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Geoscientific Instrumentation Methods and Data Systems Discussions

Interactive comment on "Development of a new distributed hybrid seismic-electrical data acquisition station based on system–on-a-programmable-chip technology" *by* Qisheng Zhang et al.

Anonymous Referee #3

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This is really a good work. The authors successfully developed a new geophysical system based on the system–on-a-programmable-chip technology. In my personal view, the developed station features the following advantages: small in size, better performance, low cost and long life cycle management. Additionally, with two channels for independent seismic and electric data sampling, it allows us to make multi-parameter measurements much easier with low cost. And hence an integrated interpretation can be performed simultaneously. As a distributed system for weak geophysical data acquisition, the authors made great efforts in time synchronization and noise reduction.

To improve more in the MS and the new station, I'd like to make following suggestions: 1. Though the present values of synchronization (200ns) and noise level (0.6uV) are acceptable, further reduction are needed for higher sampling frequency and weaker signals (electric signals in geoscience usually at âľuV or <uV). 2. To be understood easily, it is better to show the equations (1)-(2) in a graphic style. 3. Figs 7, 8, 9, 10 should be redrawn to make them clear and formal for publication. Parameter name and scale are always necessary for the vertical and horizontal axis of the figures. 4. Text and the English need much revisions (especially the INTRODUCTION). Details see the revision manuscript attached. 5. Other suggestions and comments see the revision MS attached.

Please also note the supplement to this comment:
https://www.geosci-instrum-method-data-syst-discuss.net/gi-2019-12/gi-2019-12-RC3-supplement.pdf

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