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Serial Power Supply Development for ATLAS Upgrade JOSHUA STEWART, JOE HALEY, Oklahoma State University, OKLAHOMA STATE HARDWARE COLLABORATION — The LHC (Large Hadron Collider) near Geneva will be undergoing an upgrade in 2024 that will allow for higher luminosity data collection. The ATLAS project, in the midst of these upgrades, will also be enhancing its pixel detector modules to become more radiation tolerant. As a consequence of the spatial constraints, the modules must use a serial power supply able to deliver a constant current under varying loads. Our group has set out to provide researchers with a device to power the modules, during R&D, that will simulate the conditions in the HL-LHC.

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