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Read-out electronics for LEGEND-200 experiment

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LEGEND is a ton-scale ^{76}Ge-based experimental program to search for neutrinoless double-beta decay with the discovery potential at a half-life greater than 10^{28} years. The discovery of this decay would establish that the neutrino is its own antiparticle, which would have several implications in explaining the matter-antimatter asymmetry in our universe. The first stage, LEGEND-200, using 200 kg of enriched HPGe detectors, is under construction at LNGS. Data taking will start in 2021. The unique LEGEND configuration in which the HPGe detectors operate directly in liquid argon cryostat, as well as the requirement of very low radioactive background, introduces several constraints on the design of the detector read-out electronics. In this contribution, the design and the performance of the signal readout electronics for LEGEND-200 will be presented.

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