Dear Dr.

Reviewer #1: In their submitted manuscript, Romano and colleagues offer useful applications of a Teensy 3.2 board as a cheap, reliable and easy to build tool for behavioural research. The authors present here how this board can be used to implement a rotation encoder and a controller for CS-US learning association. Although the data presented serves the purpose, the manuscript could be somewhat improved. 

Figure quality can be improved:  
Figure 2: connection schema are appreciated, but may in some cases be confusing. The figure could gain in clarity if the connections were color-coded, making them easier to follow (this might also help understand which of the connections in panel B are actually relevant).

Figure 3B: The temporal drift reported in the text might be efficiently represented using a smaller line thickness and inserting a magnification making the divergence more evident (e.g. of the first and the last 30us)

DONE

Figure 4: Regarding panel A, same observations raised for the panel B of the previous figure applies.   
DONE

About the eye-blink paradigm, it is mentioned that the amplitude of the CS is set to 0 and then increased when needed; does this happen live via the custom GUI mentioned in the Methods? Once acquired, are the time-stamps in 0dB condition distinguishable from those produced in the 75dB? Moreover, once you plug an Arduino board, the script that is loaded on it starts automatically: does the researcher have a way of controlling start and end of session, pausing and restarting the paradigm?  
  
The manuscript could be strengthened by implementing a third experimental condition in which Teensy is used to play 2 sounds (e.g. having not just a single CS that predicts a US as in the eye-blinking paradigm, but having also a "neutral" CS, not associated with any US).

DONE

Minor corrections:  
- page 2. The material reference for the Tindie sensors has a link, while other material have not  
- page 5. Typo: "for pre cise image capture"   
- page 5. " eye puff versus the sCMOS camera (Figure 4Bii)."  In this paragraph, Figure 4Biii and 4Biv should also be referred to in the text.  
- page 5. Technical details on the ADNS-9800 sensors would be more suitable for Methods.  
  
  
  
  
  
Reviewer #2: This manuscript proposes to solve technical difficulties inherent to integration of image data acquired via an sCMOS camera with animal behavioural data acquired from other sensors.  
  
I find it difficult to understand which specific problem the presented work seeks to address. It would be useful for the authors to elaborate on how exactly it has been" difficult to easily integrate sCMOS cameras and behavioural experiments". Listing a few specific technical difficulties inherent in this process would have been useful.  
  
more critically however, while I recognise that this paper is focused upon providing a technical assessment of the teensy microcontroller for neuroscience research applications the authors have performed live animal experiments on a fixed fixed animal. No statement is given regarding the animals genotype, gender, age nor as far as I can see is there any statement regarding ethical approval and licensing for animal experimentation.

Added this component

Additionally while the authors frequently refer to a sCMOS camera as part of the experimental apparatus it is not immediately clear whether this was connected during the aforementioned experiments and if so, what it was recording.