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An open-source laser electronics suite NEAL C. PISENTI, BENJAMIN J. RESCHOVSKY, DANIEL S. BARKER, ALESSANDRO RESTELLI, GRETCHEN K. CAMPBELL, JQI, University of Maryland and NIST, College Park, MD 20742 — We present an integrated set of open-source electronics for controlling external-cavity diode lasers and other instruments in the laboratory. The complete package includes a low-noise circuit for driving high-voltage piezoelectric actuators, an ultra-stable current controller based on the design of [1], and a high-performance, multi-channel temperature controller capable of driving thermo-electric coolers or resistive heaters. Each circuit (with the exception of the temperature controller) is designed to fit in a Eurocard rack equipped with a low-noise linear power supply capable of driving up to 5 A at ± 15 V. A custom backplane allows signals to be shared between modules, and a digital communication bus makes the entire rack addressable by external control software over TCP/IP. The modular architecture makes it easy for additional circuits to be designed and integrated with existing electronics, providing a low-cost, customizable alternative to commercial systems without sacrificing performance. [1] Erickson, C.J., *et. al.* Rev. Sci. Instrum. 79, 073107 (2008).

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