**Emulator hardware setup.**

A) Our emulator is based around a DAC card with signal generating capabilities. The card was recommended to us by Pavan Tiruveedhula from Austin Rooda's lab – they use it for similar purposes.

The DAC card was supplied by Strategic Test Corp (strategic-test.com; US address: One Boston Place, 26th floor, Boston MA, 20108). Our contact there is Bob Giblett ([bob.giblett@strategic-test.com](mailto:bob.giblett@strategic-test.com)).

What we purchased was a model UF2e-6022. It cost us just over $5000 in 2017. Drivers were included. The quote we used for the purchase is in this directory (UF2e-6022Quote.pdf). We think that either the appropriate cables come included with the board, or that we had these rolled into the quote we received. You will want to make sure you get cables if you build one of these systems. It might be that the cable part number is Cab-3f-9m-200.

We probably should have gotten the DAC with the M2i.xxxx-bxio option, which would have allowed us to read in TTL trigger signals through the board. That would have cost ~$500 more. Post purchase retrofit was considerably more, so we didn't do it (yet). We don't have an urgent need for triggering, but it is something that would probably be nice to be able to do.

B) The DAC card only works in Windows systems, so the emulator is Windows specific.

Our specific host computer is a Dell Precision Workstation T5810, but we think there is nothing special about this hardware configuration. The specific quote for the workstation is in file EmulatorHostPCQuote.pdf. It cost us about $2300 in 2017.

C) Pavan provided us with some additional recommendations for ADC cards that one could also put into an emulator system, to record and verify synchronization of signals coming back. We have not yet purchased or installed these. The information is summarized in file EmulatorInfoFromPavan.xlsx.

D) Once you have the card, you need to install some drivers. See EmulatorHardwardSetup.pptx for step-by-step instructions. SAS Computing has an image of the computer after we installed the OS, Matlab, and the drivers in 2018. So if we need to do it again, that's the place to start.