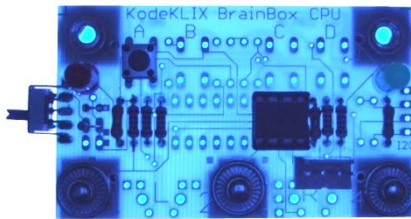
# SnapCPU "Starter Kit" Variant





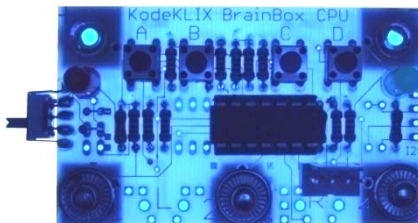
# SnapCPU – Hobby Variants

- All SnapCPUs are similar, but capability and is set by your choice of chip



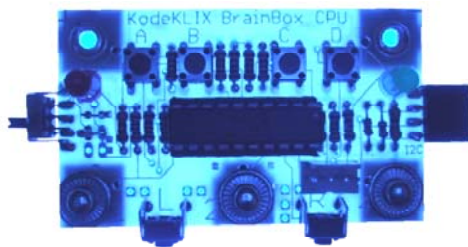
## Basic

- 08M chip
- 3x user I/O snaps
- 1x mode button



## Experienced

- 14M chip
- 3x user I/O snaps
- 4x mode buttons



