

Eval Board Care and feeding Instructions



@ Dr. Brian Fraser
Presented by Morteza Badali 1

General

- Don't lose it!
 - Put your **name/email** on your board, cables, and plastic case.
 - ..**Don't stick anything directly to the board;**
put label on plastic case.
 - Don't leave it laying around:
it looks cool, and might "**wander off**"
 - 1 student left on bus.

General

- **Plugging/Unplugging**
 - **Unplug power before** plugging/unplugging the cape, or connecting pins to headers!
(1 student fried BBG by shorting 5V to something)
 - USB and Ethernet be OK to hot-swap.
- **Power board from 5V**
 - Use either USB, or some power pins on headers.
(1 group fried a BBG by powering from 12V)

Electrostatic Discharge (ESD)

- Static electricity can very easily damage electronics.
 - The high static voltage will "punch through" the electronics making them malfunction.
 - Especially problematic in.. dry conditions.
 - Don't wear fuzzy slippers and a polar fleece robe while working on board.
- Ground yourself before touching board
 - Touch unpainted metal case of power supply, or USB port on your grounded desktop PC.
- Take care when using push buttons.
 - Don't press buttons with metal pen, pencils, etc.
 - Try not to touch chips on board or headers.

Pin capabilities

- BeagleBone's CPU.. pins are not 5V tolerant
 - The AM335x microprocessor runs at 3.3V
 - Does not tolerate 5V applied to its pins: doing so can fry the CPU.
 - 1 student shorted 5V to GPIO pin; board dead
 - Some pins are 5V, others are 3.3V (USB is 5V).
 - Don't cross the streams.
- Don't short power pins to ground.
 - 1 student did; board dead
 - 1 student ran 3.3V through an LED to ground (no resistor); board dead.



Liquids

- General idea:..

Don't spill liquids on your board.

- Keep your drink on the opposite side of your computer from the board.

- Cleaning if you do spill on your board:

- Disconnect all cables & power.
- Run board under water from tap for 10 minutes.
- Dry it off well using... a hair dryer.

Physical Damage

- Case should help protect board from falls.
 - Rubber feet should help prevent falls.
 - Come see me if suspect damage; may be repairable (at your expense).
- Carrying Suggestions
 - Transport board **inside anti-static bag**.
 - Protect board using the provided **plastic box**.
 - Make sure **your name** is on the case and cables
 - 90+ identical copies floating around!
 - Pickup circuit board by the edges.

Summary

- The board is yours!
Enjoy it, but take good care of it.
- Treat eval-board carefully;
it is good quality, but easily damaged.
 - Be careful about static electricity.
 - Keep liquids away from it.
 - Protect it from physical damage.
- Repairs to damage may be possible,
but likely at your expense.