DSG MSELV Chassis R&D Meeting Minutes

Date: December 4, 2020
Time: 11:00AM – 11:30AM

Attendees: *Peter Bonneau, Aaron Brown, Pablo Campero, George Jacobs, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran*

1. Discussed Tyler Lemon's progress in PYNQ-Z1 development for MSELV Chassis
    1.1. Tyler Lemon has reviewed pre-compiled examples to learn to use board's Jupyter notebook interface
    1.2. Tyler Lemon is investigating best way to implement MSELV Chassis DAC and ADC communications with PYNQ-Z1 board
        1.2.1. Attempting to use existing PYNQ overlays for board's Processing System communication to Processing Logic
        1.2.2. Researching development of custom software overlay for board to allow all interface headers on board to be used for project
            1.2.2.1. An overlay is a software library for the chip's processing logic that allows features to be controlled or accessed by a separate program on the Processing System
            1.2.2.2. Custom overlay would handle all DAC and ADC communication on the Processing Logic
            1.2.2.3. Custom overlay would allow the Processing Logic to handle all communication while passing ADC data to and reading DAC settings from a memory buffer
            1.2.2.4. The Processing System will also read and write to buffer while handling all excitation calculations, units conversions, and external communications