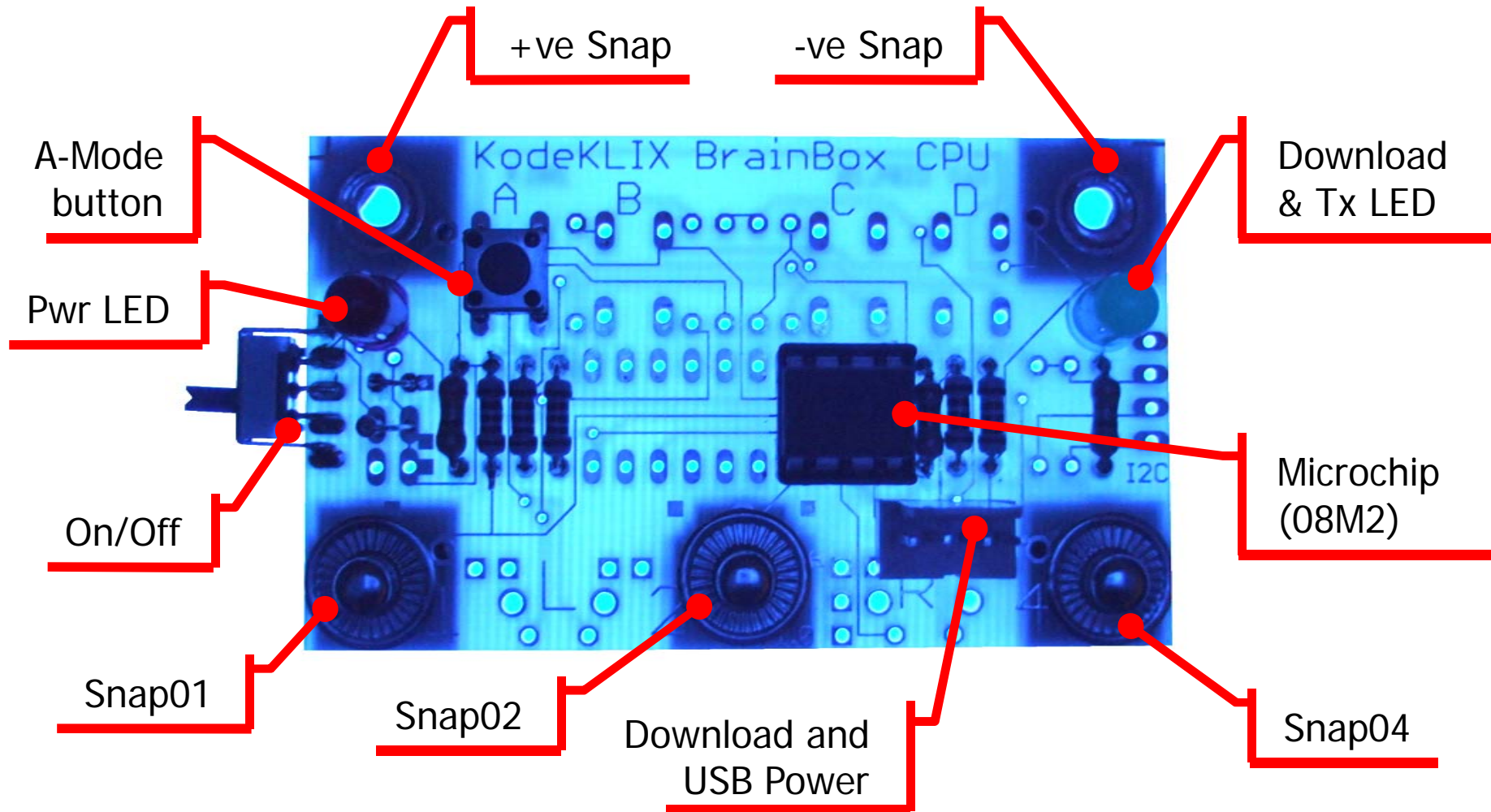
## Advanced

- 20M chip
- 3x user I/O snaps
- 6x mode buttons
- I2C expansion bus



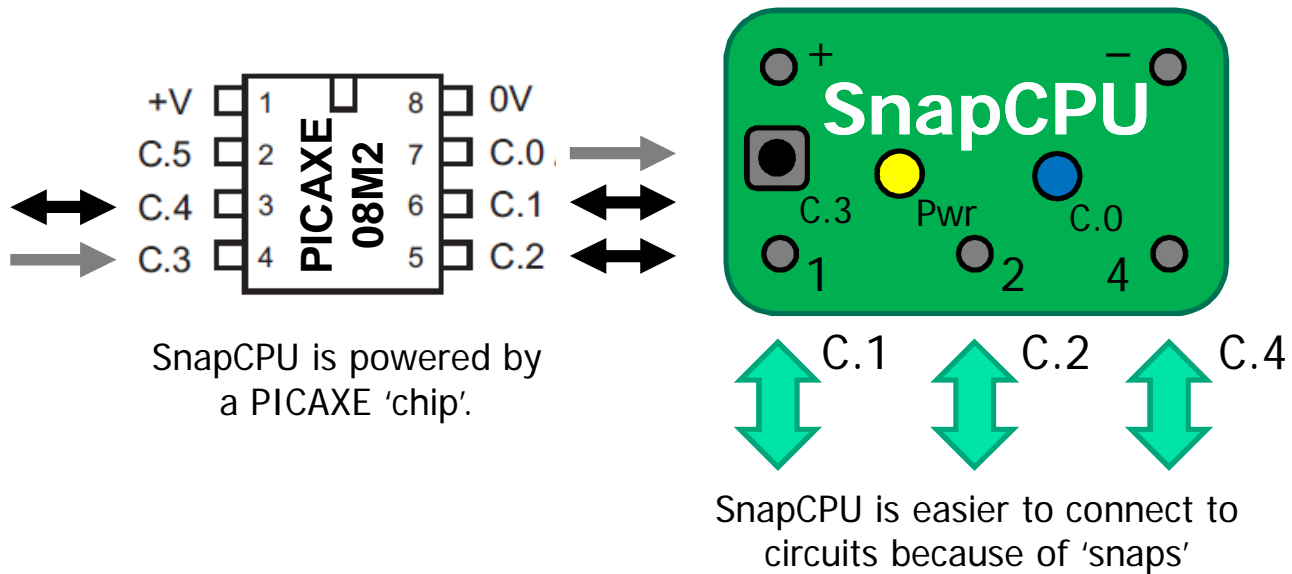


# Overview - SnapCPU™ *Basic*



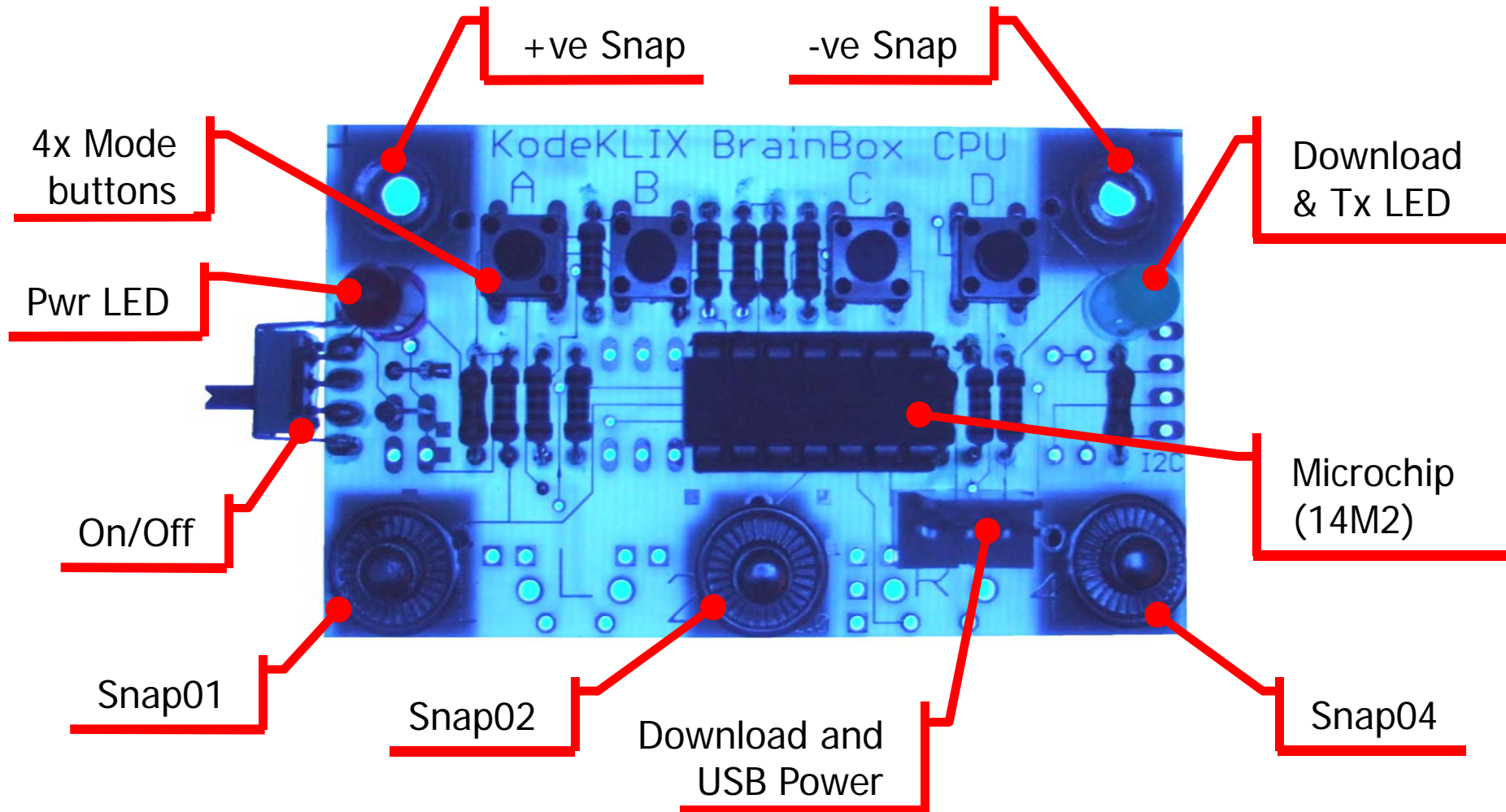


# Overview - SnapCPU™ *Basic*





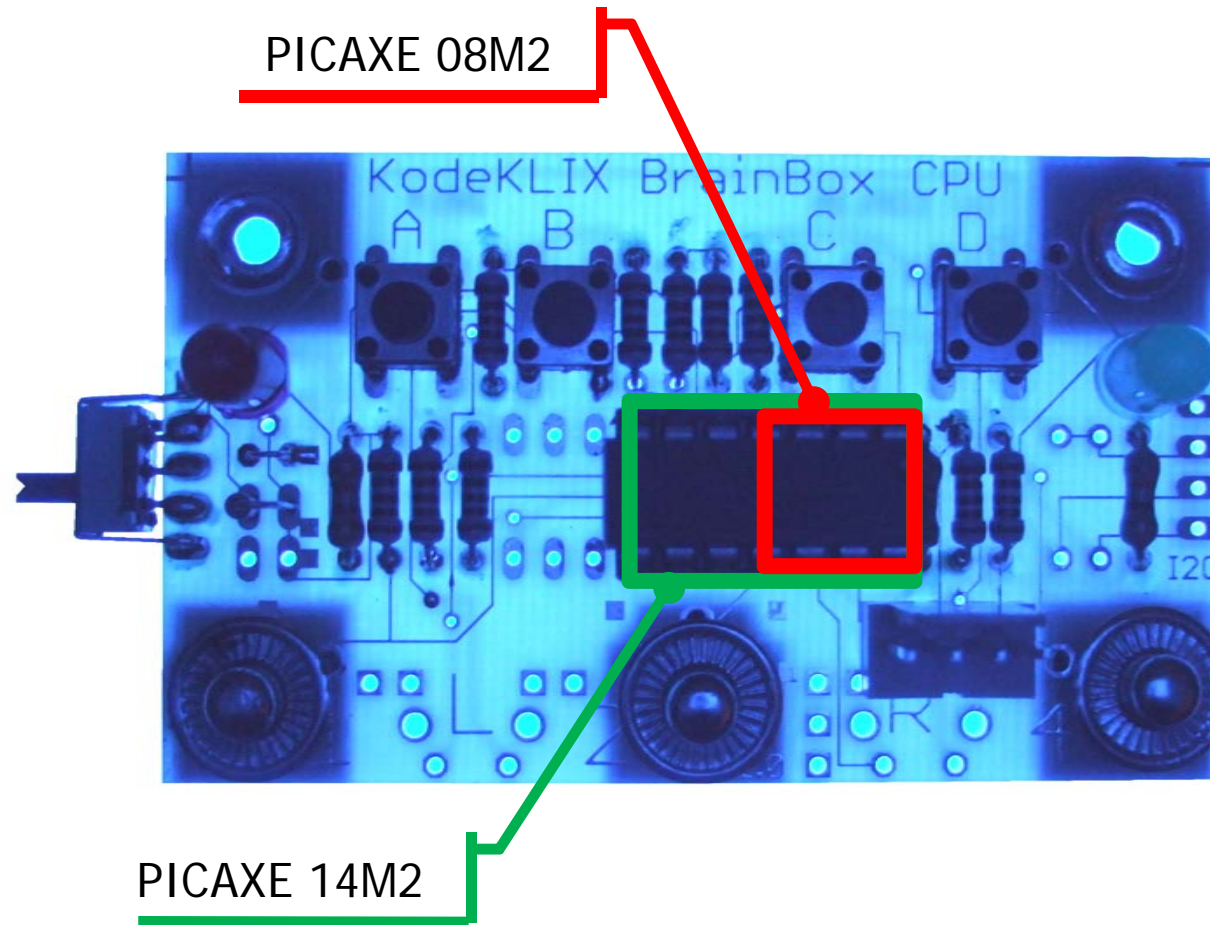
# Overview - SnapCPU™ *Experienced*







# Overview - SnapCPU™ *Experienced*

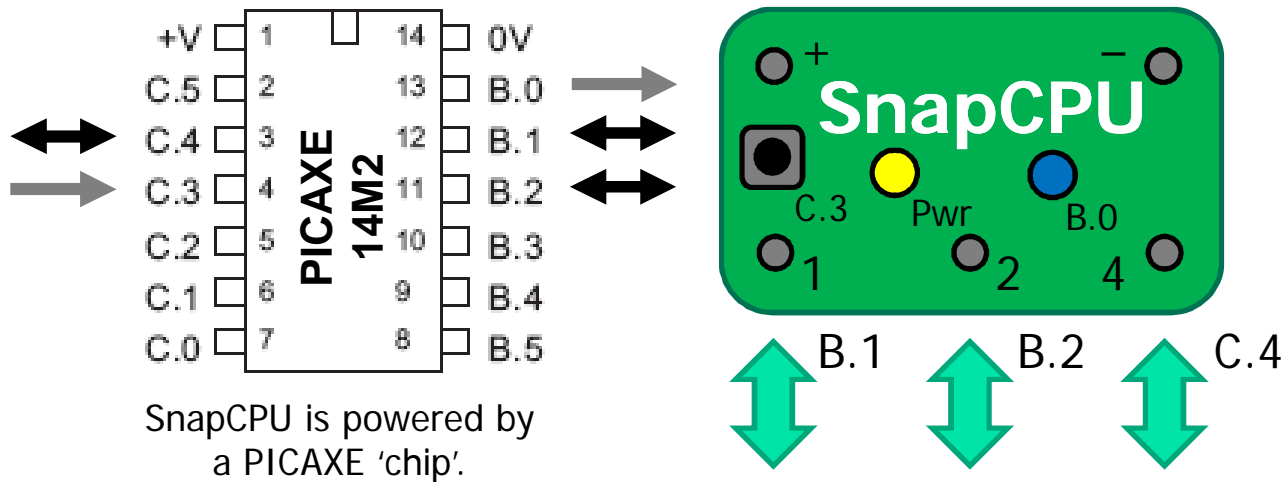


PICAXE 08M2

PICAXE 14M2



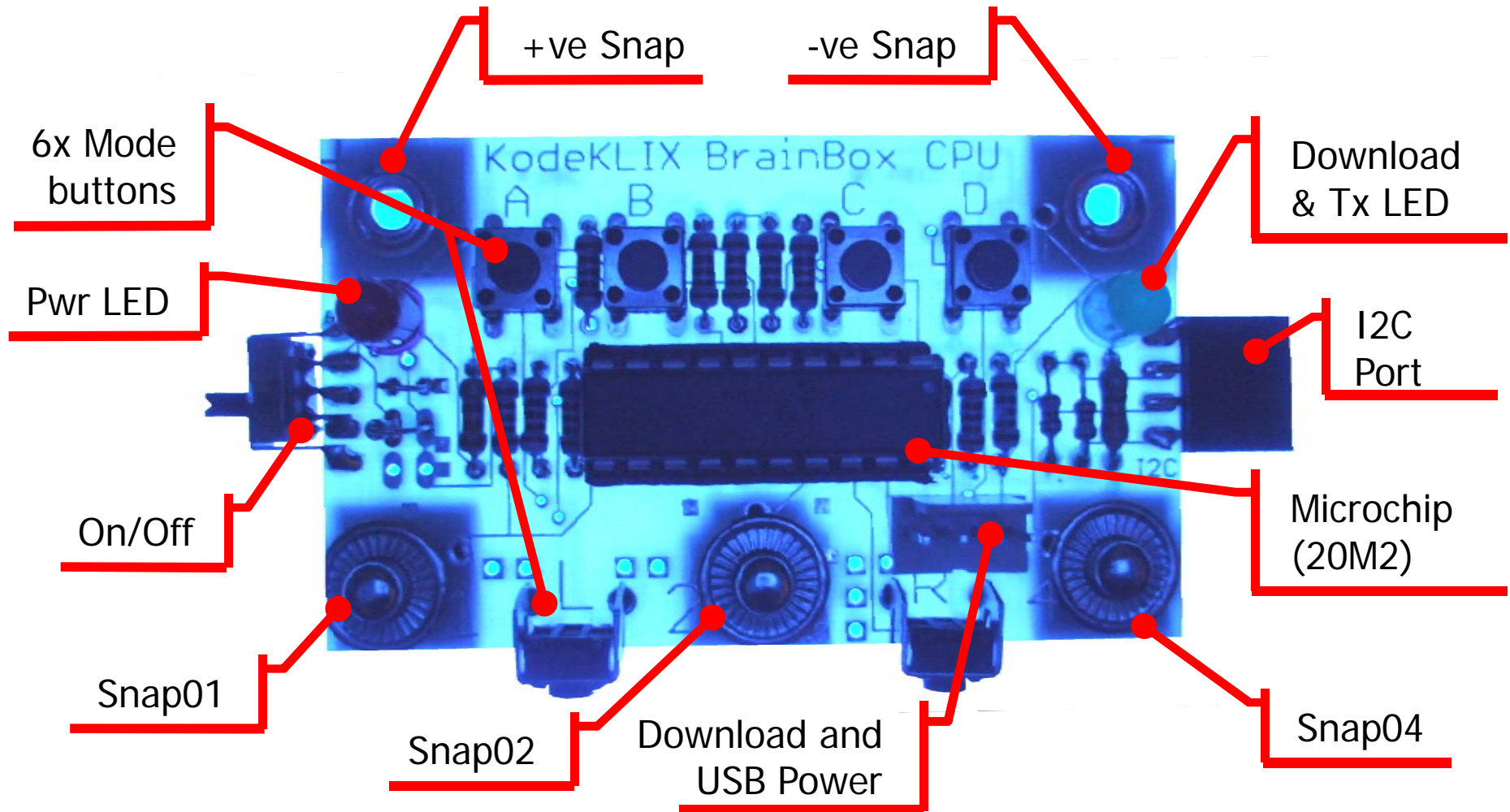
# Overview - SnapCPU™ *Experienced*



SnapCPU is easier to connect to circuits because of 'snaps'

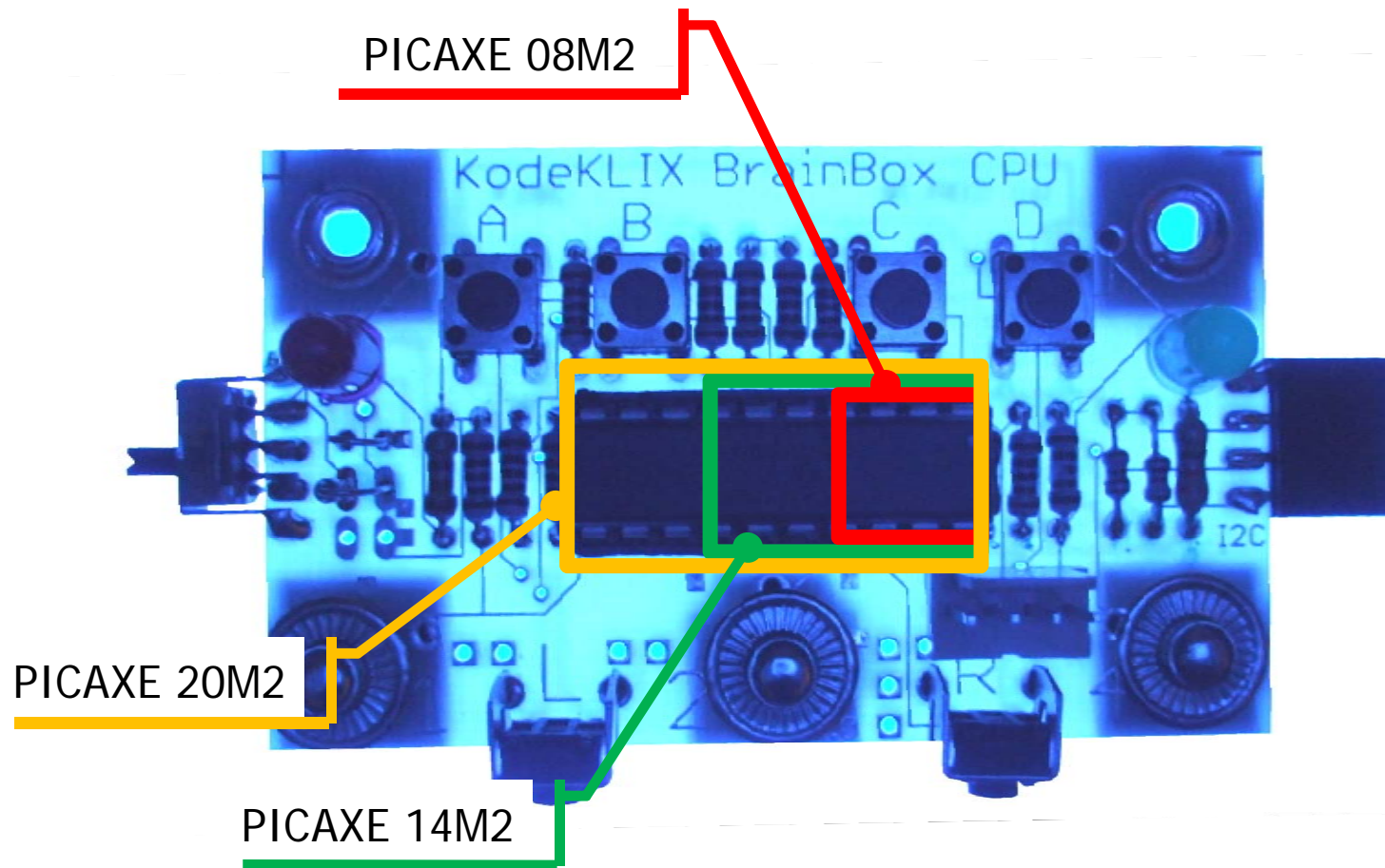


# Overview - SnapCPU™ *Advanced*



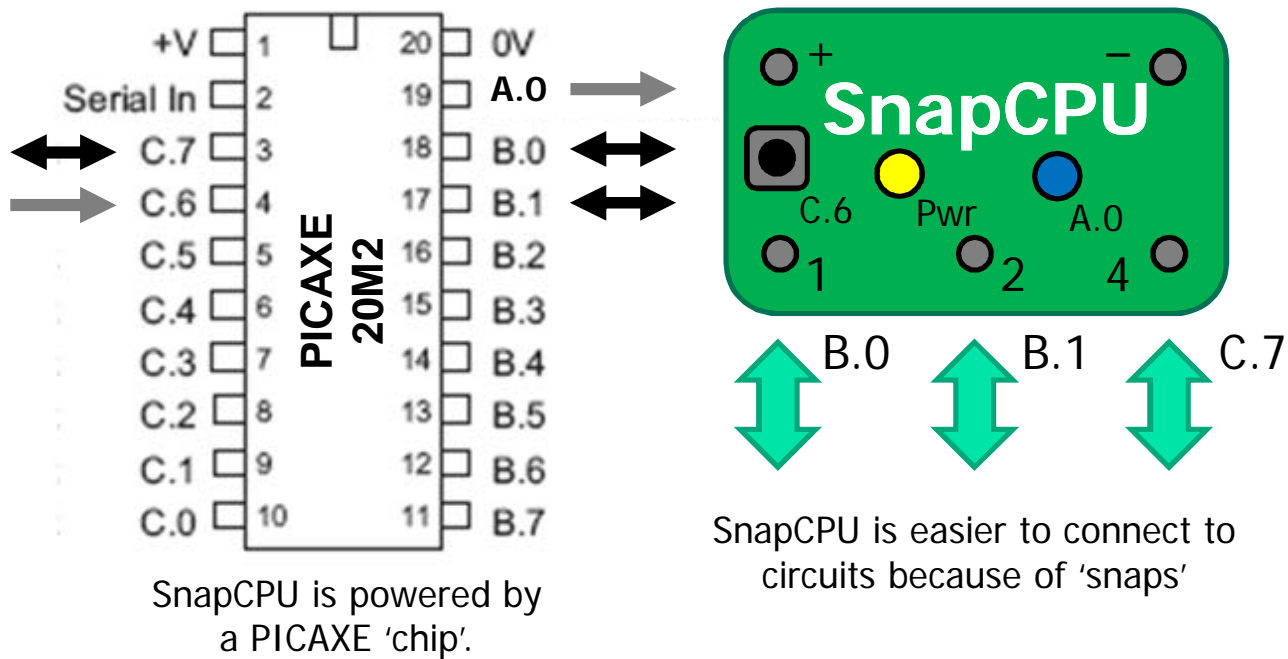


# Overview - SnapCPU™ *Advanced*





# Overview - SnapCPU™ *Advanced*







# SnapCPU –Snap Connections

- All SnapCPU boards provide for 3 user input/output snaps
  - User snaps are double-sided (connect from top or bottom of the board)
  - Power-on default is snaps set to input mode, user or program can change
  - Inputs can be digital or analog, default is 0 (as pin is held low by a pull-down to the negative terminal or aka ground)
  - Outputs can be digital, or pulse
  - Sound and tune channels can be directed to specific snaps for playback



# SnapCPU –Snap Connections

- Power snaps are clearly marked + and –
  - Battery power is needed if USB power/cable is disconnected
  - For snap signals to work a circuit is needed that connects to either + or – terminals
- USB download port also powers the Snap circuit and/or project
  - Note USB power limit is 500mA
  - Reverse voltage protect provided
- I2C expansion bus optional on *Advanced*



# SnapCPU - Features

- Mode buttons
  - Default: control which built-in program executes at power-on
  - User Coded: these are additional inputs which can alter how a program operates once started
- Datalink to PC is via the USB download cable connections
- LEDs indicate power and PC comms including download and Tx\* (transmit).

\* the Tx LED status can also be controlled by the user application



# SnapCPU – Block Diagram